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This book discusses, probably for the first time, the position of fourteen raw materials that figure prominently in India's export trade. It is not concerned merely with their position in world trade but makes a detailed survey of quantitative and qualitative trends in their production, consumption and export during the inter-war and war years. On the basis of his findings the author proceeds to indicate probable future developments affecting these selected raw materials both in India and abroad.

In addition to a wealth of statistical material in the text, an important feature of the book is an appendix on the economic consequences of the partition of India in connexion with the problem discussed.

THE INTERNATIONAL POSITION OF INDIA'S RAW MATERIALS

BY

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PREFACE

This essay on 'The International Position of India's Raw Materials' was undertaken at the request of Dr. A. Appadorai, Secretary, Indian Council of World Affairs. I began to work on it towards the end of 1945 and completed it early in 1947. I could only devote a part of my time to it throughout this period as I was simultaneously engaged upon other vital problems of investigation and research at the Gokhale Institute. More than one year was therefore required to complete the work. By the time the manuscript was ready the plan for the partition of India was announced and the dimensions of the problem discussed in these pages were radically changed. I have briefly tried to indicate the new set-up of things as it affects the problem in Appendix II. Along the lines indicated therein it will not be difficult, I think, to appraise the international position of the raw materials produced in both the Dominions.

Throughout the preparation of the essay I had the benefit of the invaluable advice, criticism and encouragement of Prof. D. R. Gadgil and these are in no small measure responsible for whatever merit the essay may possess. I must thank Dr. Appadorai for his interest in the work and for seeing it through the press. I might add that I am alone responsible for all the opinions expressed in this essay.

Gokhale Institute of Politics
and Economics, Poona, 4
28 June 1948

N. V. SOVANI

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CHAPTER I

NATURE AND SCOPE OF THE PROBLEM

The establishment of British rule in India and the Industrial Revolution in England were largely synchronous and the former facilitated and accentuated the impact of the latter on Indian economy. As a result of the development of land and sea communications India's foreign trade underwent a radical change both as to quantum and composition. Both exports and imports increased manifold. The exports came to consist largely of raw materials and imports of manufactured goods. Two factors were mainly responsible for this change in the composition of India's trade. The torrent of machine-made cheap goods from England dealt a lethal blow to the highly specialized urban and village industries in India and brought about their decline. Secondly, the British Government in India made special efforts to encourage the growth of commercial crops such as cotton, jute, indigo, etc., for export. In consequence, Indian economy became a colonial one, exporting raw materials and importing manufactured goods by the sixties and seventies of the last century. In 1879 the proportion of manufactures in Indian exports was 8 per cent., while in imports it was 65 per cent.

This state of affairs changed gradually though very slowly and large scale industry began to develop in India. The processing of domestic raw materials at home also increased with industrialization and the composition of India's foreign trade began to change. By the turn of the century the proportion of manufactures in the export trade of India had increased to 22 per cent. while that in the import trade had fallen to 53 per cent.

During the quinquennium preceding World War I, 47·5 per cent. of the total exports from India consisted of 'raw materials, raw produce and articles wholly unmanufactured' and less than 1 per cent. of 'food, drink and tobacco'.[1] During

1. The figures quoted from now onwards are not comparable with those that have been quoted earlier because the basis of classification is different in each case.

the war Indian industries developed considerably. Foreign trade was also cut off to a large extent. Indian exports during the war years consisted of 40·7 per cent. of 'raw materials, etc.' and 27·4 per cent of 'food, drink and tobacco'. During the next quinquennium the percentage increased and dropped to 51 and 21 respectively. During the next three quinquenniums the percentage of 'raw materials, etc.' fluctuated between roughly 50 and 47 showing no marked trend. In the same period the proportion of 'food, drink and tobacco' in the total exports was round about 25 per cent.

It thus appears that the composition of the export trade of India during the inter-war period did not show any marked changes. The position attained during World War I could not be stabilized in later years. India was merely able to maintain the position attained in the quinquennium after the World War I. During the inter-war period there was considerable development of industries in India and in many cases a larger part of the raw materials that were formerly exported came to be utilized at home.[2] Indian industries received a tremendous fillip when the World War II broke out. During the first five years of that war the proportion of 'food, drink and tobacco' in the total exports from India was 23·1 per cent. and that of 'raw materials, etc.' 30 per cent. Many factors such as the growth of industries, closing of channels of trade, shortage of shipping, etc., were responsible for this change. The war opened a new chapter altogether in India's economic history. The end of World War II is, therefore, a convenient vantage point from which to review India's export trade in raw materials and to try to gauge its future prospects or in other words, to assess their international position.

In what follows I shall be dealing with some of India's raw materials that figure in her export trade. I have chosen to deal with only the more important ones from among a long list; to wit, cotton, jute, groundnut, linseed, castor seed, tea,

2. For further details, see Chapter V.

coffee, tobacco, hides and skins, wool, lac, mica and manganese. I have thus selected commodities classified under 'food, drink and tobacco' and 'raw materials and produce and articles wholly unmanufactured' in the *Review of the Trade of India*. I have not dealt with food grains as I believe, that they are bound to figure only insignificantly in Indian exports of the future. Their export has been banned and will continue to be banned most probably in the post-war period. Sugar was excluded because it did not enter India's export trade in any sizable quantity and in the early post-war world also India was not likely to be in a position to export sugar in any appreciable quantities. Vegetable oils and oil-cakes were excluded because their importance in the export trade was comparatively very small. Similar considerations were responsible for the exclusion of other commodities.

In attempting to gauge the international position of India's raw materials on the eve of the end of World War II it is necessary to study in detail in the case of every commodity discussed here, the quantitative and qualitative trends in production, in internal and external demand, and to evaluate them. In Chapter II the inter-war period (1919-39) is covered generally and the decade preceding World War II in rather greater detail. This task was rendered easy in many cases because of the full and valuable data collected and embodied in the numerous reports on marketing in India. Data from these reports have been freely availed of. In the case of commodities where these marketing reports were non-existent the net had to be cast wider and information from numerous scattered sources collected. Such information was often found to be not of uniform quality and careful sifting was called for. In Chapter III the developments during the war period are covered and the various control measures are described. Data for this period are scanty and in some cases completely lacking. The greatest difficulty was encountered in giving an account of control measures as the available official and semi-official literature on the subject was hopelessly inadequate. In dealing with them I have mainly relied on the numbers of *The Indian Trade Journal*. In Chapter IV

the post-war prospects of the exports of these raw materials have been indicated as they appeared towards the end of 1946. Here again the ground was not firm because of the incompleteness of available information regarding the prospects and plans of industries in India and abroad during the post-war period, as well as in regard to the possible state of overseas markets. Information from such sources as was available was used in the preparation of this material. The Reports on the Post-War Prospects of Indian Trade prepared by various Indian Trade Commissioners were of great use in this connexion. In Chapter V the general conclusions of the analysis and some allied considerations have been briefly indicated.

CHAPTER II

INDIAN RAW MATERIALS DURING THE PERIOD BEFORE WORLD WAR II

1. Raw Cotton

Raw cotton has been the second largest single item in Indian exports for a very long time. In terms of value it accounted for, on an average during 1930-8, 19 per cent. of the total Indian exports.

India has been one of the leading cotton producing countries of the world from very old days. India's position as a world producer, in the decade preceding the outbreak of World War II can be indicated with the aid of Table Nos. 1 and 2 which respectively give the acreage under cotton in the main cotton producing countries of the world and the production of cotton in them.

Figures contained in Table No. 1 show that of the total acreage sown to cotton during 1931-9, 25 to 30 per cent. was to be found in India. After the U. S. A. India had the second largest acreage under cotton. During 1931-9 the acreage in the U. S. A. declined but the acreage in India appeared to be fairly steady. During the same period Brazil showed a very rapid increase in the acreage under cotton. According to Table No. 2 the annual production of raw cotton in India averaged 2,612 million lbs. during 1932-9. India was the second largest cotton producer, the U.S.A. being the first. In this connexion it might be noted that, with the exception of Uganda, the yield of cotton per acre was the lowest in India. India was also the second biggest exporter of cotton in the world. Of the total cotton entering world trade during 1931-8 India accounted for, on an average, 19 per cent.

Cotton is of different varieties and the position of Indian cotton in the international market can be determined only when the relative position of Indian varieties with all other varieties is indicated. There are many difficulties in the way of such an attempt. As the Imperial Economic Committee observed :

TABLE 1

Acreage under cotton in the chief cotton producing countries of the world during 1931-9

(Source :—*Imperial Economic Committee, Industrial Fibres*, 1938, p. 16)

(In Millions of Acres)

Countries		1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
U.S.A. (b)	..	38·7	35·9	29·4	26·9	27·6	30·0	34·0	26·4
India	..	23·7	22·5	24·1	24·0	26·0	24·8	25·3	23·5
Burma	..						0·5	0·6	0·5
Egypt	..	1·7	1·1	1·9	1·8	1·7	1·8	2·1	1·9
Brazil	..	2·0	1·7	2·9	4·0	5·2	5·4	6·7	6·2
China (c)	..	4·8	5·6	6·1	6·8	5·3	8·5	11·2	7·5
U.S.S.R.	..	5·3	5·4	5·1	4·8	4·8	5·0	5·2	5·1

(b) Acreage harvested. Acreage in cultivation on 1 July of the years shown and the acreage abandoned before harvesting were as follows (in million acres):—

		1931	1932	1933	1934	1935	1936	1937	1938	1939
Acreage Planted	..	39·1	36·5	40·2	27·9	28·2	31·0	34·5	26·9	24·9
Acreage Abandoned	..	0·4	0·6	10·9	1·0	0·6	1·0	0·5	0·5	

(c) Estimates of the Chinese Cotton Statistics Association, except for 1938-9 which has been estimated on the basis of production figures. Figures relate to majority of the provinces where commercial crop is grown.

TABLE 2

Production of cotton in chief cotton-producing countries of the world during 1931-9

(Source :—*Imperial Economic Committee, Industrial Fibres,* 1938, p. 18)

(In Millions of lb.)

Countries		1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
U.S.A.	..	8,172	6,215	6,237	4,606	5,085	5,927	9,473	5,972
India	..		2,302	2,597	2,591	2,902	3,057	2,620	2,212
Egypt	..	632	491	849	749	845	902	1,071	728
Brazil	..	265	215	485	650	844	818	1,048	897
China (d)	..	853	1,081	1,303	1,494	1,086	1,850	1,702	1,099
U.S.S.R.	..	896	888	922	831	1,075	1,698	1,808	1,841

(d) Estimates of the Chinese Cotton Statistics Association relating to 11 provinces where a commercial crop is grown. According to the crop reports issued by National Agricultural Research Bureau (Nanking) the estimated output of lint covering 17 provinces was as follows (in millions of lb) :—

1931	1932	1933	1934	1935	1936
1,606	1,669	1,829	1,747	1,580	2,275

Cotton is classified according to grades and staple lengths. Grades comprise a range of characteristics such as colour, feel, presence of foreign material, etc., which are less susceptible to accurate measurement than staple lengths, which largely determine the spinning capacity of the fibre. No general agreement has yet been reached for an international standard, so that the staple descriptions of different countries are not strictly comparable.[1]

In the circumstances staple length though inadequate has to be taken as the basis of comparison. There is general agreement in styling cotton with a staple over 1" as long staple, that with staple between 7/8" and 1" as medium staple and that with staple below 7/8" as short staple. Table No. 3 gives the production of cotton in the chief producing countries by staple lengths.

India was the largest producer of short staple cotton in the world. If it is remembered that the short staple cotton produced by China was not exported in any appreciable quantities, India may be said to have a monopoly of the export of short staple cotton in the world market. The figures reveal the growing proportion of medium and long staple cottons in the main producing countries, except India, and therefore in the international cotton market as a whole during 1931-8. In Indian cotton the proportion of short staple cotton was generally steady from 1931-6 and showed a rather sharp decrease only in 1937-8. The trends in the Indian cotton crop are analysed in greater detail later.

From less than about 15 million acres in the nineties of the last century acreage under cotton in India increased to about 25 million before the outbreak of the World War I. During that war acreage decreased until it was stimulated again by better prices in 1922. In 1925-6 the acreage reached a peak at 28·4 millions. The position since 1931 can be gauged from Table Nos. 1 and 2.

There is no 'cotton belt' in India as in the U.S.A. The main centres of cultivation are Bombay, the Central Provinces, the Punjab and Hyderabad and each produces a distinct

1. Imperial Economic Committee, *Industrial Fibres*, 1939, p. 20.

TABLE 3

Production of cotton in the chief cotton producing countries of the world during 1931-8 by staple length

(Source :—*Imperial Economic Committee, Industrial Fibres,* 1938, p. 21)

(In per cent. of total production)

		1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8
U.S.A.								
1⅛" and longer	..	5	5	6	9	6	8	5
1" to 1$^{3}/_{32}$"	..	22	21	22	24	25	35	29
⅞" to 3$^{1}/_{32}$"	..	67	67	67	59	56	48	56
Shorter than ⅞"	..	6	7	5	8	13	9	10
India								
⅞" to 1"	..	32	30	29	26	33	33	37
Shorter than ⅞"	..	68	70	71	74	67	67	63
Egypt								
Over 1⅜" Sakel	..	21	25	14	14	11	6	10
Over 1⅜" Others	..	8	11	12	16	21	26	25
1¼" to 1⅜"	..	1	(a)	(a)	3	2	2	3
1⅛" to 1¼"	..	70	64	74	67	66	66	62
Brazil								
Over 1⅛"	..	(a)	(a)	(a)	33	31	22	10
1" to 1⅛"	..				64	65	76	89
Shorter than 1"	..				3	4	2	1

(a) Not available.

type of staple. Long and medium staple cottons were produced in the Punjab and Sind mostly on irrigated soils. At the other end of the scale is an area of indigenous types comprising the Central Provinces, Berar, Khandesh, Central India, parts of the U.P. and of Rajputana in which the main cotton produced was of short staple before the war.

The shortness of staple of this area is to some extent connected with the fact that the cotton is grown on the rainfall, and that the season is of short duration. There are, however, other parts of India where cotton grown only on the rainfall attains quite a respectable length and some of the finest and best of the indigenous cotton varieties (improved of course by the local plant breeders) are to be found there. Such is the 2027 A.L.F. Cotton grown in the Surat District of the Bombay Province and in Baroda and Rajpipla States and the Jayawant Cotton of the south of the Bombay Province. In such areas also are to be found some of the American cottons such as the Dharwar-American (also in the south of the Bombay Province) and the Combodia in Madras.[2]

Usually the Indian cotton varieties are classified into six classes in the statistical leaflets of the Indian Central Cotton Committee. (1) Long staple over 1"—Punjab American 298F. (including 289F/K25, and Cambodia Co. 3 and Co. 4. (2) Medium staple A—1" (including Punjab-American 289F/43 Sind Sudhar, 289F1, part of 1027 ALF and part of Combodia Co. 2). (3) Medium staple B—7/8" to 31/32" (including part of 1027 ALF, part Cambodia, Jayawant, Punjab American LSS. 4F, Jarila, etc.). (4) Short staple A—11/16" to 27/32" (including Salems, Dharwar Upland, C.P. No. 1, Oomras, Hyderabad, Kumpta, Upland, Banilla, etc.). (5) Short staple B—9/16" to 21/32" (including C.P. Nos. 2 and 3, Oomras, Khandesh Oomras, Barsi and Nagar Oomras, Dholleras, etc.). (6) Short staple C—17/32" and below (including Bengals from U.P., Rajputana, Sind and the Punjab, also Comillas).[3]

2. Dr. W. Burns, 'India's Agricultural Resources', Resources of India, Special Supplement to the *Times of India*, 25 October 1940, p. 7.

3. A more detailed classification approved by the Indian Central Cotton Committee, accepted by the Government of India and brought into force with effect from the first cotton forecast of 1939-40 will be found in Appendix IV, *Report of the Indian Central Cotton Committee*, 1939.

Table No. 4 gives the changes in the character of the Indian cotton crop since 1927.

TABLE 4

Cotton Production in India classified by staple length

(Source :—*Report of the Indian Central Cotton Committee*, 1939)

(Excludes Burma) Quantities are in thousand bales* of 400 lbs. each

Description of Cotton	Average of 1927-8 to 1931-2	Average of 1932-3 to 1936-7	1937-8	1938-9	Percentage increase (+) or decrease (—) of Col. 5 over Col. 2
1	2	3	4	5	6
Short staple—below 7/8"					
1. Bengals ..	907	1,244	1,347	1,035	
2. Oomras ..	1,906	1,351	1,395	1,152	
3. Central India ..	306	244	217	252	
4. Broach (Part) ..	62	132	262	223	
5. Dholleras ..	586	594	493	337	
6. Kumpta and Upland (Part) ..	(a)	(a)	17	23	
7. Bijapur and Bagalkot Jowari 8. Westerns (Part)	(b)	(b)	147	155	
9. Warangal and Cocanadas ..	39	26	21	21	
10. Chinnapathi 11. Salems 12. Comillas	73	74	88	52	
Total—Short staple quantity ..	3,879	3,665	3,990	3,250	—19
% on Total—All staples ..	75	69	69	63	

*Statistical bales containing 400 lbs. of cleaned (lint) cotton.

(a) Included under item No. 19, seperate figures not being available.

(b) " " " " 20 " " " " "

Table 4 (continued)

Description of Cotton	Average of 1927-8 to 1931-2	Average of 1932-3 to 1936-7	1937-8	1938-9	Percentage increase (+) or decrease (—) of Col. 5 over Col. 2
1	2	3	4	5	6
Medium and Long Staple—					
7/8" and above					
13. Americans†—Punjab‡ and Sind-staple 1" and above ..	(c)	22	178	227	
14. Americans—Punjab and Sind-staple below 1" ..	238	620	773	804	
15. Central Provinces and Berar Verum ..	(d)	25	25	22	
16. Hyderabad—Gaorani ..	140	133	142	129	
17. Broach (Part) } 18. Surti }	188	162	134	183	
19. Kumpta and Upland (Part) ..	260	177	138	185	
20. Westerns (Part) } 21. White and Red Northerns .. }	229	199	32	69	
22. Tinnevellies (including Karungannies) ..	143	136	151	132	
23. Cambodias ..	126	176	216	119	
Total—Medium and Long staple quantity ..	1,327	1,650	1,789	1,870	+40
% on Total—All staples ..	25	31	31	37	
Total—All staples ..	5,206	5,315	5,779	5,120	— 2

(c) „ „ „ „ 14 „ „ „ „ „

(d) „ „ „ „ 2 „ „ „ „ „

†Includes "Punjab American 289 F-25 , "Sind American 289 F-1" (or Sind Sudhar) and "Punjab American 289 F/43".

‡Average for Punjab American 289 F" only. Figures for other varieties of staple 1" and above, being not available for the complete five year period, have been included under item No. 14.

It appears that the proportion of long and medium staple cottons in the total cotton production in India increased from 25 per cent. in the quinquennium 1927-8 to 1931-2 to 31 per cent. in the quinquennium 1932-3 to 1936-7. If it is remembered, however, that this proportion was 30 per cent. in the quinquennium 1922-7,[4] the increase as between the two succeeding quinquenniums did merely restore the pre-depression position as between the different staples. The increase in the proportion of short staple cotton during the depression cannot be satisfactorily explained. The change brought about as between the two succeeding quinquenniums was largely due to a decrease in the Oomeras and an increase in the Americans, as will be clear from Table No. 4. The average production of Oomeras during 1932-3 to 1936-7 had declined to about 13·5 million bales (of 400 lbs. each) from about 19 million bales during the preceding quinquennium, a fall of over 25 per cent. During the same period the production of Americans increased from an average of about 2·4 lakh bales to an average of 6·2 lakh bales, an increase of more than 250 per cent. The increase in the proportion of medium and long staple cottons during 1938-9, when it reached 37 per cent., was very largely brought about by the wide-spread failure of Oomras due to excessive and unseasonable rains in that year.

Commenting on this trend the Imperial Economic Committee has stated: 'India is also endeavouring to grow finer cotton, both on account of the restricted market for short staple varieties, and because the growing domestic manufacturing industry is consuming larger quantities of the finer types'.[5] The percentage of short staple cotton in the total cotton exports from India was about 74 per cent. during 1928-9 and 1930-1. During the next two years the percentage increased to about 80 per cent. but the average during the next three years came down to about 68 per cent. During 1936-7 the percentage was about 54 and about 58 in 1938-9. The shift of foreign demand for Indian cotton from short to

4. *Report of the Indian Central Cotton Committee* (I.C.C.), 1939, p. 70.

5. *Ibid*, p. 20.

medium and long staple varieties is undoubtedly brought out by the above figures. As regards internal demand also the shift to medium and long staple varieties was evident. Of the total cotton consumed in Indian mills about 30 per cent. was short staple cotton during 1931-2 and 1932-3. This percentage suddenly increased to about 35 in 1933-4 and from then onwards declined gradually to about 24 in 1938-9. There is also clear evidence to show that the Indian textile industry was progressively going fine during the decade preceding World War II. Of the total production of yarn of all counts in the Indian mills the proportion of yarn of 40 counts and above was on an average 1·5 per cent. during 1926-30. It increased to 3·5 during the next two years and increased progressively to 7 per cent. in 1938-9. In 1937-8 the Bombay Textile Labour Inquiry Committee after examining carefully a large amount of data concluded that the textile industry in Bombay City had gone fine in recent years and that in Ahmedabad steadily continued to go finer still.[6] As Bombay city and Ahmedabad together consumed a little more than 40 per cent. of the total Indian cotton consumed annually in Indian mills this might be taken as a significant change in the internal demand for cotton as between the different varieties.

Besides this the improvement in the quality of Indian cotton crop was also helped substantially by the Indian Central Cotton Committee. This committee was constituted by the Government of India in the Department of Agriculture and Revenue in 1921. Initially it was a purely advisory body but with the passing of the Cotton Cess Act in 1923 it was incorporated and was put into funds for the purpose of improving and developing the growing, manufacturing and marketing of cotton in India. Since then it has advised the central and local governments on questions relating to cotton. It has financed and directed research work connected with the improvement of Indian cotton and has also tried to bring into practice results of these researches. It has also financed schemes for the extension of long and medium staple cottons

6. *Bombay Textile Labour Inquiry Committee, Interim Report,* 1938, p. 17.

of improved variety as well as for their marketing. The cess of two annas per bale of Indian cotton exported from India or consumed in mills in the provinces in India levied since 1923 furnished the committee with its funds. The committee has also got enacted such legislation as the Cotton Transport Act, the Cotton Ginning and Pressing Factories' Act, etc., and has thus tried to prevent adulterations and to maintain the standards of the quality of grown cotton. It has conducted numerous researches into the improvement of Indian cotton and has persistently carried on propaganda for the spread of suitable long and medium staple varieties in place of the short staple ones.

The levying of import duty on the imports of cotton into India has been also partly responsible for bringing about an improvement in the quality of the Indian cotton crop. 'By the Indian Finance (Supplementary and Extending) Act (1931) passed on the 28th November 1931, raw cotton was removed from the free list and made liable to an import duty of six pies per lb. with effect from the 30th September 1931'.[7] How far did this duty on raw cotton help the Indian cultivator was one of the questions referred to the committee by the Textile Tariff Board in August 1932. The committee stated in reply that the period over which the duty had operated was too short and also exceptionally abnormal and therefore it was not possible to answer the question correctly. But the effect of the duty was commented upon by the committee in its memorandum to the Special Tariff Board in 1935. It stated :

> The considerable increase in the area under Combodias and Tinnevellies since 1930-1 may partly be attributed to the beneficial influence of the duty then in force. In other areas where there was little scope for extension and the actual area put to cotton depended on timely rainfall, there was a distinct tendency towards growing better varieties.[8]

This duty was increased to one anna per lb. of imported cotton from 1 March 1939.

7. *Review of the Trade of India*, 1931-2, p. 19.
8. *Report of the I.C.C. Committee*, 1939, p. 100.

The internal demand for Indian cotton mainly flowed from the Indian textile mills and a small amount, estimated at 450,000 bales per year by the I.C.C. Committee, was used for padding, etc., and for hand spinning. Exports of Indian raw cotton mainly went to the textile mills in Japan and Europe. A small proportion of exports of short staple cotton were mainly demanded by the foreign countries for mixing with wool in the manufacture of blankets. The relative position of external and internal demand for Indian cotton can be assessed from the data presented in Table No. 5.

Before World War I, as per figures supplies by the *Review of the Trade of India,* a little more than half of the total cotton produced in India was exported. After the war the exports accounted for about 58 per cent. of the total cotton produced. During 1927-32 the percentage of exports to total production declined to about 55 and, if we ignore the abnormal figures for 1937-8, this percentage, or a slightly lower one, has been mainatined throughout up to 1938-9. The dependence on the external market increased somewhat after World War I but during the succeeding years it lessened and on the eve of World War II the position in that respect was much the same as it was on the eve of World War I.

The consumption of Indian cotton by Indian mills increased from about one-third of the total production of cotton in India during 1922-7 to roughly 36 per cent. during the next quinquennium. In the following quinquennium about 39 per cent. of the total Indian cotton crop was being consumed by Indian mills. The percentage increased still further during the two years preceding the outbreak of World War II.

India has always imported cotton from East Africa, Egypt and the U.S.A. The imports before 1932 used to be mostly confined to long staple varieties i.e., above 1 1/16" which were not grown in India or whose production in India fell far short of the internal demand. In some years large quantities of American Middlings, short staple cotton broadly similar to Oomeras, were imported because they were cheaper than Oomeras at home. American Middling directly competed with Indian short staple varieties. The choice in the world

TABLE 5

Total Production, Consumption and Export of Indian Cotton and Receipts of Foreign Cotton at Indian Mills*

(Source :—*Reports of the I.C.C. Committee and the Bombay Cotton Annuals*)

Year (1 Sept. to 31 August)	Total production (Thousand bales of 400 lbs. each)	Export Total	Per cent	Consumption of Indian Cotton in Indian Mills	Per cent	Receipt of Foreign Cotton in Indian Mills
Average 1922-7 ..	5,954	3,595	58·8	2,038	33	—
Do. 1927-32 ..	5.851	3,252	55·5	2.150	36	227†
Do. 1932-7 ..	6,447	3,473	53·8	2,524	39	379
1937-8 ..	6,360	2,053	33	2,999	47	618
1938-9 ..	6,148	3,274	55	3,151	51	445

*Stocks ignored.

†Average for 1928-9 to 1931-2.

cotton market between Indian short staple varieties and the American Middlings was purely a matter of their relative prices or what is usually known as the parity between the prices of comparable Indian and American varieties. Usually Indian short staple varieties sold well below parity and the competition of the American Middling was felt at intervals of 3 to 4 years and was altogether erratic, depending largely on crop conditions in the U.S.A. Gradually, however, as the character of the Indian cotton crop changed after 1932 and as the production of long and medium staple varieties increased, the area of compitition between the imported cotton and home produced cottons expanded. In 1935 the Indian Central Cotton Committee stated in the memorandum already quoted :

> As more long staple cotton is being produced in Sind and this quality was likely to rise to about 1 lakh bales in the near future,[9] it might be necessary to raise from 1" to 1/16" the upper limit up to which Indian cotton should be given effective protection from imported foreign cottons.[10]

As the character of the Indian crop changes, Indian cotton comes more and more to resemble the cotton traded in international markets. Previously the bulk of the Indian cotton coming into the world market was of the short staple variety and India was the biggest producer and supplier of short staple cotton in the world. Indian cotton, therefore, becomes more and more capable of competing with other cottons in the world market as its quality improves. On the other hand it has also to face a keener competition from foreign cotton both at home and abroad.

Cotton is an internationally traded commodity and the prices of cotton the world over are closely related. To a considerable extent the changes in cotton prices are accounted for by changes in the supply of cotton and the U.S.A. being the largest producer of cotton in the world sets the tune in the world cotton markets. The influence of the U.S.A. in this regard had lessened remarkably in the immediate decade

9. It was only 8,000 bales in 1932.
10. *Ibid*, p. 100.

preceding World War II because the proportion of the world total commercial supply represented by American cotton had declined from 60 per cent. during 1922-32 to 48 per cent. during 1938-9. The relative prices of different varieties of cotton reflect largely the intrinsic qualitative differences between them.

During the 10 years 1927-36, for example, Liverpool prices of representative qualities of various growths, expressed as proportions of the price of American Middling 7/8 inch averaged about 77 per cent. for Indian Oomra No. 1 Fine, 153 per cent. for Egyptian Sakellaridis Fully Good Fair, 118 per cent. for Egyptian Uppers Fully Good Fair, 97 per cent. for Brazilian Sao Paulo Fair, and 118 per cent. for Peruvian Tanguis. These cottons differ considerably in length of staple, but it is not known to what extent these differences in prices are affected also by quality elements other than length of staple.[11]

The relative prices of these various cottons of course change over periods. But as prices of cotton of one variety increase in relation to those of other varieties the consumption of the relatively cheap cotton tends to increase, for cottons are substitutable over an extensive range.

Ordinarily yarns of a given specification can be manufactured from cotton representing a considerable range in length of staple, but the longer staples instead of the shorter tends to reduce the other costs of manufacturing and to increase the costs of raw cotton.[12] Shifts in consumption from one variety to another in response to changes in relative prices tend to effect readjustments in comparative prices of the various growths on the basis of their differences in quality or spinninng utility so that, over periods of time that are long enough for such adjustments to be made average price ratios depend on differences in quality and the relative quantities consumed depend upon the relative quantities produced.[13]

Indian cotton market has always been markedly influenced by the American market. As already remarked American Middling and Oomeras, being broadly similar in character compete with one another in the Indian market as

11. *Cotton Price Relationships*, Technical Bulletin 755, U.S.D.A., January 1941, p. 17.
12. *Ibid*, p. 20.
13. *Ibid*, p. 29.

well as outside. The demand for these competing varieties in the international cotton markets, say at Liverpool, as well as in the Indian cotton market, say at Bombay, is mostly influenced by their respective prices. The spread between the prices of these competing varieties is not solely determined by the difference in their intrinsic qualities. It is influenced among other things, by relative demand and relative supply, cost of transport to the place of consumption, tariff, exchange fluctuations and restrictions, speculation, etc.[14] In India it was usual to calculate the Liverpool-Bombay parity and the New York-Bombay parity on the basis of the quotations for Middling American on the American market and the Broach Contract on the Bombay market. The parity indicated the spread between the prices of these comparative varieties. A broadening of this spread might occur either because of a rise in the prices of American Middling or a fall in the price of Oomra No. 1 Fine or a larger fall in the price of Oomra than in that of American Middling. A narrowing of the spread might result from the opposite movements. A broadening of the spread indicates that the comparable Indian variety of cotton was relatively cheap to the American. This usually meant that Indian cotton was more attractive to foreign consumers than the comparable American. A narrowing of the parity, on the contrary, indicated that the comparative American variety was cheaper and more attractive to foreign consumers and even at times to Indian textile industry than the comparable Indian variety. Table No. 6 gives the prices of American Middling and Broach M.G.F. in the Liverpool market during 1927 and 1937, as well as the exports of Indian and American cottons during that period.

The figures show that since 1927 the general tendency was to maintain a lower, more favourable ratio, of Indian cotton prices to American Middling, that the Indian sort became relatively cheaper and more capable of competing with American

14. 'Comparisons of prices of Indian Oomra No. 1 Fine in Bombay with those in Liverpool show a decrease in the spread from 1·95 cents per pound in 1928-9 to 0·54 cents in 1931-2, and then an increase to 1·30 cents in 1935-6'...*Ibid*, p. 23.

TABLE 6

Prices of American Middling and Indian Broach (F. G.) on the Liverpool Market, during 1927-37 and the exports of cotton from India and U.S.A.

(Source :—*Bullentin of Agriculture and Sociology, Rome,* No. 11, 1937)

Year	A. Middling price per lbs.	% on Middling	Indian Broach price per lbs.	% on Middling	Year	Export of cotton from U.S.A. in Thousand Bales (running)	Exports of cotton from India Thousand Bales of 400 lbs. each	Difference between price of Middling and Broach Price per lb.
1927 ..	9·54	100	8·26	86·58	'27-'28	—	—	—
1928 ..	10·92	100	9·22	84·43	'28-'29	8,053	3,940	0·70
1929 ..	10·29	100	8·37	81·34	'29-'30	6.697	3,934	1·82
1930 ..	7·49	100	5·26	70·23	'30-'31	6,820	3,675	2·23
1931 ..	5·10	100	4·15	81·37	'31-'32	8,754	1.612	0·95
1932 ..	5·24	100	4·85	92·56	'32-'33	8,426	2,790	0·39
1933 ..	5·55	100	4·67	84·14	'33-'34	7,552	3,253	0 88
1934 ..	6·68	100	5·04	75·44	'34-'35	4,816	3,118	1·64
1935 ..	6·70	100	5·71	85·22	'35-'36	6,040	3.770	0 99
1936 ..	6·70	100	5·41	80·75	'36-'37	5,689	4,325	1·29

cotton. That their respective exports responded to the differences in their prices is also broadly observable. How these differences between the comparable American and Indian varieties of cotton affect foreign consumption of these varieties is very clearly brought out in the following:

> During the 13 years 1926-38 deviations from the average price ratios of Indian to American, obtained by dividing the average prices for representative qualities of Indian in Liverpool for the year beginning with February by the corresponding prices for American in that market, when related to deviations from the trend for consumption ratios, obtained by dividinng total consumption of Indian cotton outside of India for the year beginning with August by total consumption of American cotton outside the United States, gave a correlation coefficient of $-0{\cdot}92 \pm 0{\cdot}03$ for consumption in Europe and $-0{\cdot}92 \pm 0{\cdot}04$ for consumption in Japan and China.[15]

This merely underlines the close competition between the American Middling and Indian Oomra No. 1 Fine in the world cotton market and shows that the demand for each is closely related to their comparative prices.

A detailed analysis of the foreign demand for Indian cotton is appropriate at this stage. Table No. 7 gives the annual exports of raw cotton from India by their destinations.

The figures show that Japan had been the largest single buyer of Indian cotton since the turn of the century. In earlier parts of the nineteenth century, it is well-known that the East India Company made special efforts to encourage the cultivation of cotton in India. Textile industry in United Kingdom was from its very beginning largely fed by American cotton and was adjusted to it to a considerable extent. Up to the middle of the century, the U. K. was the largest buyer of Indian cotton. During the American Civil War Indian cotton was demanded to a very great extent by the U. K. But after that Indian cotton could not maintain the position attained in the Lancashire market and American cotton regained its former position there. After that the newly rising textile mills on the Continent—in Germany, Belgium, Italy and Austria-Hungary—became the largest consumers of Indian

15. *Ibid*, p. 34.

TABLE 7

Annual Exports of Raw Cotton from India by their destinations

(Source :—*Bombay Cotton Annual*, 1939-40—No. 21, p. 107)

(Years ending 31 March)

Countries	Pre War Average	War Average	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39
United Kingdom ..	122	212	241	270	281	166	167	342	347	456	622	395	411
Other parts of the British Empire ..	30	31	7	7	6	6	7	3	6	12	14	23	23
Total British Empire ..	152	233	248	277	287	172	174	345	353	468	636	418	434
Japan ..	1,012	1,373	1,610	1,640	1,686	1,080	1,085	1,022	2,055	1,759	2,426	1,359	1,211
Italy ..	233	249	384	393	362	183	150	261	278	154	165	152	92
France ..	109	69	204	253	232	81	124	161	148	166	155	95	169
China [exclusive of Hong Kong, etc] ..	31	48	404	566	606	436	134	337	142	109	72	69	193
Belgium ..	277	44	347	341	217	121	128	144	153	225	312	196	142
Spain ..	50	41	76	80	106	45	52	61	60	68	26	—	2
Germany ..	351	69	324	344	309	166	153	246	153	264	218	166	192
Austria ..	167	33	—	—	—	—	—	—	—	—	—	1	—
Other countries ..	25	31	115	176	121	85	63	152	148	184	258	276	268
Total—Foreign countries ..	2,255	1,957	3,464	3,793	3,639	2,197	1,889	2,384	3,137	2,929	3,632	2,314	2,269
Total ..	2,407	2,190	3,712	4,070	3,926	2,369	2,063	2,729	3,490	3,397	4,268	2,732	2,703

(Figures prior to 1937-8 include Burma).

cotton. In the early nineties, however, as these mills began to manufacture higher counts and finer cloth, they began to use more and more American cotton and their demand for Indian cotton languished. It became something to fall back upon or a cheap substitute for purposes of admixture. The newly rising textile industry in Japan then became the largest consumer of Indian cotton.[16]

In the quinquennium preceding the outbreak of World War I, roughly 42 per cent. of the total exports of Indian cotton was bought by Japan. This percentage increased to about 63 during the war years and was about 53 during the quinquennium after World War I. It declined to about 48 during the next quinquennium, 1924-5 to 1928-9. According to Mitsubishi Economic Research Bureau : 'Up to 1926, Indian cotton was imported in far greater volume than American, but with the progress of rationalization, the consumption of American cotton greatly increased.'[17] During 1929-30 to 1933-4 Japan, on an average, bought about 43 per cent. of the total Indian exports of cotton. This decline was due in some measure to the world depression but in larger measure to the boycott of Indian cotton by Japanese millers as a retaliation against Indian tariff discrimination aimed at Japanese goods. The boycott was lifted by the beginning of 1934 when the Indo-Japanese Textile Agreement was signed. By this agreement a basic quota of 325 lakhs of yards of cotton piece-goods was fixed for Japanese imports into India in return for taking a minimum of one million bales of raw cotton. It was also provided that a maximum of 400 lakhs of yards of Japanese imports would be allowed for the purchase of one-and-a-half million bales of raw cotton by Japan. Partly as a result of this and partly because of the general economic recovery, Japan took, on an average, 53 per cent. of the total Indian exports of cotton during 1934-5 to 1938-9.

Japanese consumption of cotton as a whole increased by about 50 per cent during 1930-7. The Imperial Economic

16. R. M. Joshi, *Indian Export Trade*, 1924, pp. 31, 32.

17. *Japanese Trade and Industry*, Mitsubishi Economic Research Bureau, 1936, p. 236.

Committee remarked that the greater part of the increased imports into Japan since 1930 consisted of Indian cotton.[18] This is rather an exaggeration. For actual calculations show that of the total increased imports of cotton into Japan during 1930-7 only about 45 per cent. were supplied by India.

Before World War I, Germany, Belgium and Italy were, in that order, after Japan, the best customers of Indian cotton. Of the total exports of cotton from India, in the quinquennium preceding the World War I, Germany bought on an average 14·6 per cent., Belgium 11·5 per cent., and Italy 9·7 per cent. In the quinquennium 1934-5 to 1938-9 these percentages had declined to 6, 6·2 and 5 respectively.

There was a sudden spurt in China's demand for Indian cotton during 1929-31 when her total cotton imports rose by 86 per cent.[19] Before World War I, China bought only insignificant quantities of Indian cotton. But during the quinquennium 1928-9 and 1933-4 she bought on an average 13·5 per cent. of the total Indian exports of raw cotton. Her demand, however, languished during the following quinquennium when she bought only about 4 per cent.

As noted earlier the United Kingdom ceased to be an important customer of Indian cotton in the early seventies of the last century. During this century, if the years of World War I are left out, she bought on average 5 to 6 per cent. of the total Indian exports of cotton. The reluctance of British textile industry to purchase Indian cotton in large quantities 'has been mainly due, of course, to the long dependence of Lancashire upon American staple, with the consequent adjustment of its machinery and operators to the superior American fibre'.[20] During the years immediately preceding the outbreak of World War II strenuous efforts were made for encouraging the use of Indan cottons in Lancashire mills, as a result of which during the quinquennium 1934-5 to 1938-9

18. *Industrial Fibres*, 1938, p. 25.
19. *Review of World Trade*, League of Nations, 1933, p. 4.
20. *U.S. in India's Trade*, U.S. Department of Commerce, 1939, p. 79.

TABLE 8

Exports of Indian Cotton by Varieties

(Source :—*Report of the Indian*

(In thousand bales

Trade Description of Cotton	Japan and the East					Europe	
	1928-9	29-30	30-31	31-2	32-3	28-9	29-30
Bengals—United Provinces ..	31	26	17	9	7	37	53
Sind and Punjab ..	114	191	160	171	227	115	125
Rajputana ..	1	3	2	—	4	3	6
Unclassified ..	54	81	65	40	1	193	278
Total ..	200	301	244	220	239	348	462
Oomras—Central Provinces ..	135	100	127	68	115	38	54
Berar ..	217	201	233	202	276	108	114
Khandesh ..	143	135	142	109	162	127	105
Central India ..	134	139	146	60	96	26	40
Barsi and Nagar ..	52	62	34	42	46	10	14
Unclassified ..	155	199	245	12	95	252	202
Total ..	836	836	927	493	790	561	529
Verums 262 ..	—	—	—	—	—	—	—
Hyderabad Gaorani ..	34	47	20	6	7	10	7
Total ..	34	47	20	6	7	10	7
Americans—Punjab 289F ..	—	—	—	—	1	—	—
Punjab (Unspecified—4F) ..	154	209	255	43	141	95	105
Sind ..	2	—	5	3	29	6	8
Dharwar (Gadag 1) ..	—	—	—	—	—	—	—
Dharwar (Upland Unspecified) ..	12	6	1	—	7	—	1
Total ..	168	215	261	46	178	101	114
Broach—Surat Navsari ..	—	6	4	6	1	—	4
Broach Unspecified ..	48	84	62	29	76	14	14
Total ..	48	90	66	35	77	14	18
Dholleras—Mattheo ..	11	14	18	16	28	26	19
Dholleras (Unspecified) ..	62	31	99	14	151	2	7
Total ..	73	45	117	30	179	28	26
Southerns—Kumptas Jaywant ..	—	—	—	—	—	—	—
Kumptas Unspecified ..	2	1	—	—	1	2	2
Westerns ..	9	17	13	1	17	47	47
Northerns ..	—	—	—	—	5	4	3
Coconadas ..	2	1	14	3	4	26	37
Karunganni ..	14	10	3	—	—	2	5
Tinnevellies ..	36	13	20	7	19	10	13
Cambodia (Coimbatore No. 2) ..	—	—	—	—	—	—	—
Cambodia Unspecified ..	9	5	8	1	1	5	8
Salems (Uppam) ..	—	—	—	—	2	1	1
Total ..	72	47	58	12	49	97	116
Comillas ..	—	—	—	1	2	13	15
Burmas ..	3	20	24	6	16	—	—
Other sorts ..	—	—	—	—	2	—	—
Total Indian Cotton ..	1,434	1,601	1,717	849	1,539	1,172	1,287
Exports as per Director-General of Commercial Intelligence and Statistics ..	2,178	1,964	2,379	1,000	1,596*	1,429	1,515

(*Provisional)

(PART I)
and Destinations During 1928-39
Central Cotton Committee, 1933, p. 124-125)
of 400 lbs. each)

and the West			United Kingdom					Total				
30-31	31-2	32-3	28-9	29-30	30-31	31-2	32-3	28-9	29-30	30-31	31-2	32-3
36	23	14	2	5	15	21	2	70	84	68	53	23
118	132	330	10	9	20	26	40	239	325	298	329	597
—	2	5	—	—	—	—	1	4	9	2	2	10
159	49	37	10	10	45	3	12	257	369	269	92	50
313	206	386	22	24	80	50	55	570	787	637	476	680
50	13	37	11	21	26	13	22	184	175	203	94	174
66	21	52	9	11	7	1	3	334	326	306	224	331
56	16	57	1	1	1	—	2	271	241	199	125	221
12	4	20	1	—	2	—	—	161	179	160	64	116
6	2	16	—	—	1	1	1	62	76	41	45	63
131	7	42	14	22	13	—	6	421	423	389	19	143
321	63	224	36	55	50	15	34	1,433	1,420	1,298	571	1,048
—	—	—	—	—	—	—	—	—	—	—	—	—
4	1	1	—	—	—	—	—	44	54	24	7	8
4	1	1	—	—	—	—	—	44	54	24	7	8
—	—	—	—	—	—	—	1	—	—	—	—	2
77	19	51	79	105	86	31	66	328	419	418	93	258
10	2	5	2	9	19	4	8	10	17	34	9	42
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	1	12	7	1	—	8
87	21	56	81	114	105	35	76	350	443	453	102	310
—	—	4	—	1	—	—	2	—	11	4	6	7
12	5	44	7	5	3	1	14	69	103	77	35	134
12	5	48	7	6	3	1	16	69	114	81	41	141
9	12	56	—	—	—	—	—	37	33	27	28	84
—	1	22	—	3	—	—	1	34	41	99	15	174
9	13	78	—	3	—	—	1	101	74	126	143	258
—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	2	—	—	—	—	1	4	3	1	—	4
28	9	51	4	6	1	—	1	60	70	42	10	69
2	1	5	1	—	—	—	—	5	3	2	1	10
28	6	29	7	9	5	7	12	17	18	3	—	10
—	—	6	1	3	—	—	4	35	47	47	16	45
3	—	7	8	5	1	1	9	54	31	24	8	35
—	—	—	—	—	—	—	1	—	—	—	—	1
2	—	—	7	6	—	—	—	21	19	10	1	1
—	—	—	3	1	—	—	—	4	2	—	—	2
64	16	100	31	30	7	8	28	200	193	129	36	177
15	18	25	4	2	2	2	3	17	17	17	21	30
—	—	—	—	1	—	—	—	3	21	24	6	16
—	—	1	—	—	—	—	—	—	—	—	—	3
825	343	919	181	235	247	111	213	2,787	3,123	2,789	1,303	2,671
1,003	424	862*	233	286	274	125	242*	3,933†	3,868†	3,729†	1,582†	2,741†

†Total including 'Other countries' as follows:—93 103 73 33 41

TABLE 8

(In Thousand bales

	Europe and the West (excluding the U.K.)					United Kingdom				
	1934-5	35-6	36-7	37-8	38-9	34-5	35-6	36-7	37-8	38-9
Below 7/8"										
Bengals ..	379	372	402	323	318	110	132	133	112	110
Oomras ..	157	177	140	124	96	45	56	58	43	35
Dholleras ..	39	54	49	59	83	2	—	3	2	4
Salems ..	1	1	30	—	2	—	1	5	—	—
Comillas ..	29	52	30	25	43	7	11	5	6	5
Broach Bijapur and Bagatkot Jowari ..	7	19	31	13	26	1	—	—	—	1
Westerns Warangals ..	8	18	20	8	8	9	13	8	11	20
Above 7/8"										
Americans ..	166	188	251	81	100	151	188	291	135	182
Hyderabad Gaorani ..	1	1	—	1	—	—	—	—	—	—
Central India ..	18	24	38	19	28	1	1	1	5	—
Surti ..	3	10	47	4	3	—	2	1	1	—
Tinnevellies ..	28	9	10	5	3	3	4	5	1	3
Kumptas— ..	—	—	—	—	—					
Kumptas ..	—	—	2	—	1	—	—	—	—	1
White and red Northerns ..	12	12	17	6	9	—	—	7	—	—

*Compiled from *Reports*

(PART II)

of 400 lbs. each)

Japan					China and the East (excluding Japan)					Total—Exports				
34-5	35-6	36-7	37-8	38-9	34-5	35-6	36-7	37-8	38-9	34-5	35-6	36-7	37-8	38-9
319	323	334	176	173	47	19	4	14	57	855	846	873	625	658
681	774	823	499	472	43	57	9	15	135	926	1,064	1,030	681	735
83	113	118	32	108	3	9	8	5	54	127	176	178	98	249
—	—	—	1	—	—	—	1	—	—	1	2	36	1	2
12	5	—	—	—	1	1	1	1	1	49	69	36	32	49
10	45	49	6	71	1	2	—	—	40	19	66	80	19	138
—	—	—	—	—	—	—	—	—	5	17	31	28	19	33
246	430	597	42	148	10	20	29	36	306	574	826	1,168	294	136
1	6	23	1	1	—	—	—	—	—	2	7	23	2	1
42	136	124	24	119	10	28	3	11	48	71	171	166	59	195
1	18	23	1	5	—	—	—	—	7	4	30	71	6	15
32	42	23	—	3	2	—	—	—	8	65	55	38	6	17
—	—	3	—	—	—	—	—	—	—	—	—	3	—	—
1	—	3	—	—	—	—	—	—	—	1	—	5	—	2
—	8	6	—	16	—	—	—	—	9	12	20	30	6	34

of the Indian Central Cotton Committee.

TABLE 9

Receipts of Cotton in Indian Mills by Varieties during 1931-39

(Source :—*Bombay Cotton Annual*—No. 18 and 21)

(In Thousand Bales of 400 lbs. each)

Trade Description of Cotton		1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
Bengals									
United Provinces	..	121	129	144	109	162	132	142	148
Sind and Punjab	..	39	43	52	75	63	113	157	81
Rajputana	..	55	42	48	54	49	46	59	50
Others (unclassified)	..	17	18	13	20	8	14	16	18
Total	..	232	232	257	258	282	305	374	297
Oomras									
Central Provinces	..	85	101	83	100	92	92	142	69
Berar	..	72	54	53	34	61	57	90	78
Khandesh	..	36	49	50	75	60	49	54	46
Central India	..	131	131	184	194	253	278	214	20
Barsi and Nagar	..	21	25	45	28	26	32	63	40
Unclassified	..	16	—	—	—	—	—	—	—
Total	..	361	360	415	431	492	508	573	233
Verums 262	..	—	25	23	21	30	23	43	212
Hyderabad Gaorani	..	80	131	117	114	95	122	162	73
Total	..	80	156	140	135	125	145	205	285
Americans									
Punjab	..	196	177	214	169	382	393	739	562
Sind	..	13	20	39	92	154	141	172	140
Dharwar	..	7	35	22	32	20	22	32	25
Cambodia	..	—	—	184	—	205	189	211	161
Total	..	216	232	459	293	761	745	1,154	888

Broach								
Surat and Navsari ..	94	165	160	106	124	119	182	175
Broach ..	247	199	138	136	140	185	268	198
Mattbheo ..	41	32	—	—	—	—	30	—
Dholleras ..	161	114	208	210	189	199	190	230
Total ..	543	510	508	452	453	503	670	603
Southerns								
Kumptas ..	122	145	128	158	127	118	129	270
Westerns ..	108	116	105	141	120	108	115	26
Northerns ..	33	18	19	34	23	22	10	—
Coconadas ..	11	12	13	18	15	18	18	18
Karungannis ..	51	54	45	40	50	60	52	59
Tinnevellies ..	51	56	58	55	72	53	73	65
Cambodia ..	108	141	—	208	—	—	—	—
Salems (uppans) ..	3	4	3	12	5	4	13	3
Unclassified ..	28	—	—	—	—	—	—	13
Total ..	515	546	371	666	417	383	410	454
Comillas ..	—	—	—	—	—	—	—	—
Burmahs ..	—	8	11	15	11	—	—	—
Other sorts ..	4	21	7	4	11	11	8	—
Total—Indian Cotton ..	1,951	2,065	2,166	2,254	2,552	2,600	3,394	2,770
Americans		84	30	64	25	26	130	42
Egyptians	461	36	57	123	72	86	128	85
East Americans		184	191	212	234	288	284	246
Others (Sudan, Mesopotamia etc.)		26	19	33	22	82	76	72
Total—Foreign Cotton ..	461	330	297	432	353	482	618	445
Grand Total ..	2,412	2,395	2,463	2,686	2 905	3.082	4,012	3,215
*Indian Cotton consumed in Indian Mills ..	2,346	2,360	2,336	2,612	2,677	2,631	2,994	3,121

*These figures compiled mainly from returns under the Indian Cotton Cess Act.

the average share of the U. K. in India's cotton exports rose to 13·5 per cent.

This quantitative analysis of exports has to be supplemented by a qualitative one. The data bearing on this aspect are, however, scanty. In the following an attempt is made to analyse such data as are available. Table No. 8 gives the exports of Indian cotton by varieties and destinations.

The percentage of short staple cotton in the total cotton exports was round 74 during 1928-9 and 1930-1 and increased to about 80 during the following two years. It averaged about 69 during 1933-4 and 1934-5 and during the two years preceding the outbreak of World War II, the average was round 56 per cent.

The percentage of short staple cotton in exports to Japan for which figures are available since 1933 onwards, was around 70 during 1933-4 to 1935-6. In 1936-7 Japanese purchase of Indian long and medium staple cottons exceeded those of the previous years by about 167,000 bales and the percentage of short staple in the total dropped to 57. During this year the price of Indian cotton was well below the American parity and this was in no small measure responsible for larger exports of longer and medium stapled Indian cotton. During the very next year, however, Japanese off-take of Indian long and medium staple varieties declined sharply largely because the prices of Indian varieties were ruling for a large part of the season much above the American parity. During that year about 84 per cent. of the total cotton exports to Japan from India were of short staple varieties. The percentage came to round about 70 during 1938-9 as Japan purchased larger quantities of the Indian long and medium staple varieties (Punjab Americans and Central India) than the previous year. In recent years Japanese demand had shifted from short to long and medium staple cottons because of the change of Japanese cotton spinning from coarse to medium and finer counts.

Exports of Indian cotton to the U.K. as noted earlier, jumped up during 1934-5 to 1938-9. During the first two years

the percentage of short staple cotton was about 50 and during the following 3 years it averaged about 85. The demand for cotton from the U.K. was thus largely for short staple varieties. The proportion of short staple cotton in the exports to the Continent also showed a decline during the quinquennium preceding the outbreak of World War II.

A qualitative analysis of the internal demand is also necessary. Table No. 9 gives the receipts of cotton in Indian mills by varieties.

Of the total cotton received in the Indian mills during 1931-2 and 1932-3 about 30 per cent. was short staple cotton. During the next 3 years the percentage increased to about 33, declined to 30 in 1937-8 and further to about 24 in 1938-9. The increasing use of the long and medium staple cottons in the Indian mills in consequence of their increasing production of finer and higher counts has already been discussed.

2. Raw Jute

Jute and jute manufactures accounted for in terms of value on an average more than 23 per cent. of the total exports from India during the period 1930-8. During the same period exports of raw jute alone accounted for about 7·5 per cent. of the total exports from India in terms of value.

World production of jute is almost wholly concentrated in India. Table No. 10 gives the acreage under jute and the production of jute in different countries during the quinquennium preceding the outbreak of World War II.

Jute is peculiar in its climatic requirements and is found only in one part of India. Bengal produced more than 85 per cent. of the total crop and the rest was to be found in the adjacent areas of Bihar, Orissa and Assam. The crop had been cultivated in Bengal for many centuries but in the other areas it was a comparative new comer. Table No. 11 gives the acreage and production of jute in India during the quinquennium preceding World War II.

TABLE 10

Acreage and Production of Jute in the main producing countries of the world

(Source :—*Imperial Economic Committee, Industrial Fibres,* 1939, pp. 98-9)

(In Thousands)

	1934-5		1935-6		1936-7		1937-8		1938-9	
	Acreage	Production	Acreage	Production	Acreage	Production	Acreage	Production	Acreage	Production
India ..	2,670	1,780*	2,181	1,547*	2,886	1,952*	2,889	1,809*	3,074	—
Formosa ..	12	9	18	12	12	9	—	6	66	30
Japan ..	2	1	2	1	2	1	2	1	—	—

*Exports + Indian Mill Purchases + Estimated Extra-Factory Local Consumption.

TABLE 11

Acreage and Production of Jute in India during 1934-38*

(Source:—*Report on the Marketing and Transport of Jute in India*, First Report, I.C.J.C., 1940, pp. 31 and 47)

	1934-5	1935-6	1936-7	1937-8
Acreage (thousands) ..	3,399	2,949	3,647	4,067
Production (thousand bales of 400 lbs. each) ..	10,366	8,627	11,225	11,895

*The figures in the table are those supplied by the *Report on the Marketing and Transport of Jute in India*. According to the latter the Official Forecasts of the jute crop for these years were under estimates to the extent of 26 to 41 per cent. in respect of acreage and 16 to 37 per cent. in respect of production (p. 23 and p. 45).

From 1926-7 to 1930-1 the area and production of jute increased and then decreased sharply in 1931-2 and then began to increase again. There was again a drop in 1935-6 and it was followed by an increase. The fluctuations in the area under jute were closely correlated with the prices of jute during the previous season.

With the exception of a few isolated years, prices and acreage have generally been interrelated. When prices were high—as in 1926, 1929, 1932, 1934 and 1936—they were followed in succeeding years by a marked increase in the estimated acreage. The converse is also true.[21]

The drop in acreage in 1935-6 was due, in at least a small measure, to a deliberate attempt at reducing acreage. For stabilizing jute prices the Government of Bengal in 1935 decided upon a plan for voluntary reduction of acreage under jute to 11 annas of the 1934-5 crop. Partly as a result of the

21. *Report on the Marketing and Transport of Jute in India*, First Report, 1940, p. 30.

propaganda work done by the Government under this scheme and partly because of bad prices and adverse weather conditions at the time of sowings the acreage during 1935-6 was about 13 per cent. less than during the previous year. But the voluntary restriction scheme seems to have been largely ineffectual; for though during all the subsequent years it was supposed to be in operation, the acreage under jute, under the stimulus of rising prices, went on increasing almost continuously upto 1938-9.

There are several species of jute but two, Capisularis and Olitorius, are of commercial importance. The fibre of Capisularis was ordinarily white. The colour of Olitorius was either white, yellowish, pinkish or blackish depending on the stagnancy of the water used for retting. As this variety was usually grown on highlands no running water was usually available for retting. So also the fibre of Olitorius was softer and stronger than that of Capisularis and was frequently finer also. Table No. 12 gives the proportions of the two varieties grown in different provinces as estimated by the *Report on the Marketing and Transport of Jute in India.*

TABLE 12

Production of Jute in Provinces according to varieties, 1937-38

(Source :—*Report on the Marketing and Transport of Jute in India,* First Report, 1940, p. 37)

Provinces	(1937-8) Capsularis	Olitorius
Bengal ..	71·9	28·1
Assam ..	98·3	1·7
Bihar ..	59·4	40·6
Orissa ..	94·0	6·0
All-India ..	74·5	25·5

The dominance of Capsularis variety is obvious from these figures. The reasons for this were firstly that its cultivation

was possible on all types of lands. Secondly, it was a hardier variety and stood the vagaries of weather better. Thirdly, it was an early crop and could be followed by transplanted paddy, making possible, because of this intermediate quick crop before the *rabi* crop, three crops during the year. The other varieties could be only followed by a *rabi* crop.[22]

The quality of jute is judged mainly by its spinning characteristics, i.e., its suitability for spinning various types of yarns. Trade has evolved certain methods for distinguishing various types. The main varieties, as remarked earlier, are two. Corchorus Capsularis known as white jute and Corchorus Olitorius comprising *tossa* and *daisee*. 'The *daisee* fibre though belonging to the Olitorius variety is somewhat different from *tossa* and is regarded by the trade as a separate variety'.[23] These three broad types are each classified into different classes according to their geographical distribution. The various classes in order of their spinning quality are Jat, District, Northern Assam, Western Dowrah, Jungli and Orissa.[24]

A large percentage of jute suffered from the effects of unsatisfactory growing conditions and faulty methods of preparation. The result was a lowering of quality and consequently of price.

> It is possible for the growers to eliminate them by the exercise of more care during the important processes of retting, stripping and washing. It is the considered opinion of trade that, lately, the quality of jute has deteriorated, and they attribute it to the comparatively low prices which have ruled during the period 1930-1 to 1937-8. This may be true to a great extent because high prices provide a margin and an incentive to growers for employing skilled labour. During periods of low prices growers generally rely more on the help of the members of their family. Also, the improvement in machinery and methods of manufacture have increased the demand for lower qualities to such an extent that good qualities have sometimes been a glut on the market and at times almost unsaleable.[25]

22. *Ibid*, p. 22.
23. *Ibid*, p. 4.
24. *Ibid*, p. 264.
25. *Ibid*, pp. 166-7.

Jute was mainly (about 70 per cent.) used for making gunny bags and wrapping materials for agricultural crops. The remainder was used for making cardage and finer grade jute cloth, known as hessians, basic fabrics for linoleum and rugs, roofing felts, tailors' padding, and wire-rope cores.[26]

Though jute was cultivated in Bengal from very old times the development of the crop during the last century was in response to the growing demand for jute from foreign countries, especially the U.K. Jute developed mainly as an export crop. But gradually the manufacturing industry was developed in India and internal consumption increased. It was not until 1909-10 that internal consumption of jute mills outpaced consumption abroad. Since then the former has tended to increase. During the decade preceding the outbreak of World War II on an average about 60 per cent. of the total raw jute produced was consumed internally, and the rest exported.

Table No. 13 gives figures regarding the distribution of jute according to the locality of consumption during the period from 1929-30 to 1938-9.

The total demand for raw jute depends upon the general economic conditions, particularly the conditions of industries in which jute containers and wrappers are used on a large scale. The quantities of total raw jute consumed closely follow the rhythm of the trade cycle.

During 1929-30 and 1933-4 the jute industry in India was suffering from the effects of the world depression. Demand was at a low ebb. To meet the situation the working hours in jute mills were reduced from 60 to 54 per week with effect from 30 June 1930. In July 1930, it was decided to close all mills for one week per month during the third quarter of that year. Even this could not meet the situation and from 2 March 1931 the Jute Association mills reduced the hours of work to 40 per week and sealed 15 per cent. of their looms. As a result of these measures the purchases of raw jute by mills dropped from 7·1 million bales in 1930-1 to 3·7 million in 1931-2. The restrictions were in force up to November 1934 and though the pur-

26. *U.S. in India's Trade*, 1942, p. 76.

TABLE 13

Distribution of Jute according to the locality of consumption

(Source :—*Report on the Marketing and Transport of Jute in India,* First Report, 1940, p. 240)

(Thousand Bales)

Season	Calculated Production	Export	Indian Consumption		Total
			Village Consumption*	Probable Mill Purchases†	
1929-30 ..	11,294	4,512	339	6,443	6,782
1930-31 ..	10,893	3,416	327	7,150	7,477
1931-32 ..	7,108	3,113	213	3,782	3,995
1932-33 ..	8,996	3,513	270	5,213	5,483
1933-34 ..	9,730	4,248	292	5,190	5,482
1934-35 ..	10,366	4,386	311	5,669	5,980
1935-36 ..	8,627	4,136	259	4,232	4,491
1936-37 ..	11,225	4,884	337	6,004	6,341
1937-38 ..	11,895	3,728	357	7,810	8,167
1938-39 ..	9,092	3,842	273	4,977	5,250
Average of ten years ..	9,923	3,978	298	5,647	5,945
Percentage ..	100	40·1	3·0	56·9	59·9

*Vide Annual Statement of Seaboarne Trade of British India. The basis has been changed from financial year to Jute season (July-June) and other figures have been modified accordingly.

†The probable Mill purchases are represented by calculated production less exports and village consumption.

chase of mills increased during the years following 1931-2, the total consumption was fairly steady round 5 million bales. Conditions improved during 1934 and from 1 November 1934 the mills decided to increase production by releasing gradually the sealed looms. As a result consumption increased in 1934-5. With the further improvement in trade conditions, mills began to work with the full complement of their machinery from 17 February 1936. The hours of work were increased to 54 per week from 5 August 1936. Consumption of raw jute by mills touched almost the 1930-1 level in 1936-7. During 1937-8 conditions improved still further and the Indian Jute Mills Association withdrew all restrictions on production from March 1937 onwards. As a result consumption increased to 7·5 million bales. Demand flagged at this stage and again an over-supply of jute manufactures to the expected demand was threatened. The crop was also damaged during that season due to bad weather conditions. But attempts to persuade the jute mills to restrict voluntarily their consumption proved of no avail and the Government of Bengal had to intervene by promulgating an Ordinance on 9 September 1937.[27]

By this Ordinance all mills in Bengal were to work for 45 hours per week from 26 September 1938, 'with the exception only of such mills whose total complement of looms did not exceed 175, they being permitted to work 72 hours per week'.[28]

The Indian mills manufactured ordinary hessians, sackings, tarpaulins and canvas. They drew 70 per cent. of their supplies from East Bengal *jat* and *district* areas, a type of jute which was of hard and medium hard qualities fairly strong and containing a large percentage of high coloured fibre suitable for high grade hessians. The balance was made up by *Northern, Assam, Western* and *daisee* jute, which was soft, having a large proportion of low coloured fibre, and unsuitable generally for hessian production.

Table No. 14 gives the figures of raw jute exports from India during the quinquennium 1934-5—1938-9 according to destinations.

27. Imperial Economic Committee, *Industrial Fibres*, 1939, p. 104.

28. *Report on the Marketing and Transport of Jute*, First Report, 1940, pp. 245-6.

TABLE 14

Exports of Raw Jute according their destinations during 1934-39

(Source :—*Report on the Marketing of Jute and Jute Products,* Report II, p. 180)

	1934-5	1935-6	1936-7	1937-8	1938-9	Average†
United Kingdom ..	1,66,377	1,66,058	1,88,631	1,44,767	1,80,723	22·4
Germany ..	1,37,432	1,51,951	1,33,950	1,43,133	1,31,956	18·5
France ..	83,058	75,207	85,627	65,096	75,994	10·2
U.S.A. ..	51,555	79,494	88,205	99,143	31,104	9·3
Italy ..	87,092	49,030	75,551	72,953	46,129	8·7
Belgium ..	59,797	55,795	69,682	54,650	50,861	7·7
Spain ..	42,995	50,337	17,075	4,680	11,157	3·4
Brazil ..	17,791	19,831	21,163	25,531	24,585	2·9
Holland ..	21,407	19,487	19,886	18,575	12,686	2·4
Japan ..	23,303	23,538	35,418	15,023	14,810	2·9
Black Sea Ports ..	8,206	12,248	5,814	4.400	1,466	0·9
China ..	8.236	9,521	9,408	15.311	19,209	1·6
Argentina ..	9,049	6,967	9,612	10,476	10,499	1·2
Others ..	36,176	51,860	60,569	73.520	79,260	7·9
Total ..	7,52,474	7,71,324	8,20,591	7,47,258	6,90,439	100·0

†The average is expressed in percentages and has been calculated on the actual quinquennium figures relative to the period.

As remarked already the demand for jute closely follows the world industrial production cycle. In 1929-30 exports of raw jute from India were about 8 lakh tons. During the next two years exports declined considerably as a result of the world depression. The lowest level was touched in 1932-3 when 5·6 lakh tons were exported. Demand improved during 1933-4 mostly because of the restrictive schemes adopted since 1931-2. During 1934-5 demand improved further, particularly from Dundee and this was strengthened by considerable speculative activity in raw and manufactured jute in the wake of the devaluation of the dollar. Exports fluctuated during the next two years and in 1936-7 exports exceeded those of the peak year 1929-30. Exports in the following years declined because of the recession in economic and trade conditions.

The U.K. was the first in the field as an importer of jute from India and had maintained its position as the largest customer of Indian jute. After World War I, from 1919-20 to 1923-4 the U.K. took on an average more than 30 per cent. of the total exports of jute from India. The percentage declined to slightly more than 24 per cent. during the next quinquennium and during the next two quinquenniums it declined to about 22 per cent. After World War I, during 1919-20—1923-4, Germany used to take about 19 per cent. of the total Indian exports. This increased to about 27 per cent. during the next quinquennium but declined to about 24 per cent. during 1929-30—1933-4 and further to about 19 per cent. in the following quinquennium. The off-take of France during 1919-20—1933-4 was on the average 12 per cent. of the total exports from India. It declined to 10 per cent. during the following quinquenniums. In the quinquennium after the World War I the U.S.A. took more than 15 per cent. of the total exports. The percentage declined to about 10 per cent. during the following quinquennium and to about 8 per cent. in the next one following. Europe as a whole roughly took about 38 per cent. of the total export of jute from India during 1919-20—1923-4. During the next two quinquenniums the percentage increased to about 59 and declined to about 51 during 1933-4—1938-9.

The quality of jute imported by the manufacturers of various countries is naturally governed by the type and the class of goods

manufactured by them. The mechanical efficiency of the plant used, as also that of the individual worker and the cost of labour, are important considerations in the determination of the qualities purchased by all mills. In this connexion, both the United Kingdom and the Continental spinners are ahead of their Indian competitors. For example, many Dundee products, which sell on par with Indian-made goods are woven from yarn containing 40 to 50 per cent. *daisee* jute, a fibre which the majority of mills in Calcutta refused to buy as they consider it unsuitable for good spinning. On the Continent, the bulk of fabrics are manufactured from North Bengal and Bihar jute which is used by mills in India in limited quantities only because of its general softness in texture and weakness in spinning.[29]

The American jute mills only manufacture fine yarns, twine and all types of cardage 'for which it is essential to have fibre which will spin down to four or even 3 lbs. per spindle'. American imports of raw jute consist largely of East Bengal 'Jat' Tossa and some white from good class District grades and only a little Superior North Bengal quality.[30]

With regard to changes in quality demand Balers report that within the last ten or fifteen years, a small proportion of the high grade business done by them with Dundee, the United States, and the Continent has disappeared, and manufacturers have shown an increasing tendency to use greater qualities of the more common qualities, such as are packed under the London Jute Association's various groups. They attribute this change largely to improvements in spinning machinery together with more efficient emulsifiers, bleaching agents and starches which enable manufacturers to use lower grade fibre than hitherto, still maintaining a high level of quality production. A notable feature of recent years has been the steady expansion in demand for Tossa. This fibre which is of greater strength and has superior spinning qualities than white, has always had a good sale overseas, and indications are that the demand is increasing.[31]

Constant efforts at evolving substitutes for jute are being made by many countries. It is under constant threat from the paper and the board industry. But because of its comparative cheapness natural jute has withstood all such attacks.

29. *Marketing of Jute and Jute Products in India,* Second Report, 1942, p. 186.
30. *Ibid,* p. 187.
31. *Ibid,* pp. 190-1.

Table No. 15 gives the price quotations for Jute per pucca bale.

TABLE 15

Prices of Pucca Bales (400 lbs.) of Jute (Firsts) during 1924-39

(Source :—*Report on the Marketing of Jute and Jute Products*—Report II, p. 198).

(In Rupees)

Season	Average
	Rs. a. p.
1924-5	.. 87 11 1
1925-6*	.. 106 14 8
1926-7	.. 62 1 4
1927-8	.. 65 5 1
1928-9	.. 68 8 3
1929-30	.. 54 14 4
1930-1	.. 30 7 3
1931-2	.. 32 11 9
1932-3	.. 28 0 9
1933-4	.. 26 12 4
1934-5	.. 29 7 10
1935-6	.. 34 5 11
1936-7	.. 34 8 10
1937-8	.. 33 13 14
1938-9	.. 41 5 10

*In November 1925, Jute touched Rs. 140-8-0 per bale.

During 1921-9 jute prices ruled high and averaged Rs. 74-0-0 per *pucca* bale jute (400 lbs. net). First marks, as compared to the average of Rs. 53-4-0 of the previous decade and of Rs. 34-10-0 for the decade following.[32] Prices receded sharply in 1930-1 and continued to be on the down grade. They reached the lowest at Rs. 26-12-4 per *pucca* bale (Firsts) in 1933-4. Prices slightly recovered to Rs. 29-7-10 during 1934-5 due to the various restrictions imposed on consumption and

32. *Ibid*, p. 192.

also the efforts at restricting jute acreage. During the next year, because of the increasing demand in relation to the restricted supply, prices recovered further to Rs. 34-5-11 and this level was almost maintained during the following two years. In 1938-9 prices increased still further because of a short crop and speculative activity, consequent upon a sharp rise in overseas demand.

During the latter part of 1936 the Indian Central Jute Committee was set up by the Government of India. Jute growers and manufacturers were equally represented on it. The committee was charged with the duties of promoting all interests of the trade, undertaking research work, improving crop forecasts and marketing.[33]

3. Wool (raw)

India is one of the very minor producers of raw wool in the world. In the decade preceding World War II she accounted for about 2·5 per cent. of the total annual production of raw wool in the world. Yet India had a special place in world trade in carpet wool. She usually exported on an average nearly 50 million lbs. or more than half her total annual production in the decade before 1939 and she was the largest world exporter of carpet wool accounting for one-third of the total carpet wool that entered world trade.

Table No. 16 gives annual production of different types of wool in the chief producing countries of the world.

Wool is classified in the trade into 4 main types viz. (1) Merino (2) British (3) Crossbred and (4) Carpet wools. Merino is the finest quality wool put on the market. It is noted for its softness, fineness, strength and elasticity and has superior drawing, spinning and felting properties.[34]

33. *Review of the Trade of India*, 1936-7, p. 12.

34. *Drawing*: 'The making of top from carded wool and of yarn from top is done through a gentle pull given by the various machines and this is known as drawing. Fibres which are open and not entangled naturally draw better'.

Felting: 'The property which wool possesses, obtained through the interlocking of the serrations on the fibres'—*Handbook on the Quality of Indian Wool*, 1942, p. 48.

TABLE 16

Annual Production of Different Types of Wool (Greasy Basis) in Countries Important for their Production

***(Source :—*Agricultural Marketing of India, Hand Book on the Quality of Indian Wool*, p. 3)**

Country	Total		Merino—Type		Crossbred—Type		Carpet—Type	
	Quantity (Million lb.)	% to World Production	Quantity (Million lb.)	% to World Production of Merino Wool	Quantity (Million lb.)	% to World Production of Crossbred Wool	Quantity (Million lb.)	% to Total Carpet Wool
Australia ..	1,015	28·7	808	55·9	207	12·3	—	—
Union of South Africa ..	264	7·5	259	17·9	5	0·3	—	—
U.S.A. ..	464	13·1	229	15·8	235	14·0	—	—
Argentina ..	394	11·2	55	3·8	339	20·2	—	—
Germany ..	46	1·3	28	1·9	18	1·1	—	—
Uruguay ..	114	3·2	51	3·5	63	3·7	—	—
New Zealand ..	329	9·3	8	0·6	321	19·1	—	—
France ..	54	1·5	8	0·6	46	2·7	—	—
U.S.S.R. ..	303	8·6	—	—	303	18·0	—	—
United Kingdom ..	110	3·1	—	—	110	6·6	—	—
Italy ..	33	0·9	—	—	33	2·0	—	—
China ..	110	3·1	—	—	—	—	110	26·9
India ..	85	2·4	—	—	—	—	85	20·8
Turkey ..	70	2·0	—	—	—	—	70	17·1
French Possessions in North Africa ..	69	1·9	—	—	—	—	69	16·9
Iran ..	34	1·0	—	—	—	—	34	8·3
Iraq and Syria	31	0·9	—	—	—	—	31	7·6
Mexico ..	10	0·3	—	—	—	—	10	2·4
Total for above countries ..	3,535†	(100)	1,446	(100)	1,680	(100)	409	(100)
Percentages ..			40·9		47·5		11·6	

*From publications of the Imperial Economic Committee and International Year Book of Agricultural Statistics, 1938-39.

†Besides this quantity nearly 481 million lb. of wool is produced in 'other countries' of the world making a total of 4,016 million lb; but the particulars of the types for this quantity are not available.

The British type wool is coarser than the Merino and is mainly produced in the U.K. It includes very long staple wools measuring from 8 to 15 inches in length as well as medium wools, about 3″ to 8″. Crossbred type of wool is the wool of sheep which are raised by crossing one type with another. This type of wool ' is coarser than the Merino but has a longer staple. Compared with pure British type of wool, it has a softer fibre and softer feel.'

Wool from unimproved sheep which yield light weight fleeces of uneven, coarse and kempy nature is classified in the world trade as 'carpet wool'. This wool is no doubt inferior to the types described above but the nomenclature should not be taken to mean that the stuff is fit for making only 'carpets' or floor coverings. Some of the better grades of this type can be used for making medium grade surges, overcoat cloth, tweeds, rugs, meltons, hosiery and other fabrics. It can be also used for mixing with finer wools for giving the necessary 'substance' to the fabric.[35]

As can be seen from Table No. 16 that most of the wool produced in India is of the 'carpet type'. Of the total production of carpet wool in the world India accounted for about one-fifth and China for more than one-fourth. Turkey and French possessions in North Africa each accounted for more than one-sixth. India, in contrast to all these countries which consume a larger proportion of their annual production of raw wool at home, exported nearly 50 per cent. of her annual production, excluding re-exports. She was consequently the leading exporter of carpet wool in the world. This is why she has a special place in the world wool trade.

It is not possible to describe the trends in the production of wool in India in the absence of figures of production. All production figures, used so far, are estimates formed on the basis of the sheep population of the country, a census of which is quinquennially held. The total sheep and goat population of India increased by about 25 per cent. during 1920 and 1935. ' The figures are not, however, comparable as the areas covered by the cattle census have varied from time to time. Very broadly speaking, the increase in the sheep population can be

35. *Ibid*, p. 2.

put roughly at about 15 per cent.'[36] During this period, therefore, the production of wool in India could have increased at least by 15 per cent. assuming that there was no special breeding operations for producing more wool during the period. This is all that can be said regarding the trend of production of wool in India during the inter-war period. The *Handbook on the Quality of Indian Wool* gives the following table regarding the production of wool in India and its distribution among the various areas of the country. (Table No. 17.)

The average annual production in India came to about 85 million lbs. Out of this 36 million lbs. was white wool.... produced by 22 million sheep yielding 56 million lb. fleece of varying proportions of medullation.[37]

Production was mainly concentrated to the north-western parts of the country. The Punjab and Rajputana states each accounted for nearly a fifth of the total production. North-western India as a whole produced about 77 per cent. of the total wool produced in India. In eastern and southern India, in spite of large sheep populations, the production was low because of poor yield. Madras for instance, had about 3 times the number of sheep in the Punjab, but its production of wool only amounted to 41 per cent. of that of the latter.

India found it necessary to import a large quantity of superior wool for her own requirements as the bulk of the domestic production belonged to coarser types of short wool. The average annual imports of raw wool for the ten years ending 1938-9 was 2·02 million lbs. Of these about 68 per cent. were received through land frontier routes and about 32 per cent. through British India ports. Some wool was also received from bordering countries through routes that did not terminate in railheads and were consequently not recorded. This quality was estimated at a 5·8 million lbs. per annum. The bulk of the imports came from Afghanistan, Iran, Iraq

36. *cf. Report on the Marketing of Wool and Hair in India*, 1946, p. 12.

37. Dr. Burns, *Technological Possibilities of Agricultural Development in India*, A Note, 1944, p. 107.

TABLE 17

Annual production of wool in different areas in India

(Source :—*Handbook on the Quality of Indian Wool*, p. 16)

Area		Number of sheep (Lakhs)	Annual yield of wool per sheep (greasy basis) lb.	Annual production of wool (Lakh lb.)	Percentage to total production
Kashmir State	..	12·5	1·5	18·5	2·2
N.W.F.P. Including Agency and Tribal Areas	..	8·4	3·4	28·3	3 3
Br. Baluchistan and States	..	15·1	3·2	48·6	5·7
Sind and Khairpur State	..	7·8	4·0	30·9	3·6
Punjab	..	44·2	3·8	169·7	20·0
Do. States	..	13·6	3·8	52·3	6·2
United Provinces and States	..	22·0	4·3	75·1	11·2
Rajputana States	..	53·2	3·1	164·5	19·3
Western India States	..	12·5	3·7	46·3	5·4
Bombay Including Deccan States	..	21·1	1·0	21·1	2·5
Mysore State	..	26·0	0·85	22·1	2·6
Madras and States	..	121·9	0·56	69·4	8·2
Hyderabad State	..	59·4	0·56	34·0	4·0
Central Provinces	..	5·8	2·0	11·7	1·4
Bihar	..	11·5	0·81	9·3	1·1
Orissa	..	4·0	0·75	3·0	0·3
Bengal and States	..	5·1	1·1	6·0	0·7
Other Areas*	..	9·7	2·0	19·5	2·3
Total India	..	453·8	1·9	850·3	(100·0)

*Includes Delhi Province, Central India and Bundelkhand States, Baroda State, Gujarat Agency, Eastern States, Assam and Assam States.

and Tibet, etc., and the rest from Australia and the U.K.[38] About 25 to 30 per cent. of the wool imported into India was re-exported. During three years ending 1938-9 the total average re-exports from India amounted to about 10·8 million lbs. Nearly 70 per cent. of this was Tibetan wool going out through Calcutta port and about 20 per cent. was Persian and Afghan wool exported through Karachi. Nearly 93 per cent. of the total re-exports from India went to the U.S.A. It appeared that the wool imported by sea was kept for internal consumption and re-exports largely consisted of wool imported from bordering countries by land-routes.[39]

Up to very recent times the whole Indian production of wool was classified under 'carpet wools'. But this was not verified by examination of samples, etc. With a view to ascertaining the facts in this regard the Agricultural Marketing Department of the Government of India carried out an investigation during 1936-9 by an examination of 208 samples of wool from various parts of India. Recording the results of this investigation the *Handbook on the Quality of Indian Wool* observed:

> The results of analyses have clearly established the need for acknowledging that Indian wools do not all pertain to the 'carpet' class. In fact, some of them are too fine and soft to be of any use in carpet manufacture, which requires a hardwearing, comparatively coarser and upstanding wool to have a firm pile. (*Pile*—In a carpet it consists of upright, closely set and evenly trimmed yarn giving the carpet a smooth surface and finish'). Most of the North Indian wools, if not all, could be easily utilized for clothing, rugs and blankets and even some of the South Indian wools are suitable for this purpose. Only the inferior types of Northern wools are actually suitable for carpets and their proportion is small.[40]

The Handbook, therefore, proposed a new classification of Indian wools. Table No. 18 gives this proposed classification and the production of wool in India as per this classification. The quantities given there are only rough estimates and should be accepted with reserve.

38. *Report on the Marketing of Wool and Hair in India*, 1946, pp. 14-5.

39. *Ibid*, p. 27.

40. *Handbook on the Quality of Indian Wool*, 1942, p. 40.

TABLE 18

Classification of Indian wools and production according to types

(Source :—*Handbook on the Quality of Indian Wool*, p. 40 and 42)

Main Classes	Sub-classes	Mean Diameter of Fibre in mm.	Equivalent worsted Yarn Count*	General Utility	Quantity (Lakh lb)	Percentage of Indian Production
I. North India Clothing White	Superior Clothing	Below 0·032	44's and above for superior clothing	Knitting Yarn, Worsteds, Superior Flannels, etc.	42	4·9
Do.	Clothing	0·032 to 0·042	32's to 44's for clothing	Tweeds, Broad Clothes, Medium Quality Worsteds, Flannels and Knitting Yarns, Woven Patties, etc.	380	44·7
II. North India Rug White	—	0·042 to 0·046	28's to 32's	Medium quality Tweeds, Superior Rugs, Broad Cloths, etc.	105	12·4
III. North India Carpet	White Coloured	Above 0·046	Below 28's	Cheaper Rugs, Army Blankets, Coarse Tweeds Carpet Yarn, etc.	85	10·0
IV. South India Blanket	White Coloured	0·042 to 0·046	28's to 32's	Blankets and Cheaper Rugs, Numdas, Carpet Yarn, etc.	200	23·5
V. South India Tannery	White Coloured	Above 0·046	Below 28's	Coolie Blankets, Carpet and Drugget Yarn, etc.	38	4·5
				Total :	850	(100)

*This does not mean that all the wools are capable of being combed or spun into worsted yarn. Yarn equivalents are used merely for the sake of convenience, as being readily understood in correlation with the mean diameter of the fibre.

Of the net available supplies of wool in India, about 35-40 per cent. was consumed internally. They were used for spinning of yarn, manufacture of country blankets, carpets, rugs, etc., manufacture of clothing material and knitting wools by modern mills and the making of shawls, tweeds, *lohis*, etc., by indigenous methods. Table No. 19 gives the distribution of the available supplies of wool both Indian and foreign, and its utilization in the various trade blocks described above.

From these figures it appears that nearly half the wool supplies in India were used up for the manufacture of country blankets. The mills were the second biggest consumers utilizing about 29 per cent. of the total supplies, followed by the carpet industry using about 12 per cent. The yarn which was produced for sale by the cottage industries, consuming about 5 per cent. of the total wool supplies, was used by the carpet manufacturers.[41]

The woollen mill industry in India produced mostly woollens as distinct from worsted goods. The cottage industry was predominantly woollen. Indian mills, as noted previously, used most of the imported wools and nothing went to the cottage industry. Information regarding the types of indigenous wool used by the Indian mill industry is scanty. The following figures regarding the consumption of various types of indigenous wools by two of the largest mills in Northern India have been furnished by the *Report on the Marketing of Wool and Hair in India* (p. 35) :

	1937	1938	1939
		('000 lbs.)	
Indian Plain Wools ..	1,794	1,290	1,540
Wools from N.W.F.P. ..	403	178	342
Tibet Wools ..	421	563	703
Iraq Wools ..	249	131	156
Total ..	2,867	2,162	2,741

41. *Report on the Marketing of Wool and Hair in India*, 1946, p. 31.

TABLE 19

Utilization of wool in India (Thousand lb.)

(Source :—*Report on the Marketing of Wool and Hair in India*, p. 31, 1946)

	Total available (average 1937-38 to 1939-40)	Manufacture of Yarn for Sale	Utilization			
			Blankets	Carpet factories	Modern mills	Other uses
Assam ..	3	—	3	—	—	—
Bengal ..	430	—	365	Neg	—	65
Bihar ..	1,358	150	1,170	Neg	—	38
Bombay ..	2,955	—	900	—	2,055	—
Central India States ..	293	—	293	—	—	—
C. P. and Berar ..	324	—	324	—	—	—
Hyderabad State ..	1,813	—	1,813	—	—	—
Kashmir ..	1,884	—	1,450	—	Neg	434
Madras ..	2,492	—	1,792	700	—	—
Mysore State ..	4,494	—	2,200	594	1,700	—
N.W.F.P. including Tribal Areas ..	513	—	385	—	—	128
Orissa ..	Neg	—	Neg	—	—	—
Punjab ..	11,074	—	5,494	1,640	3,640	300
Rajputana ..	1,677	—	1,258	—	—	419
Sind and Baluchistan ..	530	—	291	186	—	53
United Provinces ..	12,088	2,082	3,280	2,050	4,615	61
Total India ..	41,928	2,232	21,018	5,170	12,010	1,498
Percentage ..	(100)	(5·3)	(50·1)	(12·3)	(28·7)	(3·6)

During these three years the Indian mills consumed on an average about 12 million lbs. of all types of wool. Of this about 7·7 million lbs. came from countries overseas and the rest from indigenous production and from the neighbouring countries like Tibet, Iraq, etc. Of the latter, judging from the above figures, nearly 70 per cent. were derived from indigenous supplies.[42]

Table No. 20 gives the exports of wool from India excluding re-exports.

TABLE 20

Exports of wool [Excluding Re-exports] from India according to destinations during 1934-9

(Source :—*Review of the Trade of India*)

(Million lb)

	1934-5	1935-6	1936-7	1937-8	1938-9
Total Export ..	34	49	52	38	55
To United Kingdom ..	25·7	34·7	39·1	31	45
To U.S.A. ..	5·6	11·7	9·4	5	9

42. From the information supplied to the Tariff Board it was estimated that in 1934-5 the total consumption of raw wool by the Indian woollen manufacturers amounted to about 37 million lbs. Of this, about 24 million lbs. were consumed by cottage and small factories and the rest (including tops) by woollen mills (*Report of the Indian Tariff Board on the Woollen Textile Industry*, 1935, p. 11). The Report of the Tariff Board further observed that out of the 37 million pounds of wool consumed annually by the Indian woollen industry, at least 30 million lbs. were Indian wool and almost all the balance was East Indian wool of better quality most of which found its natural outlet in India. There was abundant material of the same quality then exported and available for expansion—*Ibid*, p. 42.

India has been an exporter of wool from 1834. The average exports during the pre-World War I quinquennium stood at 32 million lbs., but declined sharply during the next quinquennium to about 21 million lbs. During the quinquennium 1925-6 and 1929-30 exports of domestic wool from India averaged about 43 million lbs. The depression sharply reduced the exports to 30 million lbs. in 1930-1. Then they revived gradually. During the period 1934-5 to 1938-9 total export of domestic wool showed a gradual rise, if the sharp fall in 1937-8 is ignored. The U. K. has always been the principal market for Indian wool. Before World War II the yearly average import of Indian wool into the U.K. accounted for nearly 77 per cent. of the total Indian exports of wool. The share of the U.S.A. increased after World War I up to 1929 but declined since then and had been fluctuating. The U.S.A. has been the second best buyer of Indian wool and in the period before World War I accounted for, on an average, 18 per cent. of the total Indian exports of wool. Exports to other countries were negligible comparatively. They mainly went to the Continental countries.

4. Groundnut

India is the largest producer and exporter of groundnuts in the world. Table No. 21 gives the acreage and production in the principal groundnut producing countries of the world.

On an average during the quinquennium 1933-7 India accounted for about 36 per cent. of the total world acreage under groundnuts and 34 per cent. of the total world production. During the same period Chinese production was about 34 per cent. of the total world production though the area under groundnuts in China was less than 19 per cent. of the total world acreage. Yields in China averaged 1600 lbs. per acre while in India the average yield was about 900 lbs. per acre.

Table No. 22 gives the figures regarding the export of groundnuts from various groundnut producing countries of the world.

TABLE 21

Acreage and Production of Groundnut (in shell) in the World.

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 431)

(In Shell)

Name of the countries	Acreage (Thousand Acres)			Production—nuts in Shell (Thousand Tons)		
	Average 1928-32	Average 1933-7	1938 (a)	1928-32 Average	Average 1933-7	1938
British Empire :						
India (b) ..	6,092	7,000	8.927	2,457	2,822	3,398
Burma ..	533	717	880	157	155	180
Nigeria ..	633(1)	895(3)	—	213	337	255
Gambia ..	Not available	300(4)	—	63	60	47
Tanganyika ..	82(2)	169	—	16	25	5
Other Empire Countries* ..	183	255	—	25	25	—
Total ..	7,523	9,336	—	2,931	3,424	—
Foreign Countries						
China	Not available	3,574	—	Not available	2,672	—
French West Africa— Senegal ..	1,512	1,636	—	437	538	—
Other Countries* ..	652	1,469	—	178	255	—
United States of America ..	1,419	1,661	1,885	423	540	636
Netherland East Indies ..	529	534	647	222	226	283
Argentina ..	136	218	—	62	88	—
Other Foreign Countries* ..	764	923	—	400	460	—
Total ..	5,012	10,015	—	1,722	4,779	—
Grand Total ..	12,535	19,351	—	4,653	8,203	—

(a) The year to which the figures refer is the year in which the crop was harvested.

(b) In India, the crop shown in official statistics as 1938-9 crop is harvested in 1938 and is shown here under 1938. The crops for other years have also been similarly taken for working out averages. Revised figures of acreage and production discussed in the report have been used.

*Where figures for any of the years have not been availables estimates have been formed on the basis of previous year's figures.

(1) Average 4 years—1928-31. (2) Average 4 years 1929-32. (3) Area in 1931. (4) Estimate.

TABLE 22

Exports of Groundnut from the main producing countries during 1928-38

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 342)

(Thousand Tons)

	Average 5 years 1928 to 1932	Average 5 years 1933 to 1937	1938
From India*			
British Ports ..	642	565	835
Portuguese Ports ..	139	96	141
French Ports ..	62	59	51
Kathiawar states Ports ..	16†	54	162
From Nigeria (b) ..	149	236	180
From Gambia (a)	63	60	46
Do. (b) ..	—	—	1
From Tanganyika (b) ..	11	18	4
From French West Africa (a) ..	396	427	363
Do. (b) ..	1	82	167
From China (a) ..	60	33	23
Do. (b) ..	104	80	34
From Mozambique (b) ..	28	26	12
From Portuguese Guiana (a) and (b) ..	22	23	31
From Netherland East Indies (a) ..	3	2	3
Do. (b) ..	16	16	18
From Manchukuo (a)	21	29	22
Do. (b) ..	21	58	59

* Exports from India are for official years April to March. 1938-9 figures are shown under 1938 and similarly for other years. Exports from India to Burma are not included in the figures.

†Average of two years 1931-2 and 1932-3.

(a) Undecorticated, (b) Decorticated.

India was the largest exporter of groundnuts in the world and the exports were mostly of decorticated nuts. French West Africa came second but she exported mainly undecorticated nuts. China, though she produced a crop almost equal to that of India, exported only about 10 per cent. of it and by volume of exports ranked fourth in the world.

Table No. 23 sets out the figures of total acreage and total production of groundnuts in India.

TABLE 23

Total acreage under and production of Groundnut (in Shell) in India

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 6 and 12)

Year	(In Thousand Acres)			(In Thousand Tons)			
	Acreage in areas included in ground-nut crop forecasts Appendix III	Acreage in areas not included in ground-nut crop forecasts Appendix IV	Total	Production in areas included in ground-nut crop forecasts	Production in areas not included in ground-nut crop forecasts	Production in Hyderabad State in excess of figures included in crop forecasts ⅓ of production	Total production in India
1933-4 ..	7,586	182	7,768	3,186	68	125	3,379
1934-5 ..	5.141	196	5.337	1,740	75	75	1,890
1935-6 ..	5,207	254	5,461	2,114	105	96	2,315
1936-7 ..	6,784	332	7,116	2,714	136	—	2,850
1937-8 ..	8,898	423	9,321	3,501	175	—	3,676
Average ..	6,723	277	7 000	2,651	112	59	2,822
1938-9 ..	8,506	421	8,927	3,219	179	—	3,398

The cultivation of the groundnut crop in India increased at a very rapid rate since the turn of the century. Though it is believed that groundnut was introduced into India during the 16th century the area under groundnut in it till the beginning of this century was estimated to be in the neighbourhood of 300,000 acres.[43] From that level it steadily rose and by the beginning of World War I over 2 million acres were estimated to be under groundnut. During World War I there was a fall in acreage but the area again expanded from 1920 onwards. During 1920-30 the area increased by over 2 million acres. This rapid expansion was due firstly to the hardy character of the groundnut plant, which grows under a variety of soil and climate conditions, particularly on soils where other crops cannot be sown economically. Secondly, there was brisk export demand for groundnuts during the last 40 years because of the increasing world demand for vegetable oils. Thirdly, the internal demand for groundnut oil was also brisk as it was a cheap oil having manifold uses.

Madras had the biggest groundnut area in India.[44] It accounted for almost 48 per cent. of the total area and about 54 per cent. of the total production. Bombay accounted for nearly 15 per cent. of the total area and about 17 per cent. of the total production. Hyderabad state had 17 per cent. of the total area and produced about 14 per cent. of the total groundnut supplies. Bombay states, Mysore and the Central Provinces were other areas of importance in connexion with groundnut production.[45]

The nuts grown in India although marketed under various trade names, fall into four main groups, viz., Coromandel, Bold, Peanuts (or Khandesh) and Red Natal ... The percentage of kernels in nuts of different varieties average from 68 per cent to 74 per cent. The nuts

43. *Report on the Marketing of Groundnuts in India*, 1941, p. 3.

44. Everywhere in this paragraph reference is to averages for the quinquennium 1933-4 to 1937-8.

45. It might be noted in paranthesis that the rapid spread of the groundnut crop in India in the last few decades should make us revise our ideas regarding the 'conservative' temperament commonly attributed to the Indian peasant.

of Red Natal and Peanuts (Khandesh) yield a higher percentage of kernels than Coromandel and Bold. Khandesh ranks highest and Bold lowest in respect of the oil content of kernels, the former ranging from 30 per cent to 55 per cent and the latter from 49 per cent to 50 per cent.[46]

Table No. 24 gives the average estimated production of different varieties of groundnuts in the main producing areas in India during 1933-7.

Nearly 56 per cent. of the total production was confined to Coromandel, Peanuts (including Khandesh) and Bold contributed 22 per cent. and 18 per cent. of the total respectively. The remaining was divided between Red Natal and other local and non-descript varieties.

Groundnut is demanded in India for edible purposes as well as for oil extraction. It has been estimated that the average *per capita* consumption of groundnuts in India was about 1·19 lbs. before World War II (based on 1931 population) and that on an average about 7 per cent. of the total production of groundnuts in India was directly used for edible purposes.[47]

The crushing of kernels for the manufacture of groundnut oil (and groundnut cake) was estimated to be absorbing on an average more than two-fifths of the total production in the country. Table No. 25 gives the proportion of total production in India of groundnuts retained in and exported from India during 1909-38.

Groundnuts primarily developed in India as an export crop but steadily the internal demand expanded.

The requirements for seed have tended to increase with the expansion in acreage. The quantities used for edible purposes also indicate an upward trend. The demand in India is, however, mainly dependent on the quantities utilized for crushing. These vary from year to year but a large consumption of groundnut oil in India is indicated especially by the growth of Vanaspati (vegetable product) industry.[48]

The bulk of the internal demand for groundnuts flows from the Indian oil expressing industry. Groundnut oil, was

46. *Ibid*, p. 52.
47. *Ibid*, p. 58.
48. *Ibid*, p. 75.

TABLE 24

Estimated production of different varieties of groundnuts (in shell) in India, 1933-37

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 347)

Name of the Province or State	Production (Average '33-'4 to '37-'8) (Thousands)	Coromandel Proportion Per cent.	Coromandel Quantity (1,000)	Bold Proportion Per cent.	Bold Quantity (1,000)	Peanuts (a) Proportion Per cent.	Peanuts (a) Quantity (1,000)	Red—Natal Proportion Per cent.	Red—Natal Quantity (1,000)	Other Varieties Proportion Per cent.	Other Varieties Quantity (1,000)
British India:											
Madras ..	1,523	88	1,340·2	—	—	10	152·3	2	30·5	—	—
Bombay ..	474	26	123·2	27	128·0	42	199·1	2	9·5	3	14·2
Central Provinces and Berar ..	46	—	—	11	5·1	33	15·2	42	19·3	14	6·4
United Provinces ..	47	—	—	47	22·1	3	1·4	—	—	50	23·5
Punjab and other Provinces ..	8	—	—	25	2·0	10	·8	—	—	65	5·2
Indian States:											
Hyderabad ..	394	20	78·8	33	130·0	47	185·2	—	—	—	—
Mysore ..	41	50	20·5	—	—	49	20·1	—	—	1	·4
Bombay states ..	232	—	—	85	197·2*	11	25·5	1	2·3	3	7·0
Madras states ..	13	89	11·5	—	—	9	1·2	2	·3	—	—
Gwalior ..	6	—	—	85	5·1	3	·2	2	·1	10	·6
Baroda ..	28	—	—	45	13·0	55	15·0	—	—	—	—
Other states ..	10	—	—	30	3·0	20	2·0	—	—	50	5·0
Total ..	2,822	55·8	1,574·2	18·0	505·5	21·9	618·0	2·2	62·0	2·2	62·3

(a) Includes varieties known in trade as Khandesh and Khandesh Quality.

* Includes 1,39,000 tons Superior Bold grown in Kathiawar.

TABLE 25

Proportion of Groundnuts retained in India to total production in India, 1908-38

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 56)

	Average 1909-10 to 1913-4	Average 1923-4 to 1927-8	Average 1928-9 to 1932-3	Average 1933-4 to 1937-8
Production (nuts in shell) thousand tons ..	531*	1,532*	2,477*	2,822
Exports to foreign countries and Burma (in terms of nuts in shell) thousand tons ..	419†	760†	1,218	1,112
Retained in India for seed, crushing and other uses (nuts in shell) thousand tons ..	112	772	1,259	1,710
Percentage of retention in India to total production ..	21%	50%	51%	61%

*Production in main producing areas only.
†Excluding exports from India to Burma

used as an edible oil for cooking and frying, especially in south India and formed the main constituent of Vanaspati. In India its use for industrial purposes, such as in the manufacturing of soap, cosmetics, etc., was limited. It was also used in large quantities for the adulteration of other higher-priced oils, such as *til* and mustard, in areas where the latter were mainly used as edible oils. The internal demand for groundnuts in India was, therefore, in a large measure dependent upon the demand for groundnut oil. The latter in its turn depended largely on the relative prices of other oils in India.

> For instance, at Calcutta the demand for groundnut oil increased or decreased as the margin between mustard oil and groundnut oil widened or narrowed. Similarly, the demand for groundnut oil at Bombay increased or decreased as the margin between *til* oil and groundnut oil widened or narrowed.[49]

The qualitative aspect of the internal demand for groundnuts can be briefly dealt with. No quality considerations generally governed the choice for kernels having low oil content and higher protein percentage were preferred. Bold, Virginia and local varieties met the demand. But the Coromandel variety was also used for edible purposes on a large scale in South India. Khandesh variety was best suited for oil extraction as it had the highest oil content and yielded oil that was of lighter colour as compared with that from other varieties. In Madras, it was reported, that the Coromandel variety was preferred for oil extraction as peanuts gave more sediment in the oil. The mill industry had to use, however, the varieties locally available and had in reality only a limited choice in the selection of varieties of kernels.[50]

A large percentage of the total production in India was exported during the first decade of this century. Gradually, as the internal demand increased a larger percentage came to be retained at home and an increasingly smaller percentage of the total production came to be exported. Table No. 26

49. *Ibid*, p. 82.
50. *Ibid*, p. 67.

TABLE 26

Total Exports of Groundnuts (mostly Kernels) from India, 1928-39

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 31)

(Thousand Tons)

Year	Through British India Ports	Through Kathiawar States Ports	Through French Ports in India	Through Portugese Ports in India	Total
Average 1928-9 to 1932-3 ..	642	6	62	139	849
1933-4 ..	546	30	42	196	814
1934-5 ..	511	37	56	99	703
1935-6 ..	413	61	45	48	567
1936-7 ..	739	52	76	86	953
1937-8 ..	614	91	76	53	834
Average ..	565	54	59	96	774
1938-9 ..	823	162	51	141	1,177

(Excludes Export to Burma).

gives the total exports of groundnuts from India during the decade preceding World War II.

During the first decade of this century India exported on an average 116,000 tons annually and in the next decade this annual average increased to 204,000 tons, though there was a decline during the war years from 1914-8. In the decade following India's exports almost doubled in response to the increased demand. During 1920-1 to 1929-30 the annual exports averaged 534,000 tons. In 1932-3 exports fell sharply, firstly because the world fat market was saturated and secondly because the 1931-2 crop was short. The 1934-5 groundnut crop suffered because of unfavourable weather and total production was small. This was reflected in a decrease in exports during 1935-6. From that year exports were maintained at a high level and the peak was reached during 1938-9 when over one million tons of groundnut kernels were exported.[51]

Table No. 27 gives the share of different countries in the total exports from India.

Figures of exports of groundnuts by destinations for the earlier periods are available only for British India. As more than 70 per cent. of the total exports went out from British India those exports might serve to indicate the broad pattern of distribution of Indian exports according to countries. This information is summarized in Table No. 28.

Throughout the years before World War II France had been the best customer of Indian groundnuts. In the quinquennium preceding the outbreak of World War I France's annual off-take amounted to 169,000 tons on an average i.e., about 80 per cent. of the total exports from British India. During 1923-4 and 1927-8 exports to France averaged 174,000

51. *Ibid*, p. 31. Bulk of the exports of groundnut from India were decorticated. It should be, however, noted that the published statistics of exports of groundnuts include both decorticated and undecorticated nuts and they are simply added together without any attempt at calculating the equivalent of nuts in shell in the form of kernels or *vice versa*. *Ibid*, p. 35.

TABLE 27

Share of different countries in the total exports (mostly Kernels) from India *

(*Source* :—*Report on the Marketing of Groundnuts in India and Burma*, p. 32)

(Average from 1933-4 to 1937-8)

(Thousand tons)

Destinations	Exported from				Total	Percentage share of each country to the total
	British India Ports	Kathiawar State Ports	French Ports in India	Portuguese Ports in India		
United Kingdom ..	96	20·9	—	16·1	133·0	17·2
France ..	135	4·9	25·1	10·1	175·1	22·6
Germany ..	90	5·2	4·0	25·1	124·3	16·1
Netherlands ..	126	8·6	7·0	13·6	155·2	20·1
Italy ..	67	2·4	6·4	14·8	90·6	11·7
Belgium ..	24	1·0	3·1	5·8	33·9	4·4
Egypt ..	—	10·0	8·8	8·3	27·1	3·5
Others ..	27	1·2	4·5	2·6	35·3	4·4
Total ..	565	54·2	58·9	96·4	774·5	100·4

*(Excluding Exports to Burma)

TABLE 23

Exports of Groundnuts (mostly Kernels) to different countries from British India Ports *

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 24)

(Thousand tons)

	Average 1909-10 to 1913-4	Average 1923-4 to 1927-8	Average 1928-9 to 1932-3	Average 1933-4 to 1937-8	1938-9
United Kingdom .	2	21	52	96	96
France ..	169	174	208	135	150
Germany .	7	89	148	90	115
Netherlands .	(a)	64	138	126	232
Italy .	1	40	72	67	3
Belgium .	15	11	7	24	66
Spain .	1	13	(6)	(6)	—
Others .	17	2	17	27	129
Total .	212	414	642	565	823

(a) Less than 100 tons.
(b) 400 tons.

* (Excludes exports to Burma)

tons per year but the share of France in the total exports from British India fell to about 42 per cent. In the next quinquennium France's off-take increased to 208,000 tons and her share declined to about 32 per cent. in the total British Indian exports. Average annual exports to France dropped to 135,000 tons during the quinquennium 1933-4 to 1937-8. This fall was largely to be attributed to the increased production of groundnuts in French colonies and import duties and licensing regulations introduced by France against groundnuts produced outside the French Empire. Of the total groundnuts imported into France, British India supplied 78 per cent. during 1924-8, 70 per cent. during 1929-33 and 45 per cent. during 1933-8.

Before World War I Germany imported only a small quantity of groundnuts from India, about 7000 tons per year on an average. She began to take larger quantities from 1925-6 and annual exports to Germany from British India averaged about 89,000 tons or 22 per cent of the total exports during 1923-4 to 1927-8. This annual off-take increased to about 148,000 tons, during the next quinquennium, accounting for about 23 per cent. of the total exports from British India. Then there came a very sharp fall and only 48,000 tons were taken in 1932-3. In the quinquennium 1933-4 to 1937-8 Germany's annual off-take averaged 90,000 tons or about 16 per cent. of the total exports. The decline was mainly due to the deliberate policy of the Nazi Government to restrict imports of oil seeds into Germany from foreign countries as a part of a drive towards self-sufficiency.

The Netherlands and Italy were insignificant customers of Indian groundnuts before World War I. But with the development of oil crushing, margarine and hydrogenated oils industry in the former and general development of industries in the latter, they bought increasing amounts from India. During the decade immediately preceding World War II, when the off-takes of France and Germany declined, the off-takes of the Netherlands and Italy steadily increased.

The U.K. was also an important customer of Indian groundnuts. Before 1914 her share was about 1 per cent. in the total Indian exports of groundnuts. It increased to 5 per cent. in

the quinquennium 1923-4 to 1927-8 and to over 8 per cent. in the next quinquennium. The Ottawa Agreement granted 10 per cent. preference to imports of groundnuts from Empire countries into the U.K. and the annual off-take of the U.K. during 1934-5 to 1936-7 averaged about 96,000 tons representing about 17 per cent. of the total exports from British India.

The export demand for different varieties may be gauged from Table No. 29 which gives the annual total of monthly shipments during the quinquennium 1933-4 to 1937-8 of different varieties.

The bulk of the export demand was concentrated on the Coromandel variety ('machine decorticated'). Peanuts variety, because of its comparatively thin coat had inferior keeping qualities relatively to the Coromandel variety and exporters quoted a lower price for it than for the Coromandel variety. The Khandesh variety had a higher oil content than the Coromandel but had a higher free fatty acid content[52] and was, therefore, sold during the early thirties at a discount of nearly 2s. 6d. per ton as compared with Coromandels. The shipments of Khandesh variety made after November 1936

52. 'The percentage of free fatty acids is important from the point of view of quality of oil obtained as high free fatty acid renders the kernels unfit for expression and use as edible oil'—*Ibid*, p. 66. 'The causes for the high percentage of free fatty acids are several and diverse. Samples drawn at ports and terminal markets as well as those drawn later in the season show higher free fatty acids than samples from producing areas in the beginning of the season. Free fatty acids obviously tend to increase during the movement and storage of the crop. The practice of wetting the nuts before decortication or hand-shelling accelerates the development of free fatty acids. Again, free fatty acids develop more and faster in damaged kernels, brokens, nooks, and split kernels than in sound whole kernels. Shrivelled and immature kernels also contain more fatty acids than developed kernels. If bags of kernels get wet before being stored in the holds of steamers—as may happen when lightering the produce out to the ships at open ports—they generally develop high free fatty acids during the voyage. The remedy against free fatty acids, therefore, lies in the direction of harvesting mature nuts, drying the produce properly, careful decortication so as to avoid damp or breakage, better storage and avoiding of unnecessary handling.'—*Ibid*, pp. 212-3.

TABLE 29

Totals of monthly shipments of Groundnuts of different varieties during 1933-38

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 64)

(Thousand Tons)

Year	Coromandel*	Khandesh†	Bold‡	Red Natal	Pollachi Red	Total
1933-4 ..	474	65	21	13	4	577
1934-5 ..	443	52	34	7	3	539
1935-6 ..	307	36	34	4	2	383
1936-7 .	430	109	91	10	7	647
1937-8 ..	460	114	91	8	—	673
Average ..	422·8	75·2	54·2	8·4	3·2	563 8
Percentage of each variety to the total	75%	13%	10%	1½%	½%	100
1938-39 ..	578	269	145	16	—	1.008
1939-40 ..	404	132	88	4	—	628

*Includes summer crop 1,800 tons in 1933-4, 20,000 tons in 1936-7, 45,000 tons in 1937-8 28,000 tons in 1938-9 and 5,000 tons in 1939-40.

†Includes Superior Khandesh 4,700 tons in 1937-8, 20,900 tons in 1938-9 and 10,800 tons in 1939-40.

‡Includes Superior Bold (Kathiawar) 42,000 tons in 1936-7, 69,000 tons in 1937-8, 120,000 tons in 1938-9 and 71,000 tons in 1939-40.

showed fatty acids appreciably lower than Coromandels and the former could be sold in the London market during the subsequent two years without the usual discount. The exports of this variety showed an appreciable increase during those years. There were prospects of a further increase in demand from abroad for this variety.[53]

The export demand for groundnuts depends upon a number of complex factors. Groundnut kernels exported from India are almost all used for oil extraction, only a small portion of Bold kernels exported from Bombay and nuts in shell exported from Kathiawar being used for edible purposes.[54] The demand for groundnut, was therefore, primarily dependent on the demand for groundnut oil in the consuming countries. As groundnut oil is used in Europe both for edible and industrial purposes, the demand for this oil and consequently for groundnuts is influenced not only by the prices of groundnuts in relation to other oil seeds but also by the available supplies and relative prices of a number of vegetable oils, animal fats and marine oils such as olive oil, coconut oil, lard, butter and whale oil. The prices of butter largely influence the production of margarine, for the manufacture of which groundnut oil is often one of the oils.[55]

The buying policies of importing countries and the size of the crop in India also affect exports from India. Table No. 30 sets out the relevant data for gauging in a broad manner the operation of these several factors.

It seems from the data contained in Table No. 30 that exports of groundnuts increased with the widening of the spread between the prices of Danish butter and groundnut

53. *Ibid*, pp. 63-7.

54 The demand for edible purposes had increased appreciably in the latter part of the decade preceding World War II owing to the interruption of supplies from China due to the Sino-Japanese War. Before that China used to be the main supplier of the nuts demanded for purely edible purposes. The quantities exported from India for edible use abroad were as follows:

From October 1935 to September 1936	3,500	tons.
,, 1936-7	7,000	,,
,, 1937-8	11,000	,,
,, 1938-9	17,000	,,

Ibid, p. 66.

55. *Ibid*, pp. 67-8.

TABLE 30

Production of Groundnut in the main producing areas of India, exports from India, exports from French West Africa and average annual prices of Danish butter and groundnut oil
(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 88)

Year	Production in India (nuts in shell) Thousand Tons.	Exports from India (mostly Kernels) Thousand Tons.	Exports from French West Africa (nuts in shell and Kernels) 100 tons	Price of Danish Butter at London per ton	Price of Groundnut Oil at Hull per ton	Difference between Price of Butter and Groundnut Oil per ton
				£ s. d.	£ s. d.	£ s. d.
1929-30 ..	2,180	813	504	161 1 8	33 4 0	127 17 8
1930-1 ..	2,592	942	393	131 5 0	25 4 2	106 0 10
1931-2 ..	2,151	622	192	121 15 0	31 10 10	90 4 2
1932-3 ..	2,846	773	355	147 0 0	26 3 9	120 16 3
1933-4 ..	3,186	857	465	97 12 6	19 12 10	77 19 8
1934-5 ..	1,740	514	342	110 12 11	29 17 1	80 15 10
1935-6 ..	2,114	719	444	119 19 7	32 2 4	87 17 3
1936-7 ..	2,714	886	584	120 0 10	32 14 0	87 6 10
1937-38 ..	3,501	1,084	455	133 1 3	24 1 3	109 0 0
1938-9 ..	3,219	1,083	549	134 1 3	21 8 4	112 12 11

*French West Africa being the second largest exporter of groundnuts in the world was an important competitor of India in the international market for groundnuts.

TABLE 31

Average annual prices of Coromandel and Nigerian Kernels in London and Rufisque and Gambian nuts for shipments to Europe

(Source :—*Report on the Marketing of Groundnuts in India and Burma*, p. 86)

Year	Coromandel Kernel	Nigerian Kernels	Rufisque Nuts*	Gambian Nuts
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1931-2 ..	13 10 0	13 6 5	10 4 2	9 15 9
1932-3 ..	13 19 8	14 1 0	11 14 0	10 13 4
1933-4 ..	10 1 6	9 19 8	8 16 3	7 16 6
1934-5 ..	11 1 5	10 18 3	10 5 6	8 16 4
1935-6 ..	14 4 11	14 8 6	14 6 10	10 15 3
1936-7 ..	14 18 10	14 16 9	14 1 5	11 3 9
1937-8 ..	12 19 5	13 1 1	10 10 1	9 15 11
1938-9 ..	10 6 6	10 4 8	9 0 7	7 15 1

*Prices in French francs per 100 kilos have been converted to prices per ton in sterling at the rates of exchange ruling on the dates of quotations.

oil and *vice versa*. The influence on exports of the comparative sizes of crops in India and French West Africa is also abvious from the table.

Table No. 31 gives the prices of the main Indian variety of groundnuts exported and those of groundnuts exported from other countries.

During the period under consideration because of the discriminating trade policies of different Empires and countries, groundnuts produced in countries in one Empire could only compete with one another on somewhat equal terms. If the respective prices and exports of the Coromandels and the Nigerian are studied, it is seen that exports were responsive to changes in their relative prices. Indian prices of groundnuts generally followed the prices at London. There was close sympathy between Madras and London prices because Madras prices were largely influenced by the buying limits of chief exporting firms. Because of the organized 'futures' market in groundnuts in Bombay and considerable local demand the prices at Bombay, though generally following the London prices, were often out of parity with them.[56]

5. Linseed

India has been for a period of more than half a century an important producer and exporter of linseed in the world next only to Argentina. Table No. 32 shows the acreage and production of linseed in the main producing countries in the world as well as the exports from them.

Taking an average of the first 5 years of the decade preceding World War II, Argentina, the largest producer and exporter of linseed in the world, accounted for about 47 per cent. of the world acreage, and about 64 per cent. of the total world production. Argentina exported on an average about 94 per cent. of its total crop during the same period. India accounted for about 28 per cent. of the world acreage and 17 per cent. of the world production during those five years.

56. For further details see *Ibid*, pp. 88-90.

TABLE 32

Acreage, Production and Exports of Linseed in the Main Producing Countries of the World.
(Source :—*Report on the Marketing of Linseed in India,* 1938, p 274)

Countries	Area (Thousand Acres)				Production (Thousand Tons)				Export (Thousand Tons)			
	Average 1909-13	Average 1931-5	1936*	1937*	Average 1909-13	Average 1931-5	1936*	1937*	Average 1909-13	Average 1931-5	1936*	1937*
India ..	3,818	3,708	3,892	4,021	497	474	478	475	368	188	309	271
Argentina ..	3,798	6,174	6,533	7,023†	778	1,775	1.850	1,560	677	1,667	1,454	1,773
U.S.A. ..	2,488	1,770	1,180	924	489	251	148	174	2	—	—	—
Canada ..	1,035	377	468	241	302	44	45	18	183	10	5	(b)
Other Countries ..	1,521	1,245	1,799	1,305	231	240	391	273	276	20	38	124
U.S.S.R.‡ ..	3,200	6,766	5,798	5,855	479	750	(a)	(a)	134	—	—	—
World Total (Excluding U.S.S.R.) ..	12,660	13,274	13,872	13,514	2.297	2,784	2,912	2,500	1,506	1,885	1,806	2,168

*Years indicated are those of harvest. In Argentina crop is harvested from November to January next year.
†Area sown.
‡Total area for flax and linseed.
(a) Not available.
(b) 300 tons.

Indian exports of linseed were liable to considerable fluctuations. Broadly speaking 'India now exports about half of her linseed crop.'[57] The U.S.S.R. was also a large producer of linseed but almost the whole of her production was consumed internally. Both U.S.A. and Canada were important producers but they had to import additional supplies to meet their internal requirements.

Table No. 33 gives the acreage and production of linseed in India from 1925-6 onwards.

From 4,211,000 acres in 1925-6 the total acreage in India declined to 3,506,000 acres in 1930-1. In the next year acreage sharply increased but declined during the next two years. From 1934-5 the acreage steadily expanded. Total production varied, during the above period, between a minimum of 401,000 tons in 1928-9 and a maximum of 504,000 tons in 1932-3. The trend of production did not always follow the trend in acreage.[58] The main linseed producing areas in India were the C.P., the U.P., Bihar and the Hyderabad state, accounting for nearly 75 per cent. of the total area sown to linseed in the country. On the average of the years 1934-5 and 1936-7 C.P. accounted for about 28 per cent. of the total area under linseed, the U.P. for about 22 per cent., Bihar for about 15 per cent. and Hyderabad for about 11 per cent.[59]

According to the findings of the Agricultural Research Institute at Pusa in 1922 there were 26 distinct types of linseed in India each distinguished by difference in colour, in the size of the seed, and in other botanical characteristics. In commercial classification the size of the seed was the main consideration. The trade broadly recognized two types of linseed —Bold Brown and Small Brown.[60]

Bombay Bold, it is found, normally consists of linseed having less than 135 grains per gramme. In the case of Calcutta Bold the seed is smaller and ranges from 145 up to 153 grains per gramme, at which

57. *Report on the Marketing of Linseed in India,* 1938, p. 1.
58. *Ibid,* p. 14.
59. *Ibid,* pp. 5, 6.
60. *Ibid,* pp. 14-5.

TABLE 33

Acreage and Production of Linseed in India during 1925-37

(Sources:—*Report on the Marketing of Linseed in India,* 1938, p. 5 and 13)

Year	(In Thousand Acres)					(In Thousand Tons)			
	Area reported in estimates of Area and Yield	Area in States and Provinces published only in Agricultural Statistics	Area in States not reported at all (approx)	Adjustments for Hyderabad, Kotah and Bhopal	Revised Grand Total	Production reported in the estimates of Area and Yield	Production in areas for which forecasts are not made	Difference between the published and revised out-turns in Hyderabad	Revised Grand Total
Average 1925-26 to 1929-30 ..	3,230	226	211	+137	3,804	372	57	+12	441
1930-31 ..	3,009	221	211	+ 65	3,506	377	57	+ 6	440
1931-32 ..	3,309	246	211	+ 58	3,824	416	57	+ 3	476
1932-33 ..	3,299	220	211	— 19	3,711	406	57	+41	504
1933-34 ..	3,261	186	211	— 2	3,656	376	57	+25	458
1934-35 ..	3,410	220	211	+ 10	3,851	420	57	+15	492
Average 1930-31 to 1934-35 ..	3,258	219	211	22	3,710	399	57	+18	474
1935-36 ..	3,457	224	211	*	3,892	388	57	+33	478
1936-37 ..	3,594 (a)	216	211	*	4,021	418 (b)	57	—	475

* Not yet available. (a) Revised figure 3,677. (b) Do. 420.

†The official forecasts of the linseed crop are found to be considerable underestimates. *The Report on the Marketing of Linseed in India* observes: 'Taking an average for the twelve years 1925-6—1936-7 the actual area under linseed in India was at least 4,50,000 acres greater than the area given in the final forecasts—a difference of over 13 per cent. Similarly the revised outturn over the same period averages about 72,000 tons or 19 per cent. larger than the production shown in *Estimates of Area and Yield of Principal Crops in India*'. Footnote, p. 1.

point it ceases to be called Bold and becomes Small ... Laboratory analysis shows that within limits, the larger the seed the higher the percentage of oil. Samples drawn from Central India, with 112 grains per gramme show an oil content of 45½ per cent. whereas some samples of small linseed in Bengal give a figure as low as 38¼ per cent. The larger the grain the higher the oil content holds good as a general principle until the number of grains becomes less than 105 per gramme, when apparently the size of the seed becomes affected by a thickening and coarsening of the seed coat and no increase in oil content can be observed.[61]

Table No. 34 gives the production of different types of linseed in India.

Of the total production about 40 per cent. consisted of Bombay Bold, less than 10 per cent. of Calcutta Bold and rather more than half of Calcutta small. Small type of seed was generally grown in the Gangetic plain and Bengal. The Bold variety was generally cultivated in the C. P. and the C. I. states.

The linseed crop in India was grown mainly for its seed and not for the fibre as in the U. S. S. R. and some European countries. It was mainly used for oil extraction and also to a small extent for edible purposes. Table No. 35 shows the quantities of linseed retained in India, those exported and the percentage of the former to total production from 1926-7 to 1937-8.

It appears from the figures that the proportion of total supplies retained and exported were extremely variable and showed no trend. This was due to the fluctuating nature of the demand both internal and external. The bulk of the internal demand for linseed flows from the oil crushing industry. Statistical information with regard to this industry is insufficient but according to information collected in special inquiries, on an average 42 per cent. of the total production of linseed in India was used for oil extraction at home between 1934-5 and 1936-7.[62] The choice as regards the type of linseed

61. *Ibid*, p. 5.
62. *Ibid*, p. 45.

TABLE 34

Approximate Production of Different Qualities of Linseed in India during 1933-36

(Source :—*Report on the Marketing of Linseed in India*, 1938, p. 284)

	Approximate total Production (Average 1933-4 to 1935-6 crops) (Thousand tons)	Brown Linseed							
		White and Yellow Linseed		Bombay Bold		Calcutta Bold		Small	
		Quantity ('000 tons)	Proportion %	Quantity ('000 tons)	Proportion %	Quantity ('000 tons)	Proportion %	Quantity ('000 tons)	Proportion %
United Provinces with States	135	—	—	27·0	20	13·5	10	94·5	70
Bihar (and Orissa)	87	—	—	—	—	21·7	25	65·3	75
Central Provinces with States	91	2·7	3	56·4	62	—	—	31·9	35
Central India and Gwalior State	47	0·9	2	25 9	55	1·4	3	18·8	40
Bengal	22	—	—	—	—	—	—	22	100
Hyderabad	55	—	—	52·2	95	2·8	5	—	—
Bombay with States	14	—	—	11·2	80	1·4	10	1·4	10
Rajputana States	14	0·3	2	13·7	98	—	—	—	—
Kashmir	5	—	—	—	—	—	—	5	100
Punjab	3	—	—	—	—	—	—	3	100
Assam, Madras and others	3	—	—	—	—	—	—	3	100
Total	476	3·9	0·8	186·4	39·1	40·8	8·6	244·9	51·5

TABLE 35

Quantities of Linseed produced, exported and retained in India during 1924-38

(Source :—*Report on the Marketing of Linseed in India*, 1938, p. 289)

Year	Acreage '000 acres	Production ('000 tons)	Imports '000 tons	Total supplies	Export '000 tons	Quantity retained in India '000 tons	Percentage of quantity retained to production
1924-5 ..	3,724	463	5	468	371	97	21·0
1925-6 ..	3,695	501	14	515	308	207	41·3
1926-7 ..	4,211	466	21	487	192	295	63·3
1927-8 ..	3,820	473	25	498	223	275	58·1
1928-9 ..	3,824	422	15	437	157	280	66·4
1929-30 ..	3,654	401	21	422	248	174	43·4
1930-1 ..	3,510	442	18	460	257	203	45·9
1931-2 ..	3,506	440	15	455	120*	335	76·1
1932-3 ..	3,824	476	16	492	72*	420	88·2
1933-4 ..	3,711	504	16	520	383*	137	27·2
1934-5 ..	3,656	458	10	468	240*	228	49·8
1935-6 ..	3,843	492	14	506	165*	341	69·3
1936-7 ..	3,892	478	13	491	296*	195	40·8
1937-8 ..	4,021	475	11	436	226	260	54·7

*Including exports from Mormugao (Portuguese India).

crushed was very limited. The mills and the *ghanis* generally drew their supplies from the nearest producing areas. In a few localities more than one type of linseed was economically available, as for instance, in Calcutta and there the mills preferred the Bold variety because of its higher oil content and relative cleanliness.[63]

> The variable nature of the internal demand is due to various causes but generally to the amount of linseed oil used for the adulteration of other oils, particularly mustard. It appears from enquiries that only one-third of the linseed oil produced in India is used for industrial purposes, e.g., in the manufacture of paints, varnishes, etc., and the remaining two-thirds for edible purposes. In the Central Provinces and states of Central India, linseed oil is used as such for cooking but in other areas of Northern India it is almost entirely used as an adulterant of mustard oil, and for this purpose groundnut oil is its main competitor ... When mustard oil is much dearer than linseed oil there is a strong incentive to increase the amount of adulteration but if groundnut oil should be cheaper than linseed oil, it will be used instead of linseed oil.[64]

When linseed oil was the cheapest of the three, internal consumption increased but when conditions were the opposite, more linseed was available for export. This is illustrated by the data contained in Table No. 36.

The exports of linseed from India were mainly used for extraction of oil for industrial uses. As already remarked the exports of linseed from India were liable to large fluctuations. The volume of exports was governed, on the one hand, by the relative prices of Indian and Plate linseed in the London market[65] and the internal demand for linseed as reflected in the price margins between linseed and groundnut oils.[66]

63. *Ibid*, p. 47.

64. *Ibid*, p. 61.

65. London market was the most important market in this connexion; for the U.K. was the largest buyer of both Indian and Plate Linseed.

66. See diagram facing p. 76 in the *Report on the Marketing of Linseed in India*, 1938.

TABLE 36

Average Annual Prices of Mustard, Groundnut and Linseed Oils at Calcutta (ex-mill) (per maund)

(Source :—*Report on the Marketing of Linseed in India*, 1938, p. 56.)

Year	Mustard Oil	Linseed Oil	Groundnut Oil	Excess of Mustard oil price over Linseed oil price	Excess of Groundnut oil price over Linseed oil price	Quantity of Linseed Retained in India (in thousand tons)
	Rs. As. Ps	Rs As. Ps	Rs. As. Ps.	Rs. As. Ps.	Rs. As. Ps.	
1931-2 ..	14 6 4	10 4 8	12 15 0	4 1 8	2 10 4	335
1932-3 ..	12 14 8	9 4 4	13 15 6	3 10 4	4 11 2	420
1933-4 ..	11 0 2	8 5 0	9 11 0	2 11 2	1 6 0	137
1934-5 ..	13 2 8	9 6 4	10 0 10	3 12 4	0 10 6	228
1935-6 ..	15 0 2	10 14 6	13 7 10	4 1 8	2 9 4	341
1936-7 ..	14 2 4	11 12 2	13 10 4	2 6 4	1 14 2	195
1937-8 ..	16 15 0	13 2 0	13 15 6	3 13 0	0 13 6	260

In the London market Indian linseed usually commanded a premium over La Plata linseed. The permium was due to the 4 per cent higher oil content of Indian linseed as also to the fact that Indian linseed was quoted on a clean basis while that of Argentina allowed for 4 per cent refraction. Oil from the Indian variety was also reputed to have better drying properties than oil from other types of linseed.[67] The premium varied from time to time. 'The highest premium attained by Calcutta linseed over Plate linseed since 1926 occurred in December 1928 and was £4-5-0 per ton and the lowest 3s. 9d. per ton in September 1929'.[68]

The price of Indian linseed was normally expected to be 15 per cent higher than that of Argentina.[69] Apart from the intrinsic difference the premium that Indian linseed commanded was very largely governed by the size of the Argentina crop. Table No. 37 summarizes the relevant data in this connexion.

The close correspondence between the premium of Indian over La Plata linseed and the volume of linseed exports from India can be very clearly seen from these figures. They also show that the size of the Argentina crop largely determined the premium. When the premium was low, exports increased and *vice versa*. It can be also observed that their relative intrinsic values did not control their respective prices.

Table No. 38 gives the exports of Indian linseed according to their destinations during the period from 1926-7 to 1937-8.

The U.K. had been on an average the largest individual customer of Indian linseed since World War I, though in some years the off-take of France and Italy was larger than that of the U.K. In the seven years before the Ottawa Agreement, Continental Europe (mainly France, Italy, Belgium and Germany) absorbed more than 55 per cent. of India's exports while the share of the U.K. was less than 26 per cent. Under the Ottawa Agreement Indian linseed exports to the U.K.

67. *Ibid*, p. 46.
68. *Ibid*, p. 70.
69. *Ibid*, p. 55.

TABLE 37

Comparison of Premiums for Calcutta over Plate Linseed and Exports from India

(Source :—*Report on the Marketing of Linseed in India*, 1938, p. 55)

Year	Premium for Calcutta Linseed over Plate Linseed C.I.P. London (Per ton)		Premium for Calcutta Linseed over Plate Linseed C.I.P. London (Percentage of Plate price)	Argentine Production (Million tons)	Indian Production (Previous year's crop) (Thousand tons)	Exports from India (Thousand tons)	Percentage of Exports from India to Production
	£	s. d.					
1927-8 ..	1	19 2	12	2·20	473	223	47·2
1928-9 ..	2	14 10	17	2·06	422	157	37·2
1929-30 ..	1	13 10	9	1·95	401	248	61·9
1930-1 ..	2	2 6	16	1·25	442	257	58·2
1931-2 ..	2	4 9	25	1·95	440	120	27·3
1932-3 ..	1	17 6	22	2·22	476	72	15·1
1933-4 ..	1	4 2	12	1·55	504	383	76·0
1934-5 ..	1	12 11	16	1·56	458	240	52·4
1935-6 ..	2	1 5	20	2·00	492	165	33·5
1936-7 ..	1	18 8	17	1·40	478	296	61·9
1937-8 ..	1	17 9	15	1·82	475	226	47·6

TABLE 38

Exports of Linseed from India according to their Destinations during 1926-38

(Source :—*Report on the Marketing of Linseed in India*, 1938, p. 286-287)

Countries	1926-7	1927-8	1928-9	1929-30	1930-1	1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8
	(in thousand tons)											
United Kingdom ..	49	57	18	79	58	14	14	176	104	90	218	170
Australia ..	16	20	22	23	11	10	10	12	21	10	18	22
Others ..	1	—	1	—	—	—	—	—	7	—	7	4
Total British Empire ..	66	77	41	102	69	24	24	188	132	100	243	196
Germany ..	13	18	6	10	10	10	9	10	5	8	14	7
Netherlands ..	5	5	—	7	23	—	—	4	1	—	6	—
Belgium ..	17	6	2	13	13	1	—	10	1	4	—	2
France ..	51	61	47	51	25	44	22	43	14	8	7	6
Spain ..	6	4	7	7	9	4	2	9	4	2	1	—
Italy ..	29	41	28	28	33	15	11	22	10	7	1	1
Others ..	2	2	3	4	3	3	3	7	5	5	7	2
Total European Countries .	123	137	93	120	116	77	47	105	40	34	36	18
Japan ..	3	8	20	10	3	6	—	1	—	—	—	—
U. S. A. ..	—	—	—	2	—	—	—	85	65	31	17	7
Others ..	—	1	3	14	69	13	1	—	1	—	—	5
Total Foreign Countries ..	126	146	116	146	188	96	48	191	106	65	53	12
Exported from Bengal Ports ..	114	134	77	168	154	75	47	189	97	82	119	115
Exported from Bombay Ports ..	78	89	80	80	103	45	25	185	130	76	169	100
Exported from Madras Ports ..	—	—	—	—	—	—	—	5	11	7	8	11
Grand Total ..	192	223	157	248	257	120	72	379	238	165	296	226

were given a preference of 10 per cent. During the first year after the Ottawa Agreement i.e., 1932-3, 65 per cent. of the Indian export of linseed went to Continental Europe and only 20 per cent. to the U.K. The trend was reversed from the following year and in 1937-8 the share of the U.K. had risen to 75 per cent. and that of the Continental countries had dropped to less than 8 per cent.

One significant feature of the decade before World War II was the appearance of the U.S.A. as a buyer of Indian linseed for a short period during 1933-4 and 1935-6. This was due to the succession of bad crops in Argentina, which normally supplied the United States market as well as bad crops in the U.S.A. After 1935-6 this demand sharply declined both because of the improvement in domestic production and good harvests in Argentina.

As will be obvious from Table No. 38 above during 7 pre-Ottawa years Calcutta linseed averaged 16 per cent. dearer than La Plata linseed. Under the Ottawa Agreement Indian linseed was given a preference in the Empire market by the imposition of a 10 per cent. duty on non-Empire linseed. In spite of this duty during the succeeding 5 years the premium commanded by Indian over La Plata linseed in London averaged precisely the same. It would appear that the operation of the Ottawa preference helped to maintain the premium on Indian linseed at a figure commensurate with the difference in intrinsic value, but this was offset to some extent by the effect of the drawback granted on linseed oil exported from the U.K. The rate of this drawback was modified from time to time in view of the current values of linseed, being for example, 30s. in 1933 and 60s. from November 1934.[70]

Buyers of Indian linseed abroad, as their compeers at home, did not pay any regard to the quality of the linseed purchased.

The price factor, i e., the relative values of the small linseed exported through Calcutta and the bold linseed shipped from Bombay, wholly

70. *Ibid*, p. 94.

determines the buying policy of the exporting houses supplying linseed to the United Kingdom and Continental millers. In recent years, however, it has been observed that whenever the United States is in the market for Indian linseed, a definite preference is given by American buyers to Bombay Bold. This is largely due to the fact that freights to Atlantic coast sea ports in the United States are usually cheaper from Bombay than from Calcutta, and when reckoned in terms of oil, they work out still lower owing to the higher oil content of Bombay Bold.[71]

So far as quality is concerned Bold seed generally commands a premium over Small at the port markets ... The premium of Bold over Small is only about 2½ per cent. in Bombay and about half that amount in Calcutta. This does not appear to be adequate in view of the much higher oil content of the Bold seed and the position becomes still more anomalous when, as sometimes happens, Bombay Bold is sold at a price lower than that of Calcutta Small. The disadvantageous selling price of Bold seed in Bombay may be accounted for by the fact that in Calcutta, and in the regions serving Calcutta, the milling of linseed is an industry of some importance and tends to give stability by lessening the dependence of prices on export trade. This factor also exercises a stabilizing effect on the seasonal fluctuation in prices.[72]

6. Castor Seed

India was at one time the largest producer of castor seed in the world, but with the rapid growth of that crop in Brazil, India came to occupy a second place. Figures of production and acreage for different producing countries are not available. The production of castor seed in Brazil is estimated to be generally about 1½ times the Indian crop.[73] 'Incomplete data indicate that the total world production of castor beans is approximately 330,000 short tons. About 250,000 short tons are produced in Brazil and British India, while Manchuria and the Soviet Union together account for from 50,000 to 60,000 short tons. Small quantities probably not more than 2,000 short tons, are produced in Argentina'.[74]

71. *Ibid*, p. 46.
72. *Ibid*, pp. 94-5.
73. *Burns*, op. cit., p. 76.
74. *Foreign Trade of Latin America*, Part III, U.S Tariff Commission, 1942, p. 146.

Table No. 39 gives the exports of castor seed from the principal producing countries of the world.

TABLE 39

Exports of Castorseed from the Principal Producing Countries

(Source :—*Imperial Economic Committee, Vegetable Oils and Oil-Seeds*, 1938

(Thousand Tons)

	1930	1931	1932	1933	1934	1935	1936	1937
Empire Countries								
India (a) ..	84	113	86	94	75	66	44	53
Foreign Countries								
Brazil ..	22	19	12	35	42	70	100	118
Manchuria ..	(b)	(b)	7	16	24	29	20	27
Netherlands E. Indies	6	5	6	8	6	5	4	7
Angola ..	1	1	1	1	1	4	2	4
Mozambique ..	1	1	(c)	1	1	2	1	1
French W. Africa ..	1	(c)	(c)	1	2	1	1	1
Soviet Union ..	7	—	8	3	—	—	—	—
Total of above countries ..	122	139	120	159	151	177	172	211

(a) Including exports through Kathiawar (States) Ports from 1932.
(b) Not Available.
(c) Less than 500 tons.

India was the leading exporter of castor seed up to 1934 but after that Brazil took the lead. In 1936 and 1937 Brazilian exports were double those from India.

Table No. 40 gives the acreage and production of castor seed in India by the main producing areas from 1931-2 to 1938-9.[75]

75. The figures contained in the table are very defective and probably lean on the side of an underestimate. This is particularly so with regard to the figures for Hyderabad state (cf. Burns, op. cit., p. 12). They only indicate the broader trends.

Castor plant is hardy and grows under diverse conditions. It is either grown as a mixed crop or as a border to other crops, solid fields of it being found mainly in Hyderabad State.[76] The figures show broadly a declining trend since 1932-3 in regard to both acreage and yield. Madras showed a decline and in Dr. Burn's opinion the reduction was probably due to the preference for groundnut.

> While it cannot be said that there are many named varieties, there is a multitude of forms differing from one another in height, in colour of stem, in leaf and capsule, in the amount of wax (bloom) on the stem in earliness or lateness, in size, in colour of the seed-coat and in oil percentage.....For commercial purposes the two main varieties are the small and the bold seeds. The small seeds generally contain more oil than bold seeds.[77]

Figures regarding the area under these main types or regarding the production of each are not available.

The demand for castor seed was mainly dependent upon the demand for the oil it yielded. Partly also the demand for castor seed cake influenced the demand for castor seed. 'Castor oil was used in the preparation of sulphonated or soluble oils for the textile industry in the manufacture of synthetic resins, in the preparation of leather, linoleum, paints, varnishes and lacquers, and for medicinal purposes'.[78] In India it was formerly used as an illuminant. It is being increasingly used in aircrafts. 'Castor cake is a valuable manure and much used for manuring sugarcane and tea. Since it contains a poisonous principle (ricin), it is not suitable for use as a feeding cake. Its nitrogen percentage is also lower than that of groundnut cake. But it has a considerable vogue as a manure, being much liked by the sugarcane cultivators of the Bombay-Deccan and has the reputation (scientifically not tested) of keeping off white ants'.[79]

It is difficult to estimate the off-take of castor seed by the Indian oil pressing industry. No figures regarding the latter

76. Burns, *op. cit.*, p. 76.
77. *Ibid*, p. 76.
78. *Foreign Trade of Latin America*, 1942, p. 146.
79. Burns, *op. cit.*, p. 78.

TABLE 40

Acreage and Production of Castor seed in India during 1931-39

(Source :—*Estimates of Area and Yield of Principal Crops in India*, 1940-41, p. 24)

Provinces and States	(Area in Acres)							
	1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
British Provinces								
Bihar (f) ..	54,000	5,2,000	56,000	55,000	35,000	33,000	34,000	34,000
Bombay ..	(c) 77,000	(c) 81,000	57,000	43,000	43,000	47,000	42,000	46,000
C.P. and Berar ..	38,000	39,000	37,000	32,000	29,000	31,000	34,000	28,000
Madras ..	3,30,000	3,55,000	3,05,000	2,78,000	2,52,000	2,64,000	2,47,000	2,70,000
Orissa ..	—	—	—	—	20,000	25,000	20,000	20,000
Sind ..	(e)	(e)	8,000	1,000	1,000	1,000	7,000	5,000
United Provinces (a) ..	10,000	15,000	8,000	7,000	7,000	9,000	13,000	10,000
Total British Provinces ..	5,09,000	5,42,000	4,71,000	4,16,000	3,87,000	4,10,000	3,97,000	4,13,000
Indian States								
Baroda ..	66,000	78,000	81,000	76,000	83,000	68,000	88,000	70,000
Bombay States ..	46,000	48,000	51,000	76,000	53,000	47,000	47,000	66,000
Hyderabad ..	8,56,000	8,38,000	8,25,000	7,86,000	8,34,000	7,81,000	5,20,000	5,50,000
Mysore ..	1,06,000	1,11,000	1,06,000	94,000	1,01,000	1,03,000	96,000	99,000
Total Indian States ..	10,74,000	10,75,000	10,63,000	10,32,000	10,71,000	9,99,000	7,51,000	7,85,000
Grand Total ..	15,83,000	16,17,000	15,34,000	14,48,000	14,58,000	14,09,000	11,48,000	11,98,000

	Production (Tons)							
British Provinces								
Bihar (f) ..	8,000	8,000	9,000	8,000	5,000	5,000	5,000	4,000
Bombay ..	(c) 12,000	(c) 12,000	7,000	4,000	6,000	6,000	6,000	6,000
C.P. and Berar ..	8,000	7,000	7,000	6,000	4,000	6,000	6,000	5,000
Madras ..	33,000	38,000	31,000	23,000	23,000	25,000	22,000	22,000
Orissa ..	—	—	—	—	2,000	3,000	2,000	2,000
Sind ..	(e)	(e)	1,000	(b)	(b)	(b)	(d)	(d)
United Provinces (a)	3,000	3,000	2,000	2,000	2,000	3,000	4,000	4,000
Total British Provinces ..	64,000	68,000	57,000	43,000	42,000	48,000	45,000	43,000
Indian States								
Baroda ..	6,000	7,000	5,000	2,000	7,000	2,000	7,000	6,000
Bombay States ..	7,000	9,000	8,000	8,000	10,000	6,000	7,000	10,000
Hyderabad ..	63,000	61,000	67,000	47,000	57,000	66,000	40,000	45,000
Mysore ..	6,000	6,000	6,000	5,000	5,000	6,000	5,000	7,000
Total Indian States ..	82,000	83,000	86,000	62,000	79,000	80,000	59,000	68,000
Grand Total ..	1,46,000	1,51,000	1,43,000	1,05,000	1,21,000	1,28,000	1,04,000	1,11,000

(a) Excludes estimates of mixed up crops for which there is no reliable Data at present.
(b) Below 100 tons.
(c) Including Sind.
(d) Below 500 tons.
(e) Included under Bombay.
(f) Figures for years prior to 1935-36 relate to "Bihar and Orissa".

are available. A very rough idea of the castor seed supplies retained in India can be had by comparing exports and total production. Table No. 41 gives the total production of castor-seed in India and the total exports from British India.

TABLE 41

Production in and Exports of Castor seed from India, 1931-39

(Source :—*Estimates of Area and Yield of Principal Crops in India and Review of Trade of India*)

	1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
Production (Thousand Tons) ..	146	151	143	105	121	128	104	111
Exports (Thousand Tons) ..	104	86	82	69	60	43	42	8
Percentage of Exports to Production ..	29	44	57	68	50	33	40	7

The figures are obviously imperfect but the broad trend indicated by them seems to be that upto 1934-5 an increasing proportion of the total castor seed production in India was being exported. Since then, however, the proportion rapidly declined and in 1938-9 it dwindled down to an almost insignificant proportion. This taken together with the export of castor[80] oil from India which increased during this period can be taken to indicate the expanding internal demand for castor seed for pressing.

As already remarked the exports of castor seed from India have continuously declined throughout the decade preceding World War II. The growing competition from Brazil as well

80. *Imperial Economic Committee*, 1948, p. 47. Exports of Castor oil from India were : ('000 tons).

1930	1931	1932	1933	1934	1935	1936	1937
2·1	3·3	5·0	5·8	5·5	5·7	6·0	7·5

as an expanding internal demand were mainly responsible for this decline.

Brazilian castor seed commanded a premium over the Indian variety in the international market. A report was sent to the Imperial Council of Agricultural Research in India in 1933 on the position of the Indian castor seed in the U.K., showing the competition it met with from castor seed of foreign origin and how it compared in oil content, price, etc., with foreign seed.

The inquiry made in connexion with this report showed that there were no complaints regarding the grading, quality or marketing of Indian castor seed, though the Brazilian seed which had been its chief competitor before the imposition of the 10 per cent. import duty commanded a small premium over Indian castorseed on account of a somewhat higher oil content.[81]

Table No. 42 gives the exports of castor seed from India according to their destinations during the quinquennium perceding the outbreak of World War II.

TABLE 42

Exports of Castor seed from India According to their Destinations

(Source :—*Review of the Trade of India*)

	Pre-war Average	Post-war Average	1934-5	1935-6	1936-7	1937-8	1938-9
United Kingdom ..	539	105	264	224	205	127	14
U.S.A. ..	118	188	139	40	17	—	—
Belgium ..	137	41	—	7	36	12	—
France ..	157	88	92	146	65	49	2
Italy ..	110	43	51	67	14	68	—
Other Countries ..	75	18	141	116	93	165	60
Total ..	1,136	483	690	600	430	421	76

81. *Report on the Work of the Indian Trade Commissioner during* 1933-4, Sir H. A. F. Lindsay, p 37.

The U.K. had been India's best customer as regards castor seed before World War I. But after 1919 the U.S.A. was the largest buyer of castor seeds in India; 40 to 50 per cent. of the total exports of castor seed from India went to the United States during 1919 and 1930. After that year the U.S.A.'s off-take declined rapidly until in 1937-8 she disappeared from the Indian castor seed market altogether. This development was mainly the result of competition from Brazil in the U.S.A. market.

The U.K. was the second best buyer of castor seed on the Indian market during 1919-30. India completely dominated the castor seed market in the U.K. supplying more than about 90 per cent. of the total imports of castor seed into it. India's share in the U.K.'s imports was 91 in 1933 and 1934 but fell to 70 per cent. in 1936 and to 63 per cent. in 1937. The 10 per cent. preference duty on castor seeds entering the U.K. under the Ottawa Agreement of 1933 was obviously of no use in bettering the competitive position of Indian castor seed in the U.K. market.

7. Tea

After cotton and jute tea was India's third largest export commodity. On an average during the decade preceding World War II tea exports in terms of value accounted for from 10 to 13 per cent. of the total exports from India. Excepting China, India was the largest producer of tea in the world; but she was the largest exporter of tea in the world. Table No. 43 gives the acreage and production of tea in the principal tea-producing countries of the world during the quinquennium preceding the outbreak of World War II.

Of the total world acreage (excluding China) under tea, India accounted for about 37 per cent, Ceylon for about 25 per cent and the Netherlands East Indies for about 22 per cent. Of the total world production (ex-China) of tea India produced about 40 per cent., Ceylon about 21 per cent. and the Netherlands East Indies about 16 per cent. Chinese production was estimated around 900 million pounds.[82] China, Japan

82. *Tea Under International Regulation, Wickizer,* 1943, p. 29.

TABLE 43

Acreage and Production of Tea in the Main Producing Countries of the World

(Source :—*Tea Under International Regulation*, Wickizer, 1944, pp. 29-30)

(Thousand Acres)

	Average 1930-34	1935	1936	1937	1938	1939
India ..	—	832	834	834	853	—
Ceylon ..	—	557	558	559	556	—
Netherlands Indies ..	—	489	506	499	504	—
Taiwan (Formosa) ..	—	101	104	104	101	—
Japan ..	—	96	96	99	99	—
U.S.S.R. ..	—	82	96	111	121	—
British E. Africa ..	—	30	32	32	32	—
Other Countries ..	—	37	47	35	52	—
World Total (Ex-China) ..	—	2,224	2,273	2,273	2,298	—
	(Million Pounds)					
India ..	400	394	395	430	452	385(a)
Ceylon (b) ..	235	212	218	214	236	228
Netherlands Indies ..	168	157	167	164	178	183
Japan ..	90	101	106	119	121	127
Taiwan (Formosa) ..	22	24	24	29	27	—
French Indo-China (c) ..	15	24	24	24	—	—
British E. Africa (d) ..	5	13	17	16	25(e)	25(e)
U.S.S.R. (f) ..	2	7	11	15	19	25
Others (g) ..	2	3	4	4	—	—
World (Ex-China) ..	939	936	966	1,024	1,086(e)	1,102(e)

(a) North India only.
(b) Exports only. The Inter-national Tea Committee estimated domestic consumption in 1939 at 12 million pounds.
(c) Production figures are of doubtful accuracy.
(d) Kenya, Nyasaland and Yuganda.
(e) Estimate.
(f) Apparently the production of the state farms only.
(g) Iran, Mauritius, Mozambique, Union of South Africa.

and Formosa were known as 'green-tea countries' while India, Ceylon, Netherlands East Indies and others as 'black tea countries'.

Green, oolong, and black teas result from the manufacturing process employed, especially with regard to fermentation. Green teas are not

fermented at all; the leaves are heated to prevent it. Oolongs are partially fermented. In the production of black teas, the leaves are allowed to wither and then ferment before they are dried. All three types of tea may be processed from the leaves plucked from the same bush; but districts, regions or countries generally specialize in the production of one type. Different regions within China, for example, produce black, green, oolong, scented and compressed (brick) tea, while Formosa produces mostly Oolong, India and Ceylon blacks and so on.[83]

Before proceeding further certain peculiarities of the tea plant or the tea crop must be noted to facilitate later discussion. Variations in the output of the tea plant are not wide and production is adjustable by finer or lighter plucking. Weather influences occasionally substantially affect the quality as well as the volume of the crop. Weather influences upon volume, however, can be compensated by adjusting plucking. 'This extremely important advantage is possessed by few other crops' remarks Mr. Wickizer.[84]

Table No. 44 gives the figures of the acreage and production of tea in India.

TABLE 44

Acreage and Production of Tea in India

(Source :—*Indian Tea Statistics*, 1939)

	1930-34	1935	1936	1937	1938	1939
Acreage (Thousands) ..	812·8	831·7	834·1	834·3	833·7	833·2
Production lbs. ('000,000) ..	400·3	394·4	395·2	430·3	451·9	452·6

Acreage under tea in India expanded almost steadily since the eighties of the last century under the steady pressure of expanding overseas demand. Production also showed a steady

83. *Ibid*, p. 13.

84. *Ibid*, pp. 6, 7: In this connexion the following from the same source might be also noted: 'A rather remarkable expansion in output is feasible by coarser plucking and by the application of more fertilizers This has been demonstrated most recently in India and Ceylon. After

increase over the same period except for a slight drop in the quinquennium 1920-4. This was due to a deliberate voluntary effort by the Indian tea producers to restrict output by finer plucking to meet the sagging tea prices. Tea prices broke in the thirties and led to an international agreement of the main tea producing countries, India, Ceylon and Netherlands East Indies. Under this agreement, which is dealt with later, no new planting of tea was to be undertaken by the parties concerned. Consequently, the acreage under tea since 1933 has remained constant. The production showed an increase since 1937-8 consequent upon an upward revision of the export quota from that year.

Of the total area under tea in India, Assam alone accounts for half and the two districts of north Bengal adjoining Assam, for a little less than another quarter. Of the remaining a substantial proportion is to be found in south India. The teas from Assam, which comprise the bulk of the crop are usually blending teas while strong and virile teas come from south India.[85]

The statistics of tea production in India are not very reliable and consequently it is difficult to estimate the consumption of tea in India. Table No. 45 gives the best informed estimates of the quantities of tea retained and consumed in India, arrived at in *The Indian Tea Statistics.*

Java and Sumatra were occupied by the Japanese and teas from the Netherlands Indies were no longer available, India and Ceylon were obliged to make up a deficit in supply amounting to around 150 million pounds annually. India alone produced 579 million pounds of tea in the crop year 1942-3, an increase of 130-40 million pounds over pre-war output, and exported 440 million pounds—an increase of 110 million over average exports for 1935-9. Ceylon produced 285 million pounds more than the average output for 1938 and 1939', p. 7.

85. As regards quality the *Report of the Imperial Economic Committee on Tea* has the following: 'It is undoubted that the finest flavoured teas are produced from gardens in which the rate of growth of the young leaf is slow. Gardens situated at high altitudes like those in the Darjeeling District and on the higher parts of Ceylon thus possess natural advantages for the production of high quality teas. But quality does not solely depend on location. It is very largely under control, not only during cultivation but still more in the subsequent treatment of the leaf in the factory'—18th Report, 1931, p. 16.

TABLE 45

Estimates of the Quantity of Tea retained and consumed in India, during 1933-39

(Source :—*Indian Tea Statistics*, 1939, p. 8)

(Million lbs.)

1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
66	70	83	81*	91*	96*

*Excluding Burma.

The figures after the separation of Burma are not comparable with those for the period before it. The broad trend might be generally said to be an expanding one.

Tea has been all along mainly an export crop. Before and after World War I India used to export about 95 per cent. of the total tea production. During the quinquennium preceding the outbreak of World War II this proportion had gone down to 77 per cent. Before 1833 China tea dominated the tea trade of the world. In that year the East India Company lost its monopoly of Chinese trade and began to seek and develop sources of supply within its own territories. Plantations of tea were started in India and Ceylon under government initiative. Gradually these expanded and began to compete with Chinese tea industry. With the shifting of demand from green to black teas the Chinese teas suffered a reverse and gradually lost their dominant position in the world tea market.

Table No. 46 gives the export of tea from India.

TABLE 46

Exports of Tea from India during 1933-9

(Source :—*Review of the Trade of India*)

(Million lbs.)

1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
329	344	326	315	346	359

Since the closing years of the last century the exports of tea from India have, almost continuously, expanded. From 183 million lbs. in 1901-2 they increased to 385 million lbs. in 1932-3, the year after which the International Tea Agreement was entered into by India.

The substance of the International Tea Agreement inaugurated in 1933 is described in following terms in *The Indian Tea Statistics,* 1939 (Appendix I) :

> Exports of tea will be restricted to a percentage of the maximum exports form each producing country in any one of the three years, 1929, 1930, 1931. The percentage will be fixed for each year by an international Committee.....The restriction scheme will remain in force for five years and during that period existing areas are not to be extended beyond ½ per cent. of the present planted area and the export of tea seed is also to be prohibited. These heads of Agreement are to be enforced in each of the contracting countries by the Government concerned.[86]

The scheme was made applicable to India by the enactment of the Indian Tea Control Act, 1933, which came into force on 15 November 1933. By this Act the Indian Tea Licensing Committee was constituted and without a licence from it no exports of tea by sea were allowed. The same restriction was extended to exports by land in 1935 by the Notification of 1 August of the Government of India. India's overseas export allotments for the years of the agreement are given in Table No. 47.

TABLE 47

Overseas Export Allotment to India under the International Tea Agreement

(Source :—*Indian Tea Statistics,* 1939)

	1933-4	1934-5	1935-6	1936-7	1937-8	1938-9
Percentage of Standard Exports ..	85%	87½%	82½%	82½%	87½%	—
Export allotment (Million lbs.) ..	321	330	311	309	329*	355*

*For India proper, excluding Burma.

86. p. 29.

The export quota for each tea estate for each financial year was determined by the Tea Licensing Committee, as per rules and resolutions under the Act. The export quotas were transferable. The committee operated from two centres one at Calcutta for northern India and the other at Coonoor for southern India. The original Tea Agreement and the Tea Control Act expired on 31 March 1938. It was renewed for a further period of five years from 1 April 1938 and the Indian Tea Control Act 1938 gave legislative sanction to the operation of the scheme.

Table No. 48 gives the exports of tea from India according to their destinations.

TABLE 48

Exports of Indian Tea by Destinations during 1934-9

(Source :—*Indian Tea Statistics*)

(Million lbs.)

	1934-5	1935-6	1936-7	1937-8	1938-9
United Kingdom ..	288·7	276	257	288	304
Tea Re-exported from United Kingdom ..	30	32	34	35	35
U.S.A. ..	8·0	6·8	7·8	6·2	8
Canada ..	12·8	12·8	14·9	15	15
Australia, New Zealand, Fiji ..	2·7	2·3	1·2	1·1	1·6
Total by Sea ..	325	313	302	335	348

The U.K. was the main market for Indian tea and absorbed more than 85 per cent. of the total exports. Some of these were re-exported to other countries and the relevant figures are included in Table No. 48. Canada was the second largest customer of Indian tea and the U.S.A. came third.

India together with Ceylon, dominated the U.K. tea market and supplied the bulk of her imports of tea upto the World War I. After the war, Indian tea began to encounter keen competition from teas from the Netherlands East Indies. Preference to Empire tea in the U.K. was introduced in 1919. It was fairly substantial till 1924 and was abolished in 1929 until its re-introduction in 1931. The Imperial Economic Committee found that the imports of non-Empire, especially Netherlands East Indies teas, had increased in the U.K. market after 1924 and were very high in 1929. With regard to the competition between these and Empire teas the Committee observed :

> The great bulk of these foreign teas are of a low grade and useful mainly as cheapners or make-weight. For this reason the better grade (and the greater part) of the Empire product can maintain its ground through superior quality. The Empire teas most affected are those produced in the less-favoured districts, such as Cachar and Sylhet in India and part of the low country in Ceylon.[87]

The more general cause for the advance of the Netherlands East Indies teas was the high level of tea prices and expansion of the market during those 5 years. 'In the circumstances blenders sought and found additional source of low grade teas in order to keep down the cost of their blend'.[88]

The Indian Tea Cess Act was passed in 1903 for promoting the sale and manufacture of tea. Under this Act a duty of ¼ pie per lb. was levied on all Indian tea exported. The rate was revised from time to time and on 20 March 1939 the rate stood at Rs. 1-6-0 per 100 lbs. The amount so collected was made over to a fund known as the Tea Cess Fund and was placed at the disposal of a committee, appointed for the purpose. From 16 February 1937 the Indian Tea Cess Committee was re-named as the Indian Tea Market Expansion Board.

The International Tea Market Expansion Board was created in 1935 to co-ordinate the efforts of the black-tea coun-

87. *Report of the Imperial Economic Committee, 18th Report,* Tea, 1931, p. 35.
88. *Ibid.*

TABLE 49

Average Annual Prices of Tea sold at auction in the United Kingdom

(Source :—*Tea Under International Regulation*, Wickizer, 1944, p. 183)

Year		(Pence per Pound)									
		North India	South India	Ceylon	Africa (a)	Java	Sumatra	Indian Broken Pekoe Souchong	All Tea	Average Import Price	Average Retail Price
1922	..	15·5	14·0	15·8	10·8	10·1	11·2	13·1	15·1	14·9	28·5
1923	..	18·8	18·1	19·4	16·3	14·9	16·5	16·9	18·7	17·6	30·5
1924	..	19·9	19·0	20·8	16·6	15·5	17·9	17·3	19·8	19·0	28·8
1925	..	17·7	17·6	20·1	13·2	12·8	16·6	14·2	18·0	18·3	29·3
1926	..	19·4	19·0	20·3	17·4	15·9	16·3	17·0	19·3	18·8	29·4
1927	..	19·0	18·9	20·8	15·2	13·7	16·0	15·1	19·0	18·6	28·6
1928	..	16·5	15·4	19·0	13·2	12·6	13·9	14·3	16·7	16·8	28·7
1929	..	15·7	15·4	19·0	12·3	12·0	13·9	10·5	16·3	16·1	25·4
1930	..	14·7	14·5	18·6	9·4	10·2	11·2	9·0	15·2	15·1	23·8
1931	..	11·9	11·0	15·4	6·9	7·6	7·7	6·2	12·2	13·3	22·3
1932	..	9·5	8·1	11·2	6·4	6·4	5·7	6·0	9·5	10·8	21·0
1933	..	11·7	10·7	13·5	8·6	8·1	7·2	9·0	11·7	11·9	21·5
1934	..	13·4	12·9	14·0	12·5	11·2	10·2	12·0	13·3	13·2	23·3
1935	..	12·8	12·2	14·4	10·4	10·3	9·1	10·5	12·9	13·1	23·5
1936	..	13·0	12·6	14·1	11·7	10·8	10·3	11·7	13·1	13·2	24·8
1937	.	15·0	14·7	16·0	13·8	13·8	12·2	13·8	15·2	14·6	24·0
1938	..	14·2	13·8	15·3	12·4	12·8	11·3	12·2	14·4	14·0	27·5

(a) Until 1935 Nyasaland only.

tries, and to encourage and promote the consumption of black teas in the world. The work of this committee was confined to propaganda outside the countries of production.[89]

Table No. 49 gives the average annual prices of tea sold at auction in the U.K.

Broadly the figures show a period of relatively high prices from 1923 to 1927. There was a break in 1928 and prices declined for the next 3 or 4 years until they were even less than half of those prevailing in 1927. Then followed a gradual recovery and this has been generally attributed to the International Tea Control Scheme adopted in 1933.

The scheme adopted in 1933 did not provide for quality differentiations and the results of this were not far from those expected. The recovery in tea prices was shared more largely by common and cheaper varieties.

> A higher rising level of prices benefits the producers of common, "filler" or "weight" teas, because blenders attempt to keep the retail prices of their established blends as stable as possible. In a falling market the better teas are more resistant to decline, while the cheaper teas cease to be in such great demand, and their prices drop most rapidly and severely.....Normal price differentials between teas of different quality were not restored upon reaching former price levels.[90]

8. Coffee

India is not even a significant producer of coffee in the world as a whole. From 1925-6 to 1937-8 India accounted for about 1·5 per cent. of the total world area under coffee and for about 0·7 per cent. of the total world production. Brazil was by far the most important coffee producer accounting for nearly 60 per cent. of the total world production. Columbia came next with 11 per cent. followed by Netherlands East Indies with 5 per cent. India's position in the world trade in coffee was also of minor consequence. Her share of world trade in coffee was in the neighbourhood of 0·6 per cent. during the inter-war period. Indian coffee, however, was

89. *Wickizer, op. cit.* p. 55.

90. *Wickizer, op. cit.* p. 85. This was also seen with regard to the different Indian qualities of finer and common teas. cf. p. 87 *Ibid.*

known for its quality and held its own with other best coffees of the world.

Table No. 50 gives the acreage and production of coffee in India.

Any violent fluctuations of area under such a perennial crop like coffee are uncommon. Acreage under coffee in India was at its highest in 1896 when it reached 304,000 acres. In the inter-war period generally the acreage fluctuated around 200,000 acres. Of the total acreage under coffee in India Mysore accounted for about 50 per cent., Madras Presidency for more than 25 per cent., Coorg for about 20 per cent., and the remaining was to be found in Cochin and Travancore. Of the total acreage under coffee, about 37,000 acres were under plantations not exceeding 10 acres. In the course of the last 30 years the acreage of small holdings (area below 10 acres) has dwindled by more than half, while area under large plantations has increased by about a quarter. It should be noted that extensive areas on coffee plantations were uncultivated before the beginning of World War II.

Area actually plucked was estimated at about 88 per cent. of the planted area in the lustrum ending 1936-7. Production during 1932-3 to 1936-7 averaged about 581,000 cwts. according to the estimates made by the *Report on the Marketing of Coffee in India.* Production figures as supplied by the *Indian Coffee Statistics* are very inaccurate and consequently it is difficult to indicate the trend of production over a longer period from those figures.[91]

There are three main species of coffee and they 'differ not only in appearance, resistence to disease, and place grown, but most important, in flavour. *Arabica,* by far the most important commercially, is grown ... usually at elevations of 2,000—3,000 feet, *Robusta* and *Liberica,* both cultivated for the first time in relatively recent decades because of their

91. Production figures as given in *Indian Coffee Statistics* are 46 per cent. less than the estimated production based on marketing enquiries. cf. *Report on the Marketing of Coffee in India and Burma,* 1940, p. 33.

TABLE 50

Acreage and Production of Coffee in India, 1932-7

(Source :—*Report on the Marketing of Coffee in India and Burma,* 1940, p. 286-287)

	Below 5 Acres		Between 5 and 10 Acres		Above 10 Acres			Total		
	Area	Production as per Estimates*	Area	Production as per Published Statistics†	Area	Published Statistics	Corrected Estimates	Area 2, 4 and 6	Published Statistics	Corrected Estimates 3, 5 and 8
1	2 Acres	3 Cwts	4 Acres	5 Cwts	6 Acres	7 Cwts	8 Cwts	9 Acres	10 Cwts	11 Cwts
1932-3 ..	27,086	43,352	13,691	19,838	1,62,954	2,75,135	4,26,390	2,03,731	2,94,973	4,89,580
1933-4 ..	20,843	31,097	14,004	18,240	1,69,919	2,90,697	4,65,720	2,04,766	3,08,937	5,15,057
1934-5 ..	19,809	30,428	14,180	20,145	1,72,476	2,72,497	5,71,052	2,06,465	2,92,642	6,21,625
1935-6 ..	24,468	41,908	14,146	20,730	1,74,015	3,46,883	6,39,212	2,12,629	3,67,613	7,01,850
1936-7 ..	24,044	37,027	14,471	18,805	1,75,559	2,84,836	5,23,569	2,14,074	3,03,641	5,79,401

*No statistics are published in regard to production of coffee on plantations below 5 acres.

†The published figures for production of coffee on plantations between 5 and 10 acres fairly approximate to survey estimates.

resistance to disease and pests, are grown mostly in low hot country, ... where *Arabica* does not thrive'.[92] *Robusta* has a neutral, flat taste and is used chiefly as a filler in cheaper coffees.

There are not published data in India, except those specially collected for the *Report on the Marketing of Coffee in India,* regarding the acreage under the different species of coffee in India. These inquiries have furnished the following estimates in this regard for 1937-8.

TABLE 51

Area under different species of Coffee in India in 1937-8

(Source :—*Report on the Marketing of Coffee in India and Burma,* 1940, p. 30)

	Acres		
	Arabica	Robusta	Liberica
Madras ..	50,900	6,000	Negligible
Coorg ..	34,100	7,000	Do.
Mysore ..	1,01,450	2,000	50
Travancore ..	1,000	4,400	Negligible
Cochin ..	1,700	370	Nil
Others parts ..	220	Nil	Nil
Total ..	1,89,370	19,770	50

About 90 per cent. of the area under coffee in India was under *Arabica* and about 10 per cent. under *Robusta.* That under *Liberica* was negligible.

In addition to the production at home India used to import coffee from abroad. Imports, mostly consisting of raw beans, increased steadily after World War I. In the quinquennium following the close of World War I imports increased to an annual average of 35,000 cwt. as compared with the annual average of 36,000 cwt. during the quinquennium preceding the outbreak of World War I. During 1924-5 to 1930-1 the annual average imports reached their peak at 44,000 cwt.

92. Wickizer, *The World Coffee Economy,* 1943, p. 27.

Most of the coffee imported was of the cheaper variety and came mainly from Ceylon, Strait Settlements and Java. 'While the price of Indian coffees ranged from Rs. 70 to Rs. 85 per cwt., the prices of the imported coffees was only about Rs. 48 per cwt'.[93]

Under the provisions of the Destructive Insects and Pests Act the Government of India prohibited the importation of coffee plants, seeds and beans into India and Burma on 1 April 1931. For the purposes of this Act, which still stands, imports from Burma are treated as coastal imports.

Because of the defective production statistics, it is difficult to determine accurately the amount of coffee consumed in India. Table No. 52 gives the estimated available supply and per capita consumption as given by the *Report on the Marketing of Coffee in India.*

TABLE 52

Estimated available Supply and Per Capita Consumption of Coffee in India

(Source :—*Report on the Marketing of Coffee in India and Burma*, 1940, p. 61)

Year (December to November)	Estimated Net Available Supply (Cwt)	Per Capita (lb.)	Consumption (Cups)*
1932-3 ..	3,05,204	0·099	5·0
1933-4 ..	3,29,677	0·106	5·3
1934-5 ..	4,53,398	0·144	7·2
1935-6 ..	4,35,340	0·137	6·9
1936-7 ..	4,37,627	0·136	6·8

*On the basis of 50 cups a lb.

It would appear that the per capita consumption of coffee increased from 5 cups in 1932-3 to about 7 cups in 1936-7. The per capita consumption (average for period 1933-4 to

93. *Report on the Marketing of Coffee in India and Burma*, 1940, p. 45.

1935-6) in the non-producing areas was about 0·006 lb. and in the producing areas about 0·7 lb. About 96 per cent. of the coffee available for consumption in India was consumed in Madras, Coorg, Mysore, Travancore and Cochin. The home market for coffee has been steadily expanding and growing in importance as compared with the export market. The Report of the Indian Trade Commissioner at London for 1928-9 and 1929-30 noted that 'Some Indian producers state that they rely more and more on the local Indian markets and less and less on the export trade. It is authoritatively stated that better prices are secured at home than abroad.' [94]

On an average, about 340,000 cwt. of *Arabica* as against 50,000 to 60,000 cwt. of *Robusta* are consumed every year. The demand for *Arabica* comes mostly from the producing areas. *Robusta* is not exported and, therefore, almost the entire crop is absorbed in India.[95]

About 32 per cent. of the total coffee produced in India was exported before World War II. Exports were mainly confined to raw beans. Table No. 53 gives the total exports of coffee from India.

TABLE 53

Exports of Coffee from India during 1905-39

(Source :—*Report on the Marketing of Coffee in India* and Burma, 1940, p. 47)

(In Cwt)

	Average	Minimum	Maximum
1905-06 to 1909-10 ..	2,76,446	2,30,378	3,62,990
1910-1 to 1914-5 ..	2,70,065	2,45,190	2,94,278
1915-6 to 1919-20 ..	2,17,876	1,81,465	2,78,811
1920-1 to 1924-5 ..	2,25,854	1,75,015	2,48,635
1925-6 to 1929-30 ..	2,14,176	1,54,786	3,13,652
1930-1 to 1934-5 ..	1,93,444	1,44,380	2,96,833
1935-6 ..	2,18,919	—	—
1936-7 ..	2,13,638	—	—
1937-8 ..	1,35,142	—	—
1938-9 ..	1,84,800	—	—

94. *Report of the Indian Trade Commissioner in London for* 1928-9 *and* 1929-30, p. 33.

95. *Ibid*, p. 108.

The total exports from 1905-6 onwards showed a generally declining trend. They declined by 30 per cent. and touched the bottom during the quinquennium ending 1934-5. They revived slightly during the following two years but again declined to 135,142 cwt. in 1937-8. Practically the whole of the exports consisted of *Arabica*.

Table No. 54 gives the shares of the main customer countries of Indian coffee, in the total exports of coffee from India.

France was the biggest customer of Indian coffee closely followed by the U. K. France's share in India's coffee exports had declined during and after World War I. But since 1930 it gradually increased and in 1936-7 it was almost the same as during the quinquennium preceding World War I. The French import quota system did not hamper imports of Indian coffee into France as the quotas fixed were normally in excess of India's usual share in French imports of coffee. Indian coffees catered for a special but limited market in France. In the total imports of coffee into France India's share was roughly about 1·5 per cent. In France, and generally on the Continent, Indian coffee was not sold 'straight' as Indian coffee. It was used for blending with other coffees especially those from Central and South American countries, to give them the necessary flavour.[96] About 75 per cent. of the Indian exports to France were of 'cherry coffee'.[96A]

96. 'Indian coffee is invariably blended with other grades in France and never retains its identity...But the American countries can in no sense be regarded as competitors of India. On the other hand, the quality and grades of American coffee imports into France in a particular year have a decisive influence on the amount of Indian coffee required in that year for blending purposes'.—Report of the Indian Government Trade Commissioner at Hamburg for 1933-4 *Indian Trade Journal* No. 1475, p. 1522.

96A. Parchment or Plantation coffee is coffee prepared in parchment by the "wet" method; "cherry-dried" or "cherry" coffee is coffee dried in the cherry and hudled i.e., prepared by the dry method. *Report on the Marketing of Coffee in India and Burma*, 1940, p. 32.

TABLE 54

Exports of Indian Coffee according to Destinations 1905-37

(Source :—*Report on the Marketing of Coffee in India and Burma*, 1940, p. 48)

(Percentage)

	1905-10	1910-15	1915-20	1920-5	1925-30	1930-5	1935-6	1936-7
United Kingdom ..	44·9	31·3	27·8	34·6	27 8	27 0	33·3	16·4
Australia ..	3·0	3·8	4·5	3·9	3·0	2·6	2·7	2·8
Burma ..	1·1	1·5	2·8	2·8	5·4	1·9	1·4	1·4
Bahrein Islands ..	0·5	1·8	6·5	5·2	5·3	1·5	0·1	Nil
France ..	37·0	40·6	20·2	27·8	21·6	32·9	37·8	40·6
Germany ..	1·0	2·9	Nil	3·2	9·5	7·7	4·6	3·4
Norway ..	Nil	Nil	Nil	2·8	5·5	8·1	7·6	15·9
Belgium ..	2·4	2·8	Nil	2·8	3·1	4·6	5·8	9·4
Italy ..	0·2	0·3	0·1	1·5	2·7	3·6	3·0	1·4
Denmark ..	Nil	Nil	Nil	0·2	0·7	0·4	0·2	Nil
Netherlands ..	0·2	1·0	Nil	3·7	7·1	4·8	0·7	2·7
Iraq ..	Nil	Nil	Nil	Nil	2·9	2·7	0·7	3·5
Sweden ..	Nil	Nil	Nil	0·1	0·07	0·1	0·1	Nil
U. S. A. ..	0·01	Nil	0·01	0·1	0·20	0·07	Nil	Nil
Others ..	9·69	14·0	38·09	11·3	4·23	2·03	2·0	2·5

India's share in the total imports of coffee into the U.K. dropped from 10·7 per cent. in the lustrum ending 1909-13 to 7·5 per cent. in 1929-33. Indian coffee was given a 10 per cent. preference under the Ottawa Agreement in 1933. The share of India in the total imports of coffee into the U.K. increased to 9·7 per cent. in the following quinquennium. It must be noted in this connexion that during the same period the share of Empire countries also rose from 43 per cent. to about 47 per cent.

More than 95 per cent. of the average exports from India to the United Kingdom consist of *Arabica* plantation coffee, 90 per cent. of which again belong to the top grades. Quality in the cup or liquoring test is considered the best commercial test in the United Kingdom.[97]

World price of coffee and demand in South India are the chief factors that influence the course of prices of Indian coffee. Regarding the world price, Brazil dominates the situation and practically holds the key to coffee prices in general.[98]

As noted earlier the demand in the home market had been expanding in India during the decade preceding the outbreak of World War II. The prices of Indian coffee, along with other coffees, fell from 1929 onwards. They reached the lowest level in 1936. '*Robusta* prices have not shown any marked trend as in the case of *Arabica* plantation or Cherry. As *Robusta* is generally not exported, the reaction of world prices is less pronounced than in the case of other varieties.'[99]

The Indian Coffee Cess Committee was set up in November 1935 by the Government of India under the Indian Coffee Cess Act, 1935, for the promotion of the cultivation, manufacture and sale of Indian coffee. Under this Act, a customs duty on all coffee produced in India and exported therefrom to any place outside India at the rate of 8 as. per cwt. was imposed. Out of the proceeds of this duty a fund was set up and placed at the disposal of the Indian Coffee Cess Committee. The rate

97. *Ibid*, p. 85.
98. *Ibid*, p. 117.
99. *Ibid*, p. 137.

of 8 as. per cwt., as originally fixed was raised to Re. 1 per cwt. with effect from 1 June 1938.

9. Tobacco

Tobacco is comparatively an unimportant constituent of the total exports from India. During the decade preceding the outbreak of World War II, exports of tobacco from India formed on an average about 0·5 per cent. of the total exports in terms of value.

India ranks as one of the leading tobacco producing countries of the world, accounting for nearly a quarter of the total world production of tabacco. Table No. 55 gives the acreage and production of tobacco in different countries of the world.

On an average India accounted for about 30 per cent. of the total world acreage under tobacco, another 20 per cent. being accounted for by China, and the U.S.A. accounting for about 23 per cent. Of the total world production, excluding China, the U.S.A. accounted for about 27 per cent. on an average and India for about 25 per cent. Since 1932-3 India has been producing more tobacco than the U.S.A. It must be remembered, however, that the figures of production in India include not only leaf and stems but even whole or part of the stalk of the plant. The figures for other countries are for leaf alone. Figures for India might thus give a misleading indication of production.[100]

India's share in the total tobacco trade of the world was very small. India and Burma together accounted for about 3 per cent. of the total tobacco exports of the world, the U.S.A. accounting for about 46 per cent. and Netherlands East Indies and Greece together for about 22 per cent. Most of the production of tobacco in India, China and Russia was consumed at home.

100. *Report on the Marketing of Tobacco in India and Burma*, 1939, p. 3.

TABLE 55

Acreage and Production of Tobacco in different countries of the World

(Source :—*Imperial Economic Committee, Plantation Crops,* 1938, p. 87-89)

(Acreage in thousand acres and production in million lbs.).

	1930-1	1931-2	1932-3	1933-4	1934-5	1935-6	1936-7	1937-8 (Provisional)
U.S.A.—Acreage ..	2,124	1,987	1,404	1,738	1,279	1,437	1,438	1,732
Production ..	1,648	1,564	1,017	1,371	1,082	1,297	1,155	1,553
India—Acreage ..	1,200	1,146	1,192	1,163	1,124	1,308	1,253	1,134
Production ..	1.301	1,182	1,319	1,299	1,160	1,442	1,369	1,130
China—Acreage ..	—	—	—	1,295	1293	1,353	1,345	—
Production ..	—	—	—	1,389	1,327	1,393	1,404	—
N. E. Indies—								
Acreage* ..	501	558	461	416	508	457	419	—
Production ..	—	—	89	72	80	78	81	—

*Estate production only.

Table No. 56 gives the acreage and production of tobacco in India during the inter-war period.

TABLE 56

Acreage and Production of Tobacco in Indian, during 1919-38

(Source :—*Report on the Marketing of Tobacco in India*, 1939, p. 392-96)

	Acreage (In Thousands)	Production (Thousand Tons)
Average from 1919-20 to 1923-4 ..	1,132*	—
Average from 1924-5 to 1928-9 ..	1,204*	—
Average from 1929-30 to 1935-6 ..	—	576
1936-7 ..	—	560
1937-8 ..	—	—

(*Incomplete figures).

The figures in Table No. 56 are those supplied by special enquiries and which are regarded as more reliable than the official estimates and figures.[101] Unfortunately these revised figures are very scanty. Very broadly it would appear that acreage under tobacco remained appreciably steady during 1921-2 to 1931-2.

This was followed by a steady downward trend in 1932-3 and 1933-4 accounted for by a general decrease in the area sown in Madras, Bengal, the Punjab and other areas largely due to low prices that obtained and drought in some areas. In 1934-5 there was a noticeable increase in area in Bengal due to the jute restriction campaign, and in Madras, Bengal, the Punjab and the United Provinces, although the area in Bihar declined due to a larger area being sown with sugarcane. In 1935-6 and 1936-7 there was a fall in the area sown in Madras, Bombay, the Punjab and the United Provinces. The crop in Madras suffered from insect attack in 1936-7. From 1937-8 to 1939-40 there was a steady

101. *Ibid*, p. 7.

upward trend encouraged mainly by better export demand, especially for Virginia cigarette tobacco from Madras.[102]

More than half the tobacco crop in India was concentrated in 5 distinct localities in the country. These areas were North Bihar, North Bengal, Charotar in Gujarat, Guntur in Madras Presidency and the Nipani area in the south of the Bombay Presidency. In 1934-5 North Bengal accounted for about 23 per cent. of the total raw tobacco produced in India, Guntur for about 10 per cent., North Bihar for about 7 per cent. and the Charotar and the Nipani areas for about 6 per cent. each.[103]

There are two main botanical types of tobacco plants, viz., *Nicotina Rustica* and *Nicotina Tobacum*. The cured leaf of *Nicotina Rustica* is dark greenish brown, the nicotine content being at times as high as 8 per cent. It is mainly used in the preparation of *hookah*, chewing and snuff tobaccos. The cured leaf of *Nicotina Tobacum* ranges from lemon yellow to reddish brown with the nicotine content, at times, as low as ½ per cent. It is mainly used in cigarettes, cigar, cheroot, and *bidi* tobaccos as well as for snuff, etc., as in the case of *Nicotina Rustica*.[104]

Information regarding the area under each type and the production of each type is not available. This information was specially collected by special surveys in 1934-5. From the results obtained, the *Report on the Marketing of Tobacco in India* concludes : '*N. Rustica* represents in India one-third of the total production and is confined to the region north of a line joining Calcutta and Karachi. In this region about one-third of the *N. Tabacum* crop is also produced, the rest growing in Peninsular India south of a line Ahmedabad-Calcutta. *N. Tabacum* provides nearly the whole of the export trade in *bidi* and other smoking tobaccos, a small proportion only con-

102. Note by Mr. B. P. Bhargava, Senior Marketing Officer, Central Agricultural Marketing Department, quoted by Burns, *op. cit.*, p. 20.

103. *Report on the Marketing of Tobacco in India and Burma*, 1939, p. 22.

104. *op. cit.*, p. 70.

sisting of *N. Rustica'*.[105] North Bengal and North Bihar are important for the production of *hookah* and other types of tobacco. The Charotar and Nipani areas are known for their *bidi* tobaccos. Guntur produces highclass cigarette leaf.

The method of curing very largely determines the quality and the final use of the tobacco leaf. Only 2 per cent. of the total Indian production of tobacco was flue-cured. More than two-thirds of the total was ground-cured and another quarter was rack-cured. About 5 per cent. was pit-cured.[106] World trade in tobacco consists mainly of *N. Tabacum*, a very large proportion of which is flue-cured.

India consumed almost the whole of the tobacco crop produced. Tobacco exports only amounted to less than about 4 per cent. of the total production. India also imported unmanufactured tobacco, amounting to about less than 2 per cent. of the tobacco produced at home. The quantity of manufactured tobacco available for manufacture and consumption as estimated in the *Report on the Marketing of Tobacco in India* is shown in Table No. 57.

TABLE 57

Quantity of Manufactured and Unmanufactured Tobacco retained in India

(Source :—*Report on the Marketing of Tobacco in India*, 1939, p. 74)

(Million lbs.)				
1932-3	1933-4	1934-5	1935-6	1936-7
997	1,015	889	1,107	1,041

*Figures in the table are after making allowance of 20% loss of moisture, damage and waste in manufacture.

On an average about one thousand million lbs. of unmanufactured tobacco were consumed every year. Except perhaps

105. *Ibid.* p. 70.
106. *Ibid*, p. 72.

in the case of some *hookah* and chewing tobaccos, all tobacco must pass through the process of manufacture before consumption. Manufactured tobacco was consumed in various forms, such as cigarettes, cigars, charoots, *bidis*, chewing tobacco, etc. According to the estimates specially made in the *Report on the Marketing of Tobacco in India* in 1934-5, 20 million lbs. of tobacco were consumed in cigarettes, 92 million lbs. in cigars and cheroots, 69 million lbs. in *bidis* and 835 million lbs. in other tobacco products. The Report further observed: 'The general trend of tobacco consumption in India is upwards, particularly in the case of cigarettes. It is difficult to say whether the growing popularity of the cigarette is adversely affecting the consumption of *hookah* tobacco. There seems no doubt, however, that it has affected the consumption of *bidis* and seriously reduced the use of cigars not only in this country but abroad'.[107]

Table No. 58 gives the figures regarding the total exports of manufactured and unmanufactured tobacco from India.

TABLE 58

Total Exports of Manufactured and Unmanufactured Tobacco from India and Burma

(Source.—*Report on the Marketing of Tobacco in India* and *Review of the Trade of India*)

	(Million lbs.)				
	Unmanufactured	Cigars	Cigarettes	Other Sorts of Manufactured Tobacco	Total
Average 1925-6 to 1929-30 ..	30·6	0·3	0·2	0·4	31·6
Average 1930-1 to 1934-5 ..	26	0·1	0·3	0·5	26·9
*1935-6 ..	40·6	0·2	4·2		44·8
*1936-7 ..	41·0	0·2	3·6		44·7
*1937-8 ..	42·5	0·004	9·5		52·0
*1938-9 ..	60·1	0·003	4·9		65·1

(* *Review of the Trade of India* figures adjusted for India excluding Burma)

107. *Ibid*, p. 111.

The total exports of tobacco declined during 1930-1 and 1934-5, obviously as a result of the general trade depression. The figures for the next four years are adjusted for the exclusion of Burma and are not comparable. Considering the figures of exports from India alone since 1935-6 the trend appears to be towards an expansion of exports. It is also obvious from the figures that unmanufactured tobacco formed more than 90 per cent. of the total exports.

Table No. 59 gives the exports of tobacco from India according to their destinations.

TABLE 59

Exports of Tobacco from India by Destinations

(Source :—*Seaborne Trade of India*)

	(Million lbs.)			
	1935-6	1936-7	1937-8	1938-9
United Kingdom ..	11·7	13·3	21·1	37·5
Dependencies ..	7·3	8·3	7·1	3·5
Japan ..	5·6	3·0	2·3	1·0
Netherlands ..	1·2	1·1	1·4	0·46
Others ..	—	—	—	—
Total ..	29·6	29·3	52·0	65·1

The U.K. was India's largest customer. During the quinquennium ending 1934-5 nearly 40 per cent. of the total Indian exports went to the U.K. Exports to her more than doubled during the following quinquennium. From an analysis of figures for the years 1934 to 1937, as recorded by the *Annual Trade and Navigation Accounts of the United Kingdom*, about 54 per cent. of the imports from India were of the 'light' as against the 'dark' quality. 'As compared with 1934, the imports of 'light' tobaccos from India into the U.K. increased by 141 per cent. and those of dark types by 52 per cent. in 1937'.[108] The demand for tobacco in the U.K. was mainly for

108. *Ibid*, p. 106.

the cigarette or 'light' type and this demand relatively to the other types was rapidly expanding. This is reflected in the increased exports of Indian 'light' tobaccos to the U.K. The preference on Empire tobacco was partly responsible for this. 'Almost the only area of importance in India exporting unmanufactured tobacco to the U.K. is Guntur in the Madras Presidency. Evidence collected in this area indicates that since 1934-5, 90 per cent. of the exports to the U.K. are of the Virginia flue-cured type, the rest being Virginia sun-cured and the first grade of sun-cured country'.[109]

Indian exports to Aden and dependencies were higher by about 40 per cent. during 1935-6 to 1937-8. This was probably the result of 'preference' enjoyed by Indian tobacco in this market. Almost the whole of the tobacco going to this market from India was of the *bidi* and smoking type growing in the Charotar area.[110]

Exports to Japan showed a declining tendency during 1935-6 to 1938-9. This was to be largely attributed to the policy of economic self-sufficiency that was being pursued by Japan during these years and as a consequence of which she was importing more from her dependencies like, Korea, etc. Before 1934 Japan used to take from Bengal but from 1935-6 she began to import entirely from Madras. Indian tobacco exports to Japan mostly consisted of sun-cured tobacco utilized in pipe-mixtures and cheap cigarettes.[111]

Exports to the Netherlands were more or less stable during 1935-6 and 1938-9 although at a lower level than that of the preceding quinquennium 'The demand in Netherlands for Indian leaf is for cheap tobacco like the primings or scraps obtained from Virginia and country cigarette tobacco grown in the Guntur district and the *jali* tobacco of North Bengal'.[112] The quantity exported from India to the Netherlands was dependent on the production in the Netherlands East Indies which supplied nearly 87 per cent. of the requirements of the Netherlands.[113]

109. *Ibid*, p. 106.
110. *op. cit.*, p. 98.
111. *op. cit.*, p. 98.
112. *op. cit.*, p. 98.
113. *Ibid.*

10. Hides

Exports of raw hides and skins constituted slightly more than 2 per cent. of the total exports from India in terms of value during the quinquennium preceding the outbreak of World War II.

Table No. 60 gives the production of slaughtered hides in different countries of the world in 1936-7.

TABLE 60

Production of slaughtered Hides in different Countries of the World

(Source :—*Report on the Marketing of Hides in India and Burma*, 1943, p. 18)

Country	(1937) Cattle Population (In Lakhs)	Annual Production of Hides (In Lakhs)	Percentage of Hides to Cattle Population	Percentage of Hide Production to World Total
(1)	(2)	(3)	(4)	(5)
Americas—				
United States of America ..	664	243	36·6	17·8
Canada ..	88	19	21·6	1·4
Argentina ..	309	60	19·4	4·4
Brazil ..	405	42	10·4	3·1
Other Southern American countries (a) ..	347	39	11·2	2·9
				29·6
Europe—				
U.S.S.R. ..	565	247	43·7	18·1
Germany ..	201	83	41·3	6·1
France ..	158	77	48·7	5·7
Poland ..	101	35	34·7	2·6
Italy ..	72	30	41·7	2·2
United Kingdom ..	86	29	33·7	2·1
Other European Countries (b) ..	458	118	25·8	8·7
				45·5

TABLE 60—(continued)

Country		(1937) Cattle Population (In Lakhs)	Annual Production of Hides (In Lakhs)	Percentage of Hides to Cattle Population	Percentage of Hides Production to World Total
(1)		(2)	(3)	(4)	(5)
Australia—		139	25	18·0	1·8
Newzealand	..	43	14	32·6	1·0
Africa (c)	..	227	21	9·2	1·5
Asia—					
Other Asiatic Countries (d)	..	118	17	14·4	1·2
India	..	2,235 (e)	257 (f)	11·5	18·8
Burma	..	61	8	13·1	0·6
					24·9
Total	..	6,277	1,364	21·7	(100)

(a) Cuba, Mexico, Chile, Columbia, Peru and Uruguay; (b) Austria, Belgium, Bulgaria, Denmark, Spain, Estonia, Finland, Hungary, Ireland, Latvia, Lithuania, Norway, Netherlands, Portugal, Roumania, Sweden, Switzerland, Czechoslovakia and Yugoslavia; (c) Algeria, Egypt, Madagaskar, Morocco (Fr.), S. Rhodesia, Tunis and Union of S. Africa; (d) Koria, Formosa, Indo-China, Japan, Palestine and Phillippines, (e) 1,760 lakh cattle and 475 Buffaloes and (f) 200 lakh kips and 57 lakhs buff hides. The number includes fallen hides also.

Data regarding the production of hides in different countries are lacking. These can be, however, estimated by the figures regarding the number of animals killed, which are available, as almost all hides obtained in countries, other than India, are of the slaughtered type. In the case of India the figures in Table No. 60 include fallen hides which constitute the major part of the total production.[114]

India possessed a third of the world's cattle and accounted for 18·8 per cent. of the total world hide production. The U.S.A., the U.S.S.R. and India accounted for almost equal proportions of the total world production of hides. Because the cattle are not slaughtered in India a major proportion of the hides are of the fallen type. India is, however, the largest

114. *Report on the Marketing of Hides in India and Burma*, 1943, p. 18.

exporter of hides and leather in the world. Table No. 61 sets out the information regarding the annual exports of hides and leather from eight principal countries during 1936-7.

TABLE 61

Annual Exports of Hides and Leather from eight main producing Countries of the World *

(Source :—*Report on the Marketing of Hides in India and Burma*, 1943, p. 2)

(In Lakhs)

Country	Raw Hide Pieces	Tanned (Un-Finished) Pieces	Leather (Pieces)	Total Pieces
India ..	55·8	57·3	9·8	122·9
Argentina ..	61·8	Nil	Nil	61·8
United Kingdom ..	8·0	8·7	27·4	44·1
U. S. A. ..	7·5	0·5	21·0	29·0
Germany ..	0·3	Nil	25·2	25·5
France ..	16·8	5·4	1·8	24·0
Brazil ..	22·7	Nil	Nil	22·7
Holland ..	11·4	Nil	8·3	19·7

* "Leather Trade Year Book," 1937. In converting the tonnage into number of pieces the following basis (in proceeds for pieces) has been adopted.

India—Raw hide—10, Dressed hide—7, Unwrought leather—3.

Other countries—Raw hide—50, Sole leather—40, Rough vegetable tanned hide—7½.

Mixed tanned half skin (France)—4, Box and willow half skin—3.

Undressed hide—22, Undressed half skin—3, 28 sq. ft. of patent.

Leather, 25 sq. ft. Chrome uppers and 16 sq. ft. cay or kip.

Chrome uppers are taken as one piece of leather.

Argentina was the world's largest exporter of hides and India came second. If figures of weight alone are examined India ranks fifth in the world exporters of raw hides. But that does not give a true picture as Indian hides are lighter and are exported in dry condition. Exports from other countries consist of heavier hides and they are exported in the wet-salted condition. The total number of pieces, rather than weight, therefore, gives a more correct and adequate idea of exports. It should be also noted that the total production of hides in Argentina was nearly one-fourth that in India and that the

former exported a very large percentage of its total production because of the very small tanning industry in that country.[115]

Table No. 62 gives figures regarding the annual production of Indian hides as revealed by the surveys undertaken and carried out for the *Report on the Marketing of Hides in India and Burma.*[116]

Kips (cow, bullock, bull hides and calf skins) formed about 78 per cent. of the total production, the rest being accounted for by buff hides (hide of buffaloes and their young stock). In the production of kips Bengal led, accounting for about 22 per cent. of the total Indian production, followed in order of importance by Madras with about 19 per cent. Punjab and states with about 9 per cent, Bombay and states with 9 per cent. Bihar and Orissa with 8 per cent. each and C.P. and Hyderabad with more than 6 per cent. each. The proportion of slaughtered kips to total hides was 42 in Bengal and 22 in Madras. Proportion of kips production to cattle population was the highest in Madras indicating the prevalence there of a higher average death rate among the cattle population than in other parts of the country. In the production of buff hides Madras topped the list accounting for more than a quarter of the total production, followed, in order of importance, by C.P. with about 11 per cent, U.P. with about 10 per cent., Bihar with about 9 per cent, and the Punjab with more

115. It was put to the Hides Cess Committee that a large proportion of the Indian hides were of light weight (kips) and that enabled this country to influence the foreign markets for kips to a much greater extent than her share of world's total production of hides would. It was also claimed that Indian hides possessed certain tanning qualities, which were not found in hides produced in other countries. Views countrary to the latter were also placed before the committee. The committee, in the absence of accurate data on all the relevant considerations involved, did not find itself in a position 'to define the nature and limits of the competition between hides produced in India and those produced in other countries'.—*Report of the Hides Cess Enquiry Committee,* Vol. I, 1930, p. 23.

116. The period during which these surveys were carried out has not been indicated in the Report. Generally, however, it can be surmised that they were carried out sometime during 1935-9.

TABLE 62

Annual Production of Indian Hides

(Source :—*Report on the Marketing of Hides in India and Burma*, 1943, p. 10)

Type		Annual Production (Lakhs)		Total	Percentage to Total Indian Production	Number of Animals (Lakhs)	Percentage of Hides to Animal Population
		Fallen	Slaughtered				
Kips	..	147·4	52 7	200·1	78	1,760	11·4
Percentage	..	(73)	(27)	(100)			
Buff Hides	..	43·8	13·3	57·1	22	475	12·0
Percentage	..	(77)	(23)	(100)			
Total	..	191·2	66·0	257·2	(100)	2,235	11·15
Percentage	..	(74)	(26)	(100)			

than 8 per cent. As in the case of kips the proportion of buff hides produced to the buffalo population was the highest in Madras.

It is not possible to indicate the trend of the production of hides in India in the absence of reliable data. Only very rough estimates are available and there is no test by which the accuracy of these can be judged with any certainty. The general trend of production may be very broadly gauged from the movement of bovine population in India as both these are closely related. From 1920 to 1935 Indian cattle, roughly speaking, recorded an increase of about 13 per cent. During the same period, therefore, the production of hides, may be very broadly said to have increased by about 13 per cent.

No information regarding the quantity of raw hides consumed in India was available. As a result of the special enquiries conducted for the *Report on the Marketing of Hides in India and Burma*, figures regarding the consumption or use of raw hides among various consumers in India and abroad, during the quinquennium ending 1938-9 were available and have been set out in Table No. 63.

The *Report on the Marketing of Hides in India and Burma* observes :

Excluding the hides that are exported (raw or tanned) and including the small quantity of imported leather, normally about 175 lakhs hides are available annually for India's requirements. Out of this, only about 12 lakh hides are used in raw condition, without any tanning. The rest....are tanned by various methods and by several types of tanners. The methods of tanning depend to a great extent upon the uses to which the leather is put to in the country. Inquiries show that about half of the Indian tanned leather is utilized for making country shoes and *chappals*. This quantity is estimated to produce about 700 lakh pairs of shoes, or one pair per annum for every five persons in rural areas. Large and small buckets for lifting water from wells, etc., are also made out of village tanned hides and these require about 17 per cent. of the indigenous tanned leather. Almost an equal proportion is used for making other articles of agricultural use, such as leather ropes, straps, lacing, etc. Only 12 per cent. of the leather (mostly tanned by modern tanneries) is used for making shoes of western style. The

remainder or only 5 per cent. is utilized for making suit-cases, harness, saddlery and for providing leather for repairs.[117]

TABLE 63

Consumption of Raw Hides in India

(Source :—*Report on the Marketing of Hides in India and Burma*, 1943, p. 92)

Industry or Trade	Number (Lakhs)	Percentage
1. Village tanners for indigeneous tanning ..	91	34·1
2. Village and larger tanneries for making dressed hides (86 lakhs)—		
(a) For export ..	48	18·0
(b) For use in India ..	38	14·2
3. Shippers for export to foreign countries, as raw ..	47	17·6
4. Modern tanneries for making fully finished leather (31 lakhs)		
(a) For use in India ..	23	8·6
(b) For export ..	8	3·0
5. Village artisans for making ropes, etc., from hides in raw condition without tanning ..	12	4·5
Total (257 lakhs of Indian production + 10 lakhs of imports) ..	267	(100)

In the absence of data regarding the use and consumption of raw hides in India the trends in that regard have to be judged from data having an indirect bearing on that point. As remarked earlier the increase in the production of raw hides during 1930-5 has been estimated at about 13 per cent. Roughly during that period the total exports of hides, raw and tanned, declined by about 35 per cent. Obviously it suggests an increasing proportion of the total production being used at home. This is again corroborated by the fact that the decline in exports was almost wholly confined to raw hides and that exports of tanned and unwrought leather had increased during the decade perceding the outbreak of World War II indicating that a larger proportion than formerly of the total production was being processed by tanneries in the

117. *Ibid*, pp. 101-2.

country. The imports of tanning material have also increased considerably during 1919-20 and 1938-9. All these considerations point to the fact that the Indian tanning industry was developing during this period and was processing an increasing proportion of the Indian production.[118]

Table No. 64 gives the exports of hides from India and Burma during the inter-war period.

The exports on the whole declined during the interval between the two world wars. The decline was mostly accounted for by the decline in raw hides, while during the decade preceding 1939, the exports of tanned and unwrought hides actually increased. On an average before World War II, about 40 per cent of the total production was exported abroad. The proportion of kips and buff hides in the exports of raw hides have changed during the period. During the quinquennium ending 1918-9 kips formed about 70 per cent. of the total raw hides exported, the rest being buff hides. The proportion of kips to total raw hide exports had increased to about 82 per cent. during the quinquennium ending 1938-9. There was a proportionate reduction in the percentage of buff hides from about 30 to about 15 per cent. during the same period. Calfskins formed only a very small percentage of the total exports at the end of World War I, i.e., about 4 per cent. and this percentage had declined to 1·7 during the quinquennium ending 1938-9.

Table No. 65 gives the shares of different countries importing kips and buff hides from India and Burma.

Continental countries were the chief customers of raw hides from India and Burma. Germany and Italy among themselves accounted for more than 50 per cent. of the exports of hides up to 1933-4. Their shares in exports declined sharply after that year. The share of the United States declined from about 15 per cent. in the quinquennium ending 1923-4 to 0·4 per cent. during the triennium ending 1936-7. The share of the U.K. was small in the quinquennium ending 1923-4 being 12·6 per cent. and this declined to 8·5 per cent. in the quinquennium ending 1933-4. During the next three years, how-

118. *Ibid*, p. 97.

TABLE 64

Exports of Hides from India and Burma during 1913-39

(Source :—*Report on the Marketing of Hides in India and Burma*, 1943, p. 28)

Quinquennium ending	Raw Hides		Tanned Hides		Unwrought Leather		Total	
	Tons ('000)	Pieces* (Lakhs)	Tons ('000)	Pieces* (Lakhs)	Tons ('000)	(Lakhs) Pieces*	(Lakhs) Pieces	Value (Lakhs) Rs.
1913-4 ..	49·6	114·1	9·1	29·1	0·04	0·3	143·5	818
1918-9 ..	32·9	75·7	16·9	54·1	0·18	1·3	131·1	948
1923-4 ..	30·1	69·2	11·5	36·8	0·33	2·5	108·5	671
1928-9 ..	32·7	75·2	13·7	43·8	0·23	1·7	120·7	704
1933-4 ..	19·6	45·1	11·7	37·4	0·25	1·9	84·4	394
1938-9 ..	23·8	54·7	15·0	48·0	1·13	8·4	111·1	435

*Number of pieces has been calculated at 230 per ton in case of raw hides, 320 for tanned hides and 745 for unwrought leather.

TABLE 65

Shares of different countries in the Exports of Hides from India

(Source :—*Report on the Marketing of Hides in India and Burma*, 1943, p. 32, 36)

Countries	Average of Quinquennium ending 1918-9			Average of Quinquennium ending 1923-4			1928-9			1933-4			Average for the Triennium ending 1936-7		
	Kips	Buff Hides		Kips	Buff Hides		Kips	Buff Hides		Kips	Buff Hides		Kips	Buff Hides	
	Percentage to total														
United Kingdom ..	23 7	25 4		12·6	27 7		5·9	8 6		8 5	9·0		20·8	11·2	
U.S.A. ..	21·0	64·0		14·8	31·1		1·2	14·6		0·7	5·4		0·4	10·1	
Germany ..	6·0	1·0		29·8	14·9		46·8	26·5		33·8	24·3		29·7	16·6	
Italy ..	35·4	2·1		19·3	7·1		19·8	7 8		22·6	3·7		14·5	2·2	
Spain ..	4·5	0·3		8·4	0·6		7·9	2·0		7·6	1·7		2·1	0·4	
Austria ..	1·7	—		0·2	—		—								
Netherlands ..	0·1	0·4		1·0	2·1		2·3	1 9		5·0	1·0		5·0	0·4	
Greece ..	0·1	1·1		0·2	2·1		1·4	4·9		4 2	14·7		4·6	13·7	
Sweden ..	1·1	—		4·3	—		3·6	—		4·1	—		2·5	—	
Norway ..	1·1	—		1·9	—		1·8	—		3·3	—		2·6	—	
Other countries ..	5·3	5·7		7·5	14·4		9·3	33 7		10·2	40·2		17·8	45·4	
Total ..	(100)	(100)		(100)	(100)		(100)	(100)		(100)	(100)		(100)	(100)	

ever, the average share of the U.K. in the total exports shot up to about 21 per cent.

The U.S.A. was the principal buyer of buff hides up to 1923-4 but after that her share declined to 5·4 per cent. in the quinquennium ending 1933-4. Her share during the three following years was about 10 per cent. Germany's share was small before and immediately after the World War I, but during the decade 1923-24 she absorbed on the average a quarter of the total exports. But her share again decreased during the following three years. The U.K. took about a quarter of the total exports during the decade following the end of World War I, but in the period following her share had been round about 10 per cent.

The types and classes of hides exported from India are shown in Table No. 66.

The proportion of wet-salted was very low in the exports, that of *suktis* being the largest. Tanners in the country preferred the wet-salted variety because it left the hide pliable and moist and thus very suitable for easy and effective tanning. The exporters preferred the other three types for convenience of handling, packing and transport.[119] About 20 per cent. of the total hides exported were of the slaughtered type.

Raw hides were sent out mostly through the ports of Calcutta and Karachi. The tanned hides were mostly prepared in south India and exported from Madras.[120]

A study of the average declared export values of hides, mostly *suktis* and dry frameds, sent out from India during the 60 years period ending 1939-40 shows great ups and downs in the prices. From 1880 to 1916-7 prices steadily rose from Rs. 23 to Rs. 60 per maund. In the next five years, they fell back to about Rs. 23, but again rose to Rs. 37 per maund in 1929-30. Thereafter, they fell again, the lower limit being reached in 1935-6 when they approximated Rs. 16-8-0 per maund... Long-range data in respect of internal markets are not available but a study of the prices during the last ten years reveals tendencies similar to those described above.[121]

119. *Ibid*, p. 88.
120. *Ibid*, p. 58.
121. *Ibid*, p. 129.

TABLE 66

Types and classes of Hides Exported from India

(Source :—*Report on the Marketing of Hides in India and Burma,* 1943, p. 94)

Types of Cure	Number (Lakhs)	Proportion To Total	Type of Hide			
			Number (Lakhs)		Percentages	
			Fallen	Slaughtered	Fallen	Slaughtered
Sukti ..	19	40·4	19·0	Nil	100	Nil
Dry-salted ..	15	31·9	9·9	5·1	66	34
Framed ..	12	25·6	9·0	3·0	75	25
Wet-salted ..	1	2·1	0·5	0·5	50	50
Total ..	47	(100)	38·4	8·6	81·7	18·3

The types are distinguished by the method of curing adopted. It was estimated that about 5 per cent of the Indian hides were prepared as 'dry framed', about 8 per cent as 'dry-salted', about 38 per cent as 'wet salted' and the remaining were just dried in the sun or shade in an unwashed and unframed condition. These last are called *Suktis* and consist mostly of fallen hides. *Report on the Marketing of Hides in India and Burma,* 1943, p 88.

11. Skins

India is the leading world producer and exporter of sheep and goatskins. Exports of skins from India can be traced as

TABLE 67

Production of Skins in the main Producing Countries of the World
(Source :—*Report on the Marketing of Skins in India and Burma*, p. 1, 2)

	Goat and Sheep Population (1935)* (Lakhs)	Annual Skin Production† (Lakhs)	Percentage of Skins to Goat and Sheep Population	Percentage of Skins Production to World's Total
India (a), (d) ..	1037·8	378·0	36·4	18·9
U.S.A. (b) ..	601·0	218·6	36·4	11·0
Australia (b) ..	1131·9	188·6	16·7	9·4
Newzealand (b) ..	291·2	130·3	44·7	6·5
United Kingdom (b) ..	440·1	111·0	25·2	5·6
Italy ..	106·6	68·2	64·0	3·4
France (b) ..	108·8	68·1	62·6	3·4
Argentina (b) ..	449·8	68·0	15·1	3·4
Union of South Africa ..	420·4	29·2	6·9	1·5
Turkey (a) ..	219·5	27·6	12·6	1·4
Germany (a) ..	109·7	17·5	16·0	0·9
Canada (b) ..	26·4	17·2	65·2	0·9
Rumania (a) ..	122·5	15·7	12·8	0·8
Algeria ..	93·4	11·1	11·9	0·6
Uruguay (b) ..	154·3	10·7	6·9	0·5
Burma (a) ..	3·5	2·8	80·0	0·1
Other Countries (c) .	—	632·1	—	31·7
Total ..	—	1994·7	—	100·0

*Compiled from "International Year Book of Agricultural Statistics", 1938-39.

†Compiled from "Statistical Year Book of the League of Nations," 1937-38. Figures relate to sheep, lamb, goat and kid skins unless otherwise indicated.

(a) India—Sheep Skins—144·7; Goat Skins—233·3. Burma—Sheep Skins—0·6; Goat Skins—2·2. Turkey—Sheep Skins—18·8; Goat Skins—8·8. Germany—Sheep Skins—14·7; Goat Skins—2·8. Rumania—Sheep Skins—15·4. Goat Skins—0·3.

(b) Represents figures for Sheep Skins only.

(c) Egypt, Morocco, S. Rhodesia, Tunis, Mexico, Brazil, Chile, Columbia, Peru, Japan, Palestine, Syria and Lebanon, Austria, Philippines, Belgium, Denmark, Estonia, Finland, Hungary, Irish Free State, Latvia, Lithuania, Norway, Netherlands, Poland, Portugal, Sweden, Switzerland, Czechoslovakia and Yugoslavia.

(d) Besides this India produces about 67 lakhs of marketable Goat and Sheep Skins, from dead animals.

far back as the early 17th century. Table No. 67[122] gives the figures of the production of skins in the main producing countries of the world.

Table No. 68[123] gives the figures of exports of skins from various countries.

India, the largest producer, accounted for about 20 per cent. of the total world production, followed by the U.S.A. with about 11 per cent., Australia with about 9 per cent., New Zealand with about 7 per cent., and the U.K. with about 6 per cent. Of the total world production of skins slightly more than half entered international trade. In 1934-5 India accounted for about 23 per cent. of the total world exports of skins, followed by South Africa and New Zealand with about 14 per cent. each, Australia with about 12 per cent., China with about 8 per cent., and Spain and Argentina with about 7 per cent. each. The movement was broadly towards Europe and the U.S.A. In 1934-5 the U.K. and the U.S.A. almost equally shared 40 per cent. of the total exports of skins and the major portion of the balance was taken by France, Germany, Holland and Belgium.

Statistics regarding the production of raw skins in India are totally lacking. Special surveys, therefore, were conducted by the Agricultural Marketing Department of the Government of India. Table No. 69 sets out the information collected as a result of these surveys.

Of the total production of skins in India goatskins comprised about 60 per cent. Only 15 per cent. of these were of the 'fallen' type. The largest producer of goatskins was

122. 'Many of the countries give only the number of sheep slaughtered, while some have supplied only regional figures. No country has given any data for the number of skins produced from dead animals. Hence the figures in the table should be taken to represent an approximate estimate only'.—*Report on the Marketing of Skins in India and Burma*, 1943, p. 1.

123. Statistics regarding the movements of skins are not compiled and made available in any uniform manner. In Table No. 67 the figures available have been converted into the number of skins, for the sake of uniformity and should therefore be treated as only approximate. cf. *Ibid*, p. 2.

TABLE 68

Annual Exports of Skins from various countries in the World (in Lakhs)

(Source—*Report on the Marketing of Skins in India and Burma*, 1943, p. 3)*

Principal Exporting Countries	Principal Importing Countries								Percentage to Total Imports
	United Kingdom	U.S.A.	France	Germany	Holland	Belgium	Others	Total	
India .	49·6	152·9	4·7	8·5	7·3	3·0	13·1	239·1	22·7
South Africa ..	40·3	43·9	52·5	6·8	4·7	0·9	1·7	151·4	14·4
Newzealand ..	48·5	72·3	8·7	0·5	0·3	1·4	10·0	141·7	13·5
Australia ..	18·4	13·1	81·0	2·7	—	3·0	2·5	120·7	11·5
China ..	1·2	68·0	1·4	1·3	1·5	—	7·6	81·0	7·7
Argentina ..	—	—	—	—	—	—	—	69·9	6·6
Spain ..	3·6	6·2	14·0	29·0	2·1	7·3	5·7	67·9	6·5
Irish Free State .	22·3	—	—	—	—	26·3	1·7	50·3	4·8
U. Kingdom ..	—	—	—	—	—	—	—	35·5	3·4
Brazil ..	—	—	—	—	—	—	—	35·3	3·4
Chile .	8·6	10·6	—	0·4	—	—	1·8	21·4	2·0
Nigeria ..	7·8	9·1	2·0	0·1	—	0·1	0·1	19·2	1·8
Holland .	1·1	0·4	—	1·6	—	9·0	1·1	13·2	1·3
Czechoslovakia ..	0·1	2·5	0·1	1·1	—	—	0·9	4·7	0·4
Total ..		—	—	—	—	—	—	1051·3	100·0

*Compiled from the "*Leather Trade Year Book*" 1937, the figures relate to goat, sheep skin and mainly pertaining to trade in 1935-36

Note—Conversion factor—1 Skin=2½ lb.

TABLE 69

Annual Production of Skins in India and Burma

(Source :—*Report on the Mar* ...*ns in India*, 1943, pp. 5, 6, 7)

	Annual Production (Lakhs)			Sheep Population in 1935 (Lakhs)	Percentage of Skins to Sheep Population
	Slaughtered	Fallen	Total		
India					
Goat Skins ..	233·2	41·7	274·9	579·0	47·5
Sheep Skins ..	144·7	26·1	170·8	558·8	37·2
Burma					
Goat Skins ..	2·2	1·3	3·5	2·8	128·0
Sheep Skins ..	0·6	0·3	0·9	0·7	128·6

U. P. accounting for about 19 per cent. of the total production. Bengal and Bihar accounted for more than 10 per cent. each and Madras and Rajputana states for a further 7 per cent. each. The percentage of skin production to total goat population was the highest in Travancore, being 150, indicating that a very large number of goats were imported into that state for slaughter. Similar was the case with Burma. Bombay province with Deccan states came next with 77 per cent. followed by Central Provinces and states and Eastern states with about 68 per cent., Central Indian states and United Provinces and states with about 66 per cent. each, Central Provinces with about 64 per cent. and the North-West Frontier Provinces including Agencies and Tribal areas with about 62 per cent. The percentage was low in Assam, Mysore, Punjab and Rajputana states, being 19·7, 23·6, 30·2 and 30·4 per cent. respectively.[124]

In the production of sheepskins Madras occupied the leading position, accounting for nearly 23 per cent. of the

124. *Ibid*, p. 6.

total Indian production. Bombay and Hyderabad each contributed about 10 per cent. of the total production followed by Rajputana states with about 8 per cent. and Punjab with about 7 per cent. About a quarter of the total sheep population in India in 1935 was found concentrated in Madras Province. The percentage of skins produced to total sheep population was the highest in Bombay province and Deccan states being about 85. Sheep population in Bombay was smaller and the rate of slaughter was high. The percentage was lowest in Orissa being about 22 per cent. In Burma, of course, the rate of slaughter far exceeded the sheep population in the country and a considerable number was imported.

As in the case of hides it is not possible to gauge the trend of production of skins in India except by indirect means. Production figures over a period are totally absent. The broad trend of production can be gathered from the movement of sheep and goat population. From 1920 to 1935 the sheep and goat population in India increased by 24·6 per cent. and the total production of sheep and goat skins may be roughly taken to have increased in the same proportion during that period, 'although in this connexion the influence of other factors, such as epidemics among the animals, and increase or decrease in the demand for meat, and, therefore, increase or decrease in the supply of total skins, which affect production independently, should not be lost sight of'.[125]

'India imports only a small number of skins from foreign countries. Her average annual imports of raw and dressed skins amount to 59·2 lakhs pieces valued at 34·4 lakhs of rupees. Of the above about 54·1 lakh pieces are imported in the raw state and the balance in tanned or dressed condition. India imports raw skins mostly from Afghanistan and Burma and tanned leather mostly from the United States of America.'[126]

Information regarding the consumption of skins produced in India is lacking. Informed estimates based on the agricultural marketing surveys of the Government of India revealed that the total available supply of raw goat and sheep skins in India was 504·9 lakh pieces including imports.

125 *Ibid*, p. 11. 126. *Ibid*, p. 112.

"Of this, 51 per cent. are exported to foreign countries by the shippers in raw state, 37·8 per cent. are tanned both by rural and urban tanners for making dressed skins, 6·3 per cent. are consumed by village tanners for indigenous tanning, 4·5 per cent. are used by the modern tanners for making fully finished leather and only 0·4 per cent. are utilized for making ropes and musical instruments in the raw condition.

"Of the 70·4 lakhs of tanned skin pieces used for different purposes, it is estimated that 20 lakh pieces are used for making lining of the uppers of country pattern shoes including *chappals*, 21 lakh pieces for making fancy shoes and linings of the western style shoes, 17·4 lakh pieces for making bellows, water-bags, book-binding leather and for general repairing and 12 lakh pieces for making ropes, hand-bags, suitcases, purses, etc. Besides the above, 2 lakh pieces of skins are estimated to be used in the raw state for making musical instruments, ropes, etc." [127]

For gauging the trend of internal demand and consumption only indirect evidence was available. The demand of tanners in the country could be roughly gauged from the figures of the exports of tanned or dressed leather from India. Nearly 78 per cent. of the raw skins produced in India were tanned and nearly 92 per cent. of those tanned were exported. It merely follows that the demand of tanners in India moved sympathetically with the demand for Indian tanned and dressed leather from abroad. The average of exports of tanned or dressed skins from India during the quinquennium ending 1938-9 was only slightly higher than that of the preceding quinquennium, though fluctuations for individual years were quite wide, ranging between 5,369 tons (1932-3) and 7,370 tons (1936-7). Generally, it should be said that the demand by the tanners at home was steady and improved only slightly during 1929-39.

Table No. 70 gives the figures of exports of skins of all types from India during 1929-39.

The figures show that raw skins formed more than 55 per cent. of the total exports of skins from India during the period 1929-39. The percentage of raw skins in the total exports of skins varied between 55 and 64 during this period. No trend

127. *Ibid*, p. 116.

TABLE 70

Total Exports of Raw and Tanned Skins from India

(Source :—*Report on the Marketing of Skins in India and Burma*, 1943, p. 17)

Period	Raw Skins		Tanned Skins		Total		
	Quantity (Tons)	Pieces (a) (Lakhs)	Quantity (Tons)	Pieces (b) (Lakhs)	Quantity (Tons)	Pieces (Lakhs)	Value (Lakhs) Rs.
1929-30 ..	21,517	265·1	6,596	183·5	28,113	448·6	885·8
1930-1 ..	18,121	223·2	6,125	167·8	24,246	391·0	701·5
1931-2 ..	16,151	211·7	5,406	150·5	21,557	362·2	564·4
1932-3 ..	12,826	190·5	5,369	144·2	18.195	334·7	474·2
1933-4 ..	19,419	278·5	6,506	174·0	25,925	452·5	598·2
1934-5 ..	15,039	215·7	6,486	172·5	21,525	388·2	514·6
1935-6 ..	21,037	301·0	6,155	169·5	27,192	470·5	578·3
1936-7 ..	18,568	262·9	7,370	201·2	25,938	464·1	644·7
1937-8 ..	19,373	255·6	6,692	183·3	26,065	438·9	644·7
1938-9 ..	19,492	252·6	5,421	148·1	24,913	400·7	513·2

(a) **Actual figures.**
(b) On the basis of : Goat Skins 1,968 pieces to a ton ; Sheep Skins 3.542 pieces to a ton.

either way in these percentages was observable. The total export of skins from India declined continuously from 1929-30 to 1932-3. It touched and passed the original level during the next year but there followed a recession in the year following. Exports were marked up during 1935-6 and they exceeded the level reached in 1933-4. In the following years there occurred a continuous decline. The exports of raw and tanned skins during the same period followed the same pattern broadly, though the decline in exports since 1936-7 was largely shared by tanned skins alone.

'Of the total exports almost all the sheep skins and more than 85 per cent. of the goat skins are sent out in dry and dry-salted condition and only the balance in wet-salted cure.'[128] Of the total exports of raw skins nearly ninety-five per cent. consisted of goat skins and the rest of sheep-skins.

Table No. 71 gives the figures of the exports of goat and sheep skins from India according to their destinations.

The U.S.A. had been for a very long time the principal customer of raw goat skins from India and up to 1933 exports of raw goat-skins to the U.S.A. accounted for about 80 per cent. of the total exports of that commodity. In the following quinquennium, however, the share of the U.S.A. dropped and averaged only about 65 per cent. of the total raw goat-skin exports. 'This was perhaps due to a change in fashion in shoes causing a decline in the imports of 'Calcutta' type of skins into the United States of America.'[129] The share of the U.K. in the total exports of raw goat skins averaged around 8 per cent. from the beginning of World War I to 1932-3. During the following quinquennium, however, her share increased to about 23 per cent. France and Netherlands were steady customers and their share expanded between 1917-8 and 1927-8. Since then there was a sharp decline.

The exports of raw sheep skins declined during the decade following the termination of World War I and though they

128. *Ibid*, p. 17.
129. *Ibid*, p. 21.

TABLE 71

Exports of Goat and Sheep Skins from India according to Destinations

(Source :—*Report on the Marketing of Skins in India and Burma*, 1943, p. 20 and 23)

	Average for Quinquennium Ending—					
	1913-4	1917-8 4 Years War Period	1922-3	1927-8	1932-3	1937-8
Raw Goat Skins						
Total Average Annual Quantity Exported (Tons) ..	25,436	21,418	21,059	18,261	17,483	17,744
Importing Countries	Percentage to Total	Percentage to Total	Percentage to Total	Percentage to Total	Percentage to Total	Percentage to Total
U.S.A. ..	77·6	83·5	79·9	78·7	81·4	64·5
United Kingdom ..	8·4	9·6	8·9	6·3	8·3	22·6
France ..	5·9	2·4	3·9	6·4	2·9	2·5
Netherlands ..	3·6	9·8	2·6	4·6	2·3	3·5
Australia ..	1·1	1·7	1·8	1·5	1·9	2·9
Germany ..	1·8	0·4	0·8	1·1	0·7	1·4
Belgium ..	1·0	0·6	0·2	0·9	1·4	0·8
Spain ..	Nil	Nil	Nil	0·1	0·4	0·1
Other Countries ..	0·6	1·0	1·9	0·4	0·7	1·7
Total ..	(100)	(100)	(100)	(100)	(100)	(100)
Raw Sheep Skins						
Total Average Annual Quantity (Tons) ..	1,330	1,784	1,734	381	708	951
Importing Countries			Percentage to total			
U.S.A. ..	83·3	91·0	58·1	17·8	6·8	3·2
Italy ..	0·4	0·2	Nil	13·4	39·8	39·0
United Kingdom ..	3·2	2·9	23·2	28·1	4·4	7·9
Germany ..	7·7	0·5	0·2	21·0	17·5	20·4
France ..	1·6	0·1	4·7	16·3	19·6	7·1
Other Countries ..	3·8	5·3	13·8	3·4	11·9	22·4
Total ..	(100)	(100)	(100)	(100)	(100)	(100)

recovered appreciably during the following decade they were much lower than during the pre-World War I quinquennium. The U.S.A. was the largest single buyer of raw sheep skins till 1922-3. Before World War I she absorbed, on an average, nearly 83 per cent. of the total exports from India and Burma and her share increased to 91 per cent. during World War I. In the following quinquennium it came down sharply to about 58 per cent. and has continued to decline swiftly since then. It was only about 3 per cent. during the quinquennium ending 1937-8. In contrast with this Italy's share recorded a continuous increase, from about 0·4 per cent. before World War I to about 39 per cent. during the decade ending 1937-8. The U.K. was only an insignificant buyer before World War I taking about 3 per cent. of the total exports. In the quinquennium following World War I her share suddenly rose to about 23 per cent. and to about 28 per cent. during the next quinquennium. Since then, however, her share declined sharply to about 4 per cent. during 1928-9 to 1932-3, though in the following quinquennium it increased to about 8 per cent. Germany was an important customer of Indian sheep skins and in the 5 years preceding World War I nearly 7 per cent. of the total exports were absorbed by her. During the war and afterwards also her share dwindled to insignificance. But during the period from 1923-4 to 1937-8 she took on an average nearly one-fifth of the total exports of raw sheep skins from India and Burma. The share of France in Indian raw sheep skin exports increased from about 5 per cent. during 1918-9 to 1922-3 to about 16 per cent. during the following quinquennium and further to about 20 per cent. in the next. In the period following it declined sharply to about 7 per cent.

12. Lac

India is known to have exported lac from as early as 1607. It is a resinous substance secreted by the insect *Laccifer Lacca* on the branches of certain trees known as its hosts. India holds practically a world monopoly of lac, accounting for nearly 85 per cent. of the total world production. 'Much of the lac produced outside India in Burma, Straits Settlements, Siam, Indo-China, Ceylon, Java and China, is imported into

India in the form of stick lac to be worked up into seed lac and shellac.' [130]

The larvae settle down in large numbers on the young succulent shoots, pierce the bark and start feeding on the sap of the host and secreting lac. The encrustation formed on the branches is scraped and forms the stick lac of commerce. It contains apart from woody matter, the lac resin, lac dye, bodies of insects and some wax. Seed lac is obtained by grinding and washing this stick lac. Shellac is made by melting seed lac or extracting it by a suitable solvent.[131]

Four lac crops were harvested in a year, known as *Jethua, Aghani* (*Kusum*), *Baisaki* and *Katki*. The first two were obtained from *Kusum* hosts and the last two from other hosts. *Baisaki* was the biggest and the most important of the four and was harvested between April and June. *Katki* was cut in October-November, *Aghani* (*Kusum*) in November-February and *Jethua,* the smallest crop, in June-July.

Table No. 72 gives the total production of lac in India during the decade preceding World War II.

The total lac collected in India during the period from 1918-9 to 1921-2 averaged about 37,000 tons per annum. Though this might not necessarily correspond with the total production it broadly gives an idea regarding the total amount produced. Estimates of production framed by the Indian Lac Cess Committee are available from 1928-9. In 1928-9 the total production was put at about 55,000 tons. It declined to about 32,000 tons in 1931-2 to 1932-3. Then followed a continuous increase upto 1936-7 when the record figure of about 60,000 tons was reached. In 1937-8 there was a decline and there was again an increase in the following year. The average production during the quinquennium preceding the outbreak of World War II was about 48,000 tons.

The main lac producing areas in India were certain districts of Bihar, the Central Provinces, the U.P., Bengal and Assam and the Central India and Eastern States. On an

130. *Report on the Marketing of Lac in India,* 1943, p. 1.
131. *op. cit.,* p. 1.

TABLE 72

Production of Stick Lac in India from different Crops during 1929-39

(Source :—*Report on the Marketing Lac in India*, 1943, p. 149)

Crop	Average of 1929-30 to 1933-4	(Tons) 1934-5	1935-6	1936-7	19 -8	1938-9
Reporting Areas (12 Lac Divisions)						
Baisakhi Crop ..	22,061·0	23,402	23,255	27,663	28,949	29,555
Jethua Do. ..	1,465·8	827	1,102	13,674	1,268	1,598
Katki Do. ..	7,884·0	7,853	7,035	12,721	11,443	17,249
Kusmi Do. ..	5,003·6	3,804	7,458	13,988	3,228	3,784
Total ..	36,414·4	35.886	38,850	58 046	44,888	52,186
Assam ..	1,431·0	1,745	1,414	1,231	956	808
Non-reporting areas .	(Not available)	503	422	422	624	771
Grand Total ..	37,845·4	38,134	40,686	59,699	46,468	53,765

average during the pre-World War I quinquennium Bihar accounted for about 60 per cent. of the total production, the C.P. for 13 per cent. and Bengal for 8 per cent.[132]

Besides the production at home India also imported lac from the other producing countries, most of which were her neighbours. Total imports of stick lac into India amounted to an average of about 3,900 tons during 1929-30 to 1933-4, or about 11 per cent. of the average production in India during the same period. They averaged about 62,000 tons during the next quinquennium or about 12½ per cent. of the average Indian production during that period. During that quinquennium imports of lac from Burma declined but those from Straits Settlements and Siam increased very considerably.[133]

The quality of stick lac depends upon a number of factors such as the type of host, the time of the crop, the method of infection, the stage of maturity, etc. For instance, *Kusum* lac is considered best. Between *Ber* and *Palas*, the former is said to give a higher percentage of lac of lighter colour. *Baisaki* crop yields lac of paler colour compared with *Katki* crop. Again lac from "natural infection" is generally inferior to that from "artificial infection" and *Phunki* lac invariably contains less colouring matter than *Ari* lac.[134]

'The quality of seed lac depends mainly upon the type and quality of stick lac and the extent of washing. *Kusumi* stick lac produces seed

132. *op. cit.*, p. 10.

133. *op. cit.*, p. 10.

134. *op. cit.*, pp. 127-8 The terms used in the above can be explained as follows.—

(1) *Palas* and *Ber* are names of hosts. The average yield of stick lac per tree has been estimated as 12 lbs. for *Kusum*, 3 lbs. for *Ber* and 2 lbs. for *Palas*.

(2) 'Artificial infection' and 'natural infection' are the two methods used for infecting or inoculating lac hosts. For artificial infection, a few sticks of brood lac, i.e., lac from which larvae are about to emerge are tied to a host tree suitably pruned. For natural infection, all or part of the lac encrustation on a host is left on its branches. 'Artificial infection is more common and better of the two types'.

(3) 'The branches with encrustation of lac may be cut before the emergence of larvae when the lac is called *ari* or after swarming, i.e., emergence of larvae, such lac being called *phunki*. A major part of the lac crop is collected as *ari* lac'.

lac of lighter colour and care in washing improves colour and helps to reduce the impurities. The main commercial grades of seed lac are golden, fine and ordinary *Kusumi* and there are similar grades for *Baisakhi*...The quality of shellac depends upon the type and quality of seed lac used, the method of manufacture and the extent of mixing or addition of substances like rosin and orpiment. The main commercial grades of shellac are T.N., Standard I, Fine and Superfine. Among these, there are grades with and without the admixture of rosin and addition of orpiment. The trade brands under which shellac is put on the market by the various manufacturers and shippers are over 300 in number'.[135]

Lac was used mainly in the preparation of gramophone records and in the manufacture of paints, varnishes, polishes and various electrical goods. For gramophone records particularly clean lac with good fluidity is required. Varnishes and polishes required lac of good colour and lac free from rosin or orpiment was essential for electrical goods. Besides these lac was also used for plastic mouldings, as sealing wax and for stiffening hats, etc.

Table No. 73 gives the quantities of lac retained in India during 1934-5 and 1938-9.

TABLE 73

Lac retained in India during 1934-5 to 1938-9

(Source :—*Report on the Marketing of Lac in India*, 1943, p. 27)

	(Tons)				
	1934-5	1935-6	1936-7	1937-8	1938-9
Total Supplies of Lac (Production and Imports) in Terms of Stick Lac ..	46,692	46,535	68,515	49,860	58,857
Total Exports in Terms of Stick Lac ..	45,560	36,939	65,769	51,577	50,598
Net Available Supplies ..	1,132	9,396	2,836	—1,717	8,259

135. *op. cit.*, p. 128.

The total consumption of lac in India was very small and during the period referred to in Table No. 73 it did not amount, on an average, to more than about 9 per cent. of the total production. Internal demand did not show any definite trend. Table No. 74 gives information regarding the utilization of lac in India for various purposes.

TABLE 74

Utilization of Lac in India for various Purposes

(Source :—*Report on the Marketing of Lac in India*, 1943, p. 41)

	(Tons)		
	Stick Lac	Seed Lac	Shellac
Varnishes, Paints and Polishes ..	—	300	1,000
Gramophone Records ..	—	—	300
Bangles ..	—	50	300
Wood Turning Industry ..	—	—	80
Jewellery ..	—	30	20
Colouring Skins ..	50	—	—
Miscellaneous ..	50	70	150
Total ..	100*	450	1,850

*Total in Terms of Stick Lac=4,000 Tons.

As already remarked, India has been exporting lac to Europe from the beginning of the 17th century. Lac-dye was also exported. A strong demand for lac-dye developed in the days of the East India Company and obscured the exports of resin. By 1868-9 exports of lac-dye from India reached 887 tons valued at about Rs. 8 lakhs. With the discovery of aniline-dyes this demand languished and after a time dis-

136. *Ibid*, p. 22.

appeared altogether. But the demand for lac resin developed considerably for industrial purposes. The demand for lac-dye was replaced by the demand for lac resin by about the nineties of the last century.

Table No. 75 gives the exports of lac of various kinds from India.

TABLE 75

Exports of Lac of Various Types from India

(Source :—*Report on the Marketing of Lac in India*, 1943, p. 14)

Period	(Tons)					
	Shellac	Button Lac	Seed Lac	Stick Lac	Other Kinds	Total
1909-10 to 1913-4	17,785 (82·6)	1,728 (8·0)	333 (1·6)	274 (1 3)	1,404 (6·5)	21,524 (100·0)
1914-5 to 1918-9	15,011 (87·0)	475 (2·8)	782 (4·5)	156 (0·9)	834 (4·8)	17,258 (100·0)
1919-20 to 1923-4	17,784 (85·4)	704 (3·4)	287 (1·4)	97 (0·5)	1,945 (9·3)	20,817 (100·0)
1924-5 to 1928-9	21,037 (74·5)	1,067 (3·8)	2,977 (10·6)	599 (2·1)	2,539 (9·0)	28,219 (100·0)
1929-30 to 1933-4	19,525 (69·5)	1,025 (3·6)	5,440 (19·4)	240 (0·9)	1,863 (6·6)	28,093 (100·0)
1934-5 to 1938-9	20,068 (62·4)	1,224 (3·8)	8,698 (27·1)	182 (0·6)	1,964 (6·1)	32,136 (100·0)

(*Note* :—Figures in brackets represent percentages).

The total exports of lac from India expanded after 1923-4 and particularly during the quinquennium preceding the outbreak of World War II. The proportion of shellac and button lac together formed about 90 per cent. of the total exports upto 1923-4. From that time onwards the proportion of seed lac began to increase and from 10 per cent. in the total exports in the quinquennium ending 1928-9 it increased to 27 per cent. during the quinquennium 1934-5 to 1938-9.

Table No. 76 gives the total exports of lac from India according to their destinations.

TABLE 76

Exports of Lac from India according to Destinations

(Source:—*Report on the Marketing of Lac in India*, 1943, p. 15)

(In Terms of Seed Lac)

	(Percentage)		
	1909-10 to 1913-4	1929-30 to 1933-4	1934-5 to 1938-9
United Kingdom ..	42	38	26
U.S.A. ..	26	32	40
Germany	17	11	9
Others ..	—	—	—
Total	(100)	(100)	(100)

While the shares of the U.K. and Germany in India's lac exports had shown a decline that of the U.S.A. had considerably increased during recent years. From a comparison of different types of lac purchased by these countries over a period of years the *Report on the Marketing of Lac in India* observes:

It will be observed that before the 1914-8 War and in the quinquennium ending 1933-4, the United Kingdom took about 98 per cent. of her requirements in the form of shellac and button lac. In the five years period 1934-5 and 1938-9, shellac and button lac averaged 90 per cent. of her total off-take of lac and the proportion of seed lac increased to over 9 per cent. The U.S.A. also took more than 93 per cent. of her requirements in the form of shellac and button lac before the 1914-8 War but with the growing tendency in favour of seed lac in subsequent years. Shellac and button lac together accounted for less than 60 per cent. only of her off-take during the quinquennium 1929-30 to 1933-4, the balance being seed lac. During the next five years 1934-5 to 1938-9 her off-take was made up by more than half seed lac and less than half shellac and button lac. Germany's off-take before the 1914-8 War consisted of about 80 per cent. shellac and button lac and 19 per cent. 'other kinds' of lac but during the two quinquenniums ending 1933-4 and 1938-9 seed lac and 'other kinds' of lac gained ground. The exports to 'Other Countries' before the 1914-8 War

consisted mainly of shellac and button lac but in the two quinquenniums ending in 1933-4 and 1938-9 the proportion of shellac and button lac declined appreciably with an increase in the proportion of seed lac and 'other kinds' of lac.

Lac prices in Calcutta and London declined almost continuously since 1922-3 except for a slight recovery in 1927-8 and 1934-5. In the latter year the rise in prices was due to the corner attempted by a London syndicate. It miserably failed and prices crashed.

Lac encountered competition in foreign markets from synthetic resins. These could be used generally where shellac, in its chemically unmodified form could be used. The chief distinctive qualities of synthetic resins as compared with shellac were transparency, toughness and heat resistance. They were also free from impurities and mixtures while lac was often not. The chief advantage, however, that lac enjoyed was its cheapness. Past experience showed that the lower the prices of lac, the greater the consumption inspite of the synthetic resins. But when lac prices rose, substitutes were increasingly used. As the *Report of the Indian Trade Comsioner* at Hamburg for 1933-4 observed: 'Lac and shellac are peculiarly liable to this danger (of speculation), that, if prices rise too high then the manufacturers who require the product will turn to synthetic substitutes for the satisfaction of their requirements, especially if the synthetic substitutes are uniform in quality from year to year and their prices are not subject to fluctuations'.[137]

From August 1936 a cess on exports of lac at the rate of 7 annas per maund of shellac and seed lac and 5 annas per maund of lac refuse has been collected by the Government of India.

13. Mica

Mica accounted for less than one per cent. of the total Indian exports in terms of value. It was one of the specialized products that India exported to the outside world.

137. *Indian Trade Journal*, Vol. CXIV, No. 1475, p. 1528.

India was the third largest producer of mica in the world, the first two being the U.S.A. and the U.S.S.R. Table No. 77 gives figures regarding the production of mica in the chief producing countries of the world.

TABLE 77

World Production of Mica, 1932-34

(Source :—*Mineral Raw Materials*, U.S. Bureau of Mines, 1937, p. 132)

Country	(In Metric Tons) 1932	1933	1934
Argentina[1] ..	55	75	175
Australia—New South Wales ..	—	41	91
Central Australia ..	30	43	49
Bolivia[2] ..	8	23	4
Brazil[3] ..	42	23	59
Canada (Sales) ..	280	857	905
Ceylon[2] ..	2	3	3
Chosen ..	20	23	103
Eritrea ..	20	3	4
India British[5] ..	2,389	2,878	4,716
Italy ..	9	3	5
Madagaskar[6] .	140	173	294
Norway[2] ..	103	105	170
Rhodesia Northern ..	—	2	1
Do. Southern ..	13	4	2
Sweden ..	61	68	16
Tonganyka Territory .	12	11	31
Union of S. Africa (Sales) ..	250	549	278
U.S.S.R. ..	7,790	5,778	4
U.S.A. (Sales) ..	6,540	8,104	7,267

1. Rail and river shipments.
2. Exports.
3. Less than 1 ton.
4. Data not available.
5. Exports. Figures for output are incomplete and a more accurate idea of the size of the industry is to be obtained from the export figures (Records of the Geological Survey of India, Vol. 59, Pt. 3—1926, p. 273). Output reported as follows :—
   1932—1,662 Tons
   1933—2,087 ,,
   1934—2,830 ,,
6. Exports reported as follows :—
   1932— 130 Tons
   1933—2,087 ,,
   1934—2,830 ,,

Even though India ranked third in the world producers of mica she was the leading world exporter of it. In 1934 she accounted for slightly less than 50 per cent. of the total mica entering world trade. Again in contrast with other producers Indian production of mica consisted almost entirely of sheet, i.e., blocks, splittings and films and not of scrap. 'India is responsible for three qua[illegible] world production of sheet mica '.[138]

The chief mica producing regions in India are the mica belt of Bihar and Nellore district in Madras Presidency. Aimere-Merwara also produces small quantities.

The mica belt of Bihar is some 60 miles long by 12 to 14 miles wide and runs in a general east and west direction along the junctions of the Gaya, Hazaribagh and Monghyr districts. There is also a small production from Rajputana and Nilgiris. Both in Bihar and in Nellore the mica occurs in pegmatites, which are nearly always lenticular, and may reach a maximum length of 1,500 feet, with thickness up to 100 feet. They are aggregates of quartz, felspar and mica, with accessory mineral such as tourmaline, garnet, apatite and beryl. The beryl is not of gem (emerald or aquamarine) quality, but has been worked to a small extent in Ajmere-Merwara as a by-product for the extraction of the metal berylium, used in copper alloys. In mining the pegmatites it has been found that the mica averages about six per cent. of the total rock excavated, and only about one per cent. represents material of saleable quality after dressing.[139]

There are several varieties of mica, but the three chief are the white mica, muscovite, a hydrated silicate of aluminium and potassium : the amber mica, phlogopite, which is a magnesium-bearing mica ; and the black or brown ferro-magnesian variety known as biotite. Of the three, muscovite is far and away the most important commercially, phlogopite has some important uses, and biotite is utilized to a considerably lesser extent.[140]

Indian mica predominantly consists of ruby muscovite type, with biotite in frequent association. The only phlogopite deposit in India so far discovered occurs in Eranial Taluq of the State of Travancore in Southern India. This Travancore deposit was not commercially

138. A. M. Haron, *Mineral Resources*, Oxford Pamphlet on World Affairs, 1945, p 17.

139 A. M. Haron, *op. cit.*, p. 17.

140. *Minerals in Industry*, Pelican Books, 1946, p. 81.

worked till 1935, from when small annual productions appear in official records.[141]

Raw mica as it comes from the mines has to be processed before it can be marketed.

After the removal of broken and flawed pieces, the sheets are trimmed, a sickle being used for this purpose in Bihar and shears in Nellore, the product being then known as 'dressed block'. The wastage in this process alone amounts to between 70 to 80 per cent. The dressed mica is next sorted into the various market sizes, of which there are ten, ranging from No. 6, in which the area of the included rectangle measures 1 to 2½ square inches. After sizing comes the grading process, in which the sheets are classified according to their freedom or otherwise from stains and inclusions. Nine quality grades, ranging from clear to densely stained, are recognized on the London market. Most of the larger sizes and better qualities are exported in block form. Over 80 per cent. of the exports, however, consist of splittings, made by separating the smaller sizes into the thinnest possible films, one thousand films to the inch being the usually accepted standard.[142]

The latter was a very skilful operation and was done by aboriginal women and children in the Bihar belt. Their position in this regard was unique and several tons of block mica from foreign countries was sent to India for being split by these supremely skilled workers of India.

Table No. 78 gives the figures regarding the output of dressed mica in the producing areas in India.

The figures regarding the output of mica in India are defective. They are considerably less than those of exports. It is usual to rely on the figures of the exports of mica from India for a more correct idea regarding output.[143] These are shown in the last column.

Judging the trend of mica production in India from the figures of mica exports it appears that mica production steadily increased upto 1930. The average annual export from 1919

141. R. R. Chaudhary, *Handbook of Mica*, 1939, p. 99.
142. J. Coggin Brown, *India's Mineral Wealth*, 1936, p. 264
143. *cf. Guide to Current Official Statistics*, Third Edition, 1945, p. 26.

TABLE 78

Output of Dressed Mica in India during 1934-8

(Source :—*Report of the Mica Inquiry Committee 1944-45*, 1946, p. 4)

Year	Bihar	Madras	Rajputana	Other Provinces and States	Total	Year	Total Exports
1934 ..	45,979	9,189	538	—	55,706	(34-35)	1,04,502
1935 ..	50,821	8,799	544	—	60,164	(35-36)	1,66,649
1936 ..	71,738	13,742	1,591	—	87,071	(36-37)	1,79,594
1937 ..	85,978	15,834	2,814	32	1,04,658	(37-38)	2,93,971
1938 ..	84,235	23,155	4,936	880	1,13,206	(38-39)	1,61,844

to 1930 was about 76,450 cwt.[144] From 1930 onwards there was a sharp falling off of exports and the annual average for the next four years came to about 58,400 cwt. Shortly after that exports recovered and passed all previous records during the next five years.

Mica is mainly used in the electrical industry as an insulating material.

> For this and other purposes, its perfect cleavage, transparency and lack of colour in thin sheets; its flexibility, toughness and non-conductivity of electricity and heat; its resistance to temperature changes and chemical decomposition, render it indespensable. Mica mining has indeed grown with the advance of electrical engineering, and through its unique combination of properties the developments of motor transport, aeronautical science and radio-telegraphy have been made possible. Sheet mica is also used for the fronts of stoves and furnaces, for lamp chimneys, etc. The ground mineral is employed as a drying powder for sticky compositions, such as roofing materials, in the manufacture of pipe and boiler lagging, as a decorative substance for wall papers, and as a lubricant.[145]

The *Report of the Mica Enquiry Committee 1944-45* observes: 'As no record, official or unofficial, is kept of the use of mica in India, and as the published figures of production are inaccurate and are often exceeded by the figures of export, it is only possible to guess at the amount of mica used in India. In 1935 Dr. C. S. Fox estimated the amount at about 2,000 cwt. a year'.[146] The committee tried to collect information on the subject by direct inquiry but the results of it were unsatisfactory because of the paucity of information that was supplied to the committee. After surveying the field in India for the potential use of mica the committee came to the conclusion that there was considerable scope for an increase in the internal consumption of mica, especially micanite and pulvarized mica.

Table No. 79 gives the proportion of block splittings and mica in the total mica exports from India.

144. *cf.* R. R. Chaudhary, *op. cit.*, p. 114
145. J. Coggin Brown, *op. cit.*, p 263.
146 *op. cit.*, p. 51.

TABLE 79

Distribution of Mica Exports during 1934-38 into Block Splittings and Waste

(Source :—*Report of the Mica Inquiry Committee 1944-45*, 1946, p. 91)

Year	Block (1)	Splittings (2)	Waste (3)	Total (1+2)	Percentage of Splittings in Total Exports
1934 ..	20,617	48,368	23,933	68,985	70%
1935 ..	23,774	62,029	56,011	85,803	72%
1936 ..	27,235	95,049	55,380	1,22,284	78%
1937 ..	30,203	1,49,336	1,18,004	1,79,339	83%
1938 ..	18,831	94,253	62,025	1,11,084	85%

As the figures disclose most of the exports of mica consisted of splittings, the demand for splittings had steadily increased since the process of making built-up mica or micanite was invented in 1893. From mica splittings plates of any desired thickness were built up and compressed with shellac as the binding agent. It has led to an important development in the Indian mica industry. In the earlier days requirements of mica in the electrical industry were mostly confined to large-size mica sheets from No. 3 up. Mica from No. 4 downwards was thrown away as waste and accumulated in dumps. Demand for sizes upto No. 5 developed after the process of making micanite was invented and due to further technical advance during World War I demand for mica upto No. 6 or even No. 6 small increased vastly. As a result of this, miners who had large accumulations of mica wastes and rejections in their dumps, could use them as the sources of cheapest raw material for the manufacture of cheap splittings. These dumps immensely benefited them and India secured a monopoly in the supply of cheap loose splittings. The dumps provided the raw material without almost any cost and splittings made from freshly-mined stuff could not naturally

compete with it.[147] These dumps were, however, rapidly nearing exhaustion on the eve of World War II.

Table No. 80 gives the exports of Indian mica according to their destinations.

TABLE 80

Exports of Indian Mica according to their Destinations 1934-39

(Source :—*Review of the Trade of India*)

(Cwts)

	1934-5	1935-6	1936-7	1937-8	1938-9
United Kingdom ..	31,600	39,400	45,000	72,000	1,47,000
U.S.A. ..	46,500	88,500	92,200	1,74,000	39,000
France ..	2,200	4,300	6,900	3,000	3,000
Germany ..	10,200	16,300	18,000	31,000	20,000
Japan ..	—	—	—	10,000	28,000

From very early times the U.K. was India's leading customer in regard to mica. In the decade preceding World War I, on an average 53 per cent. of total Indian exports of mica went to the U.K., about 20 per cent. to Germany and about 15 per cent to the U.S.A. But the share of the U.S.A. was even larger because a large quantity of Indian mica exported to the U.K. was re-exported to the U.S.A. Some idea of this flow can be had from the fact that the annual average import from the U.K. into the U.S.A. in the period 1933-7 was 900 cwt. of block and 600 cwt. of films and splittings.[148] In the decade 1919-28 Germany's share declined to about 8 per cent. while that of the U.S.A. increased to slightly more than 37 per cent. During the same period the share of the U.K. declined to about 47 per cent. During the following quinquennium the share of the U.K. declined to about 41 per cent., that of the U.S.A. to about 32 per cent., but that of Germany remaining unaltered.[149]

It is also interesting to study the proportion of block and splittings in the exports to these countries. Table No. 81

147. For the above account I have drawn upon Chaudhary, *op. cit.*
148. *Report of the Mica Enquiry Committee 1944-45*, 1946, p. 93.
149. *cf.* J. Coggin Brown, *op. cit.*, p. 267.

TABLE 81

Average Quantity of Splittings and Block in Exports of Mica during 1934-39

(Source :—*Report of the Mica Inquiry Committee 1944-45*, 1946, p. 92-93)

(In Cwts)

	United Kingdom	U S.A.	Germany	France	Italy	Japan	Other Countries
Blocks ..	12,141	5,883	1,366	767	1,109	3,128	932
Splittings and Waste ..	34,954	82,191	17,861	3,037	3,493	9,586	5,065
Total ..	47,095	88,074	19,227	3,804	4,602	12,714	5,997

gives figures regarding the average quantity of splittings and block in the exports to these countries during the period 1934-5 to 1938-9.

The United States and Germany imported a higher proportion of mica splittings from India than the other countries. While the proportion of splittings in the total mica exports from India to Germany and the U.S.A. was more than 90 per cent. it averaged about 75 per cent. in the exports to the U.K., France, Italy and Japan.

14. MANGANESE

India is one of the important producers and exporters of manganese ore in the world.

Table No. 82 gives figures regarding the world production of Manganese ore in 1932-4.

India ranked second in the world producers of manganese ore according to the figures in Table No. 82. 'Since 1929 the U.S.S.R. has been the greatest producer of manganese and is followed for second place by India, formerly the leading producer. In 1937 South Africa made a spectacular leap in the third place, closely followed by the Gold Coast. A record world total of 6,000,000 long tons of manganese ore was reached in 1937, more than treble that of 1920'.[150] But though India has ceased to be the largest producer of manganese in the world, she still remains the largest exporter. Table No. 83 gives the exports of manganese from the producing countries.

The principal manganese producing areas in India are the Balaghat, Nagpur and Bhandara districts of the Central Provinces, Sandur state and Vizagapatam in Madras, the Panch Mahals in Bombay, Singhbhum in Bihar and Keonjhar and Bonai, two of the Eastern States Agency.

150. W. R. Jones, *Minerals in Industry*, Pelican Books, 1943, p. 78. Before World War I Russia supplied 50 per cent. and India 40 per cent. of manganese ore in the world. During the latter part of World War I Russia virtually ceased production and India became the leading producer until 1929 when Russia came into its own again. *cf., Mineral Raw Material*, U.S. Bureau of Mines, 1937, p. 114.

TABLE 82

World Production of Manganese Ore

(Source :—*Mineral Raw Materials, U.S. Bureau of Mines*, 1937

(In Metric Tons)

Country	1932	1933	1934
Argentina[1] ..	252	410	583
Australia—New South Wales ..	108	131	105
South Australia ..	20	2	2
Brazil ..	20,300	25,000	7,527
Chile[2] ..	448	765	4,065
China[2] ..	20,733	9,574	870
Cuba .	9,800	28,000	68,000
Egypt ..	327	187	959
Germany ..	12	563	515
Gold Coast[2] ..	51,502	2,69,395	3,44,832
Greece ..	745	1,623	1,206
Hungary ..	1,497	6,232	10
India, British ..	2,16,016	2,21,811	4,12,827
Do. Portugese ..	3,573	1,600	3,800
Italy ..	378	4,524	6,941
Japan ..	26,242	43,535	57,165
Mexico[3] ..	700	573	664
Morocco ..	3,980	4,800	3,407
N. E. Indies ..	8,287	10,463	11,635
N. Rhodesia ..	—	5,453	2,074
Portugal ..	—	26	295
Rumania ..	5,051	2,774	12,057
Spain ..	2,591	2,834	3,796
Sweden ..	3,014	5,895	5,832
Turkey ..	2,800	7,700	2,687
Union of South Africa ..	—	21,229	57,730
U.S.S.R. ..	9,15,300	9,98,000	1,821,000
U.S.A.(a) ..	18,062	19,453	26,940
Puerto Rico[2] ..	2,339	1,664	1,738
Yugoslavia ..	160	535	1,103
Total ..	13,14,000	16,95,000	28,61,000

1 Shipments by rail and river.
2. Exports.
3. Approximate production.
(a) U.S.A. Continental (Exclusive of Fluxing Ore).

TABLE 83

Exports of Manganese Ore from the Producing Countries

(Source: *Foreign Trade of Latin America, Part* III U.S. Tariff Commission, Report No. 146, Second Series, 1942, p. 110)

[Long tons Gross Weight]

	1929	1932	1936	1937	1938
Total Latin-American Countries ..	2,97,083	39,429	1,99,893	3,75,144	2,54,678
British India ..	9,64,489	3,01,252	7,42,347	11,51,834	6,48,740
Soviet Union[1] ..	8,85,755	4,09,045	5,96,166	9,84,999	3,53,554
Gold Coast ..	4,08,224	50,689	4,11,024	5,27,036	3,24,207
All Others ..	1,33,125	85,143	3,89,064	7,52,781	5,09,982
Total[2] ..	26,88,676	8,85,558	23,38,494	37,91,794	20,91,161

1. Figures for 1929 are for the year ended September 1930 while those for 1938 cover January-November only.
2. Approximately 30 countries.

Table No. 84 gives the production of manganese ore in India by provinces during the period 1933-4 to 1938-9.

TABLE 84

Production of Manganese Ore in India by Provinces during 1929-38

(Source:—*Statistical Abstract of India*)

(Tons)

	Average 1929 to '33	1934	1935	1936	1937	1938
Madras ..	16,456	20,145	16,135	15,358	21,159	33,809
Bombay ..	29,381	—	4,866	28,994	59,764	61,598
Bihar ..	10,312	15,112	16,667	11,722	24,180	24,469
Central Provinces ..	3,16,533	1,86,025	3,85,179	5,68,806	6,95,177	6,46,465
Sandur ..	1,23,336	1,27,356	1,59,436	1,02,966	1,49,782	1,41,440
Keonjhar ..	47,153	54,208	53,891	68,116	82,128	64,901
Bonai ..	6,056	3,032	4,438	15,921	13,856	14,790
Mysore ..	12,087	428	871	1,559	5,548	5,323
Total ..	5,58,596	4,06,306	6,41,483	8,13,442	10,51,594	9,92,795

Manganese is chiefly used in the manufacture of steel and the fortunes of manganese ore mining are closely linked to the state of the iron and steel industry. Production of manganese ore in India amounted to 1,129,353 tons in 1927 when the iron and steel industry of the world was at high levels of prosperity. In the years of the depression that followed iron and steel industry was one of the worst sufferers and manganese ore production also suffered the same fate. Production dropped to 212,604 tons in 1932. The full magnitude of this catastrophe to the Indian manganese mining industry is perhaps best realized from the fact that whilst the quantity of the production in 1933 was a little over one-fifth of that of the peak year 1927 the value was less than one-twenty-second part of the value of 1927 production. Production steadily increased from that year and touched 1,051,594 tons in 1937. As will be evident from Table No. 84 the Central Provinces was the most important producing region, followed by Madras. Of the total Indian production upto 1931 the C.P. accounted for 70 per cent., Madras for 14·9 per cent., Bombay 6·1 per cent., Mysore 4 per cent., Bihar and Orissa 3·9 per cent. and central India 1·1 per cent.[151]

When Indian manganese ores were compared with those mined in other countries it was found that Indian ores contained less moisture than those of the other countries and had the highest manganese contents.

> The Indian ores contain much less iron than the manganiferrous iron ores of other countries; but of the true manganese-ores they contain the highest amounts of iron in spite of the fact that they also contain the highest amounts of manganese. The high iron contents of the Indian ores may be regarded as a point in their favour, or otherwise, according to the use to which the ores are to be applied. It is true that the high iron contents make it more difficult to manufacture the very highest grades of ferro-manganese from the Indian ores; but on the other hand, if the highest grades are not required, then the iron is of considerable value. Both manganese and iron are of use in this case,

151. J. Coggin Brown, *op. cit.*, p. 124.

and the buyer obtains the following totals of Mn + Fe when he buys the ores of the different countries[152]:—

	Mn + Fe per cent.
India ..	57·17
Brazil ..	54·09
Russia ..	50·41
Chile ..	48·40
Greece ..	47·99
Spain ..	44·27

Manganese is chiefly used as a deoxidizer and desulphurizer in the manufacture of steel, about 95 per cent. of the total manganese consumed in the world being consumed for metallurgical purposes. Relatively small amounts are used in the chemical industry such as a depolarizer in dry batteries, as a drier in paints, varnishes and inks.

Table No. 85 gives figures regarding the consumption of manganese ore by the Indian iron and steel industry.

TABLE 85

Consumption of Manganese Ore by the Indian Iron and Steel Industry

(Source :—*Records of the Geological Survey of India*, Vol. 74, Part 2, p. 321

Years	1936	1937	1938
Tons ..	46,221	60,219	63,731

The figures are obviously too scanty to indicate any general trend of consumption in India but they do indicate that as compared to 1936 the consumption of manganese in India had increased by about 40 per cent. in 1938.

152. *Records of the Geological Survey of India*, Vol. LXX, 1935, pp. 226-7.

Table No. 86 gives the exports of manganese-ore from India by their destinations.

TABLE 86

Exports of Manganese from India by Destinations

(Source.—*Reviews of the Trade of India*)

(Thousand Tons)

	Average 1929-30 to 1933-34	1934-5	1935-36	1936-7	1937-8	1938-9
United Kingdom ..	158	159	197	216	224	115
Germany ..	11	1	17	15	17	2
Netherlands ..	13	—	15	19	5	—
Belgium ..	86	37	72	98	85	10
France ..	153	113	119	87	189	87
Italy ..	1	—	16	1	43	48
Japan ..	30	99	174	128	187	110
U.S.A. ..	32	45	106	87	169	67
Other Countries ..	—	6	13	26	22	17
Total ..	494	460	729	677	1,001	456

The total exports of manganese ore from India improved from 197,730 tons in 1932-3 to 729,047 in 1935-6. There was a slight recession during the next year but in 1937-8 the exports reached the peak at one million tons. During the following year they suddenly dropped to 455,982 tons owing to the reduced demand from consuming steel industries which were rather depressed during the year.

The U.K. has been India's principal customer of manganese ore. In the quinquennium preceding World War I the U.K. took 32 per cent. of the total Indian exports of manganese ore, the U.S.A. 22 per cent., Belgium 25 per cent. and France about 16 per cent. In the quinquennium 1919-20 to 1923-4 the U.K.'s share increased to 38 per cent. and that of Belgium to about 29 per cent. The share of France remained steady at about 16 per cent. while that of the U.S.A. declined to about 10 per cent. In the following quinquennium

Belgium's share remained steady and that of the U.S.A. and France increased to about 13 and 27 per cent. respectively. The U.K.'s share declined to about 26 per cent. During 1929-30 to 1933-4 the shares of the U.K. and France increased to 32 and 31 per cent. respectively while those of Belgium and the U.S.A. declined to 17 and 6 per cent. respectively. Japan appeared during this period as a significant buyer of Indian manganese ore and her share increased to 6 per cent. being negligible in the preceding decade. During the next quinquennium the share of the U.S.A. and Japan increased to 14 and 21 per cent. respectively while the shares of the U.K., Belgium and France declined to 27, 9 and 18 per cent. respectively.

Of the 16,252 tons of manganese ore shipped from ports of British India between the years 1895 and 1931 exactly 40 per cent. went to the United Kingdom, 21·3 per cent. to Belgium, 17·16 per cent. to France and 15·38 per cent. to the United States of America.[153]

153. J. Coggin Brown, *op. cit.*, p. 124.

CHAPTER III

INDIAN RAW MATERIALS DURING WORLD WAR II

1. Raw Cotton

Table No. 87 gives the acreage under cotton and the total yield of the crop in India during the war period (1939-45).

TABLE 87

Acreage and Production of Cotton in India during 1939-45

(Source :—*I.C.C. Reports*)

	1939-40	1940-1	1941-2	1942-3	1943-4	1944-5
Acreage (in Thousands) ..	21,580	23,311	24,151	19,203	20,398	14,803
Yield (in Thousand bales of 400 lbs. each) ..	5,884	7,032	6,949	4,961	5,723	—

In 1939-40 the acreage sown to cotton was about 9 per cent. less than that of the previous year. The decline was largely to be attributed to the prevalence of low prices at the sowing season. A short and swift boom developed in the Indian cotton marked during the first five months of the war (September 1939—January 1940) but it could not influence sowings, except in the late sown varieties in Madras which increased by 13 per cent. over the previous season.[1] During the next two years the area under cotton increased by more than 10 per cent. During this period there was good demand for cotton from the Indian textile industry with which huge war orders, had been placed by the Defence Department of the Government of India. The 'Grow-More-Food' Campaign during 1941-2 could

1. C. B. Mehta, *Indian Cotton Review*, 1939-40, pp. 1-2.

not prevent an increase in the area under cotton. Indian cotton lost its Continental market soon after the declaration of war in September 1939. The freezing of Japanese and Chinese assets in India in July 1941 meant the loss of Far-Eastern markets also. Because of the shrinkage of exports, which used to absorb a good proportion of short staple cotton produced in the country, stocks of short staple cotton began to mount up and to become burdensome. This was further accentuated by the declaration of war by Japan in December 1941. The I.C.C. Committee recommended that it was necessary to curtail acreage under short staple by half and to divert it to food crops. Certain provincial governments undertook to advance loans and subsidies to cotton growers for such a change-over.

On 29 January 1942, the Government of India announced by a Notification the decision to form a special fund from the proceeds of an additional duty of one anna per lb. of imported raw cotton from that day, for the relief of the cultivators of short staple cotton. Another Press Note on 11 February 1942 announced that these payments shall not await the collection of duty but shall be advanced against the prospect of future collection. The second 'Grow-More-Food' and 'Less-Short-Staple Cotton' campaign was more successful and the acreage sown to cotton during 1942-3 came down by about 18 per cent. During the next year it increased by about 6 per cent., an increase largely accounted for by the increases in the Punjab, Sind, U.P. and Hyderabad state. There were considerable decreases in the other provinces and states. During the next two seasons, however, the acreage declined further. From the war-time peak level in 1941-2 the acreage declined by slightly less than 40 per cent. up to 1944-5. Enactments of provincial governments making the diversion from cotton to food crops compulsory, propaganda, the rising prices of food grains and other inducements were mainly responsible for this decrease. It should be noted that per acre yields of cotton remained stationary during this period.

Table No. 88 gives figures regarding the Indian crop by staple lengths during the war period.

TABLE 88

The Distribution of the Indian Cotton Crop by Staple Lengths during 1939-44

(Source :—*Bombay Cotton Annuals*)

	1939-40	1940-1	1941-2	1942-3	1943-4
	(In Thousand Bales)				
Long Staple Over 1" ..	66	93	161	270	363
Medium Staple 7/8" to 1" ..	1,794	2,151	2,551	2,465	2,797
Short Staple Below 7/8" ..	3,049	3,836	3,313	1,819	1,934
Total ..	4,909	6,080	6,127	4,554	—

Of the total Indian crop during 1939-40 nearly 62 per cent. was of the short staple (below 7/8") variety. The proportion was almost the same as during the previous year. The percentage slightly increased to 63 during 1940-1. In 1942-3 the movement towards the displacing of short staple by long and medium staples gathered strength because of better demand for the latter varieties both at home and abroad. The Central Provinces and Berar recorded the greatest switch-over in cotton history from short staple to medium staple growths like *Verum* and *Buri* to the extent of about 60 per cent. of the total acreage placed under cotton.[2] Since then the percentage of short staple cotton has continuously declined. It was only 38 per cent. in 1943-4. In the 1944-5 season, according to reports at the time of writing the percentage had increased to 43, thus recording a reversal, at least temporarily, of the former trend.

The most important of the many causes that brought about this remarkable switch-over were the languishing demand for short staple growths and the better prices realized for the medium and long staple varieties both at home and abroad. Secondly, the 'Grow-More-Food' and 'Less-Short-Staple Cotton' campaign also played a large part. Direct enactments

2. Mehta, *The Indian Cotton Review*, 1942-3, p. 2.

restricting acreage under cotton in general and under short staple cotton in particular, the loans and subsidies offered from the cotton fund, etc., were important parts of the campaign. Thirdly, the introduction of the new cotton contract on 15 July 1942, based on 3/4" Jarilla also helped this movement. It replaced the other Broach, Bengal and Oomra Contracts and prevented the import of these varieties, not required by the Indian mills, into Bombay merely for the purposes of trading. This was reinforced by denying facilities, by enactments, to rail supplies of unwanted cottons to port centres like Bombay and Karachi except under a licence. There were many other factors that operated on the situation strengthening this trend towards an increase under long and medium staples.

Table No. 89 sets out the figures regarding the consumption of cotton in Indian mills during war years.

TABLE 89

Consumption of Indian Cotton by Indian Mills during 1939-45

(Source :—*I.C.C. Annual Reports*)

	1939-40	1940-1	1941-2	1942-3	1943-4	1944-5
Consumption, (Thousand bales of 400 lbs. each) ..	3,050	3,617	4,025	4,307	4,125	4,245
% of Total Crop ..	52	52	58	86	72	—

For some years preceding the war the consumption of Indian cotton by the Indian textile mills was fast increasing. The actual consumption during 1939-40 was slightly less than that of the preceding year. For some months before the outbreak of World War II the Indian cotton textile industry was depressed and mills had voluntarily restricted production.[3]

3. *Review of the Trade of India*, 1939-40, pp. 40-1.

There were also prolonged strikes in the industry. The war gave a fillip to the industry firstly, by providing it with huge orders from the Defence Department[4] and secondly, by providing larger scope for the export of Indian textiles.[5] The total consumption of cotton by Indian mills increased apace during the war period. Besides, the improvement in the prices of cloth and textiles as compared with the prices of raw cotton which came about later on, provided every inducement to the Indian textile mills to expand their production.[6] In the 1940-1 season 'while the entire surplus of cotton of staple lengths 7/8" and above, resulting from the loss of the Continental markets, may be said to have been absorbed by the increased

4. 'The volume of defence requirements of textiles represented about 16 per cent. of the production capacity of the Indian mills at the end of 1940-1. This increased to 20 per cent. in the early months of 1941-2 and by July 1942 Indian textile industry had agreed at a Conference of the Cotton Textile Advisory Panel to place 35 per cent. of its capacity at the disposal of the Government of India' (Mehta, *Indian Cotton Review*, 1941-2, p. 7). In February 1943 the Indian textile industry agreed to place 60 per cent. of its productive capacity at the disposal of the Government of India for the manufacture of standard cloth and cloth for defence requirements.

5. The following figures from the *Review of the Trade of India* give an idea of the extent to which the export of Indian cotton textiles increased during the war period:—

	('000 yards)				
	1939-40	1940-1	1941-2	1942-3	1943-4
Grey (unbleached) ..	79,894	125,537	249,195	298,600	218,876
Coloured (printed or dyed) ..	128,017	210,346	396,660	390,138	162,995

6. The following indicates the margin of profit left to the spinner. 'If compared with pre-war prices the price gains at the end of 1941-2 appeared phenomenal at 186 per cent. for Drills, 209 per cent. for Domestics, 152 per cent. for 10½'s yarn and 177 per cent. for 20's yarn. They were still more so during the season 1942-3 when price gains up to 21 May 1943, as compared with pre-war prices worked out at 446 per cent. for Drills, 489 per cent. for Domestics, 500 per cent. for 10½'s yarn and 629 per cent. for 20's yarn. Raw cotton during the same period had improved hardly 132 per cent. in the case of Bengals, 137 per cent. in the case of Oomra, 133 per cent. in the case of Broach and 194 per cent. in the case of Khandesh Jarilla' Mehta, *Indian Cotton Review*, 1942-3, p. 8.

consumption in this country, only two-fifths of the surplus below 7/8" in staple was so utilized'.[7] During 1943-4 there was a decrease in the consumption of cotton by Indian mills. This was mainly accounted for by the shortage of coal and the consequent stoppage of work, restricted supplies of essential stores and comparative shortage of efficient labour. In 1944-5 the consumption again increased though it could not reach the high level of 1942-3 due to various bottle-necks in production.

Table No. 90 shows the total receipts of cotton at Indian mills classified according to their staple lengths, during the war period.

TABLE 90

Receipts of Cotton at Indian Mills Classified by Staple Lengths during 1939-44

(Source :—*I.C.C. Annual Reports*)

	(Lakhs of Bales)				
	1939-40	1940-1	1941-2	1942-3	1943-4
7/8" and above ..	*17·3	*22·8	24·9	29·6	29·3
Below 7/8" ..	*12·0	*19·1	18·1	14·0	11·7
Total ..	29·3	41·9	43·0	43·6	41·0

*Calculated approximately from figures published by the I.C.C. Committee.

There was a progressive decline in the proportion of short staple cotton in the total cotton consumed by Indian mills from 1940-1. In 1940-1 the total receipts showed an increase of about 40 per cent. over that of the last year. 'Bengals,

7 I C.C. Committee's Report, 1941, pp. 18--9.

Americans, Oomras, Central India, Southerns, and other varieties accounted for 7, 30, 27, 11, 13 and 11 per cents. respectively of this increase '.[8] Of the total increase of 12·6 lakhs of bales over the previous season nearly 55 per cent. was accounted for by medium and long staple varieties. In 1943-4 the percentage of short staple cotton in the total cotton consumed had fallen to about 28 while that of medium and long staple cotton had increased to 72 per cent.

The keener demand for medium and long staple cotton by Indian mills could be largely attributed to the huge defence orders placed with the industry for the execution of which much medium and long staple cotton was required. The Supply Department had to lower its specifications in 1942 for providing an outlet to about 400,000 bales of short staple cotton. The increased production of finer varieties of cloth and textiles by the Indian mills was in response to the demand for those varieties which was met before the war by imports from abroad. Yet a third reason was the shrinkage of medium and long staple cotton supplies from abroad due to the shortage of shipping space and various other war-time difficulties.

Table No. 91 gives the exports of Indian raw cotton by their destinations during the war period.

TABLE 91

Exports of Indian Raw Cotton by their Distinctions during 1939-44

(Source :—*Review of the Trade of India*)

(Year—1st April to 31st March)

Countries	(In Thousand Bales)				
	1939-40	1940-1	1941-2	1942-3	1943-4
United Kingdom ..	473	291	547	229	180
Other British Empire Countries ..	26	43	76	56	36
Japan ..	1,056	705	385	—	—
France ..	229	126	—	—	—
China ..	681	754	141	—	—
Total Exports ..	2,948	2,768	1,438	301	282

8. *Ibid*, p. 18.

The total exports during 1939-40 were larger by about 9 per cent. than those of the previous year. The total off-take of Japan was smaller than that of the previous year because of the restrictions imposed in Japan on the use of imported cotton during that year. The exports to China had however, increased considerably, firstly because Chinese cotton production had declined considerably since the Sino-Japanese war. Secondly, considerable difficulties were experienced in moving up-country cotton to mill centres. China therefore became more dependent on cotton imports from abroad and particularly from India. The shrinkage in the exports to the U.K. and the Continent was largely due to the shipping shortage. In 1940-1 exports decreased substantially. Exports to China alone showed some increase over the previous year. The Chinese off-take increased because Chinese speculators during that year attached double value to Indian cotton both as a good investment and also a hedge against the fluctuating Chinese dollar. The exports to Japan showed a decline. The Protocol governing Indo-Japanese trade was terminated on 31 March 1940 but exports of cotton piece-goods from Japan to India were regulated on a monthly basis and the provisions regarding the imports of Indian cotton into Japan were maintained as before. The political situation in the Pacific, however, deteriorated rapidly and on the 26 July 1941 the Government of India, together with the U.S.A. and other Empire countries, issued on Ordinance freezing Japanese assets in India. On 30 July 1941 a similar freezing order affecting Chinese assets followed.

Later both these regulations were modified to permit fresh credits being opened to enable cotton sold before 26 July to be shipped to Japan and in the case of Shanghai fresh credits were permitted even for new business. The immediate effect of these modifications was largely offset by the absence of ships to carry the cargo eligible for export. There was a further development in August 1941 when banking machinery set up between the Bank of England and the Yokohama Specie Bank provided for the exchange of goods, which so far as Britain was concerned were surplus.....The exports of raw cotton to Japan in August and September (1941) amounted to 13,969 and 9,618 bales respectively, there being no export to that country after the latter month.[9]

9. *Review of the Trade of India*, 191-2, p. 21.

With the declaration of war by Japan on 6 December 1941 all exports to the Far East came to a standstill.

The decline in the exports to the U.K. was largely due to the tight shipping position as well as the diversion of resources in the U.K. to the making of munitions. In October 1940 the British Ministry of Supply issued an order making the use of all non-Empire cottons (except Egyptian, Sudanese, and French African cotton) subject to licence. In March 1941 it was announced that with effect from 1 April 1941 the Ministry of Supply would be the sole importer of raw cottons into the U.K. and would take over all the unsold stocks of cotton and all arrivals thereafter at spot values. Shortly after this it was decided to curtail production of cotton piece-goods and concentrate the same in the most efficient mills. By mid-April about 60 out of the 400 mills were ordered to be closed down and the output of Lancashire was reduced to about half of normal production. The U.K. Government had also undertaken to buy the entire 1940-1 Egyptian crop as also to ensure sale of all commercially saleable cotton production in French Equitorial Africa for the year ending 30 September 1941 and to buy roughly 1,25,000 bales of Brazilian cotton. In these circumstances, the U.K. could not absorb more Indian cotton.

During 1941-2 exports to the U.K. and the U.S.A. increased and exports to Australia began. The Japanese war, however, intervened and the exports to the U.S.A. as well as to Australia were completely stopped. As a result, the total exports of cotton declined during 1942-3, being less than one-fourth of that of the pervious year. The off-take of the U.K. also shrank. In 1943-4 exports recorded a further decline. By a Notification of 19 August 1943 the Government of India banned the export of raw cotton of Indian origin that of a staple length higher than ¾". Export of cotton of foreign origin was also banned. The exports to the U.K. and Empire countries, however, did not come under the ban on cotton of Indian origin.[10]

10. *Review of the Trade of India*, 1943-1, p. 15.

Table No. 92 gives the total export of raw cotton from India classified by staple lengths, during the war period.

TABLE 92

Exports of Raw Cotton from India Classified by Staple lengths during 1939-44

(Source :—Voluntary Returns to I.C.C. Committee—*I.C.C. Reports*)
(Year—1st September to 31st August)

Description	(Lakhs of Bales)				
	1939-40	1940-1	1941-2	1942-3	1943-4
7/8" and above ..	* 8·0	7·2	3·6	0·7	2·1
Below 7/8" ..	*15·5	12·9	5·1	0·9	1·5
Total ..	23·5	20·1	8·7	1·6	3·1

* Estimated

During 1939-40 'the export demand for short staple varieties, particularly Dholleras, Broach, Oomras, Central Indian and Comillas showed a marked falling off, the total shrinkage in the exports of such cotton (below seven-eighth of an inch in staple) being 7,85,000 bales against 1,99,000 bales under long and medium staple.'[11] The figures clearly show that foreign demand for Indian cotton very markedly shifted to medium and long staple varieties during the war period. In 1940-1 even Japan, the biggest customer of Indian short staple cotton, was purchasing medium and long staple varieties in India. Only at a later stage was a part of Japanese demand diverted to short staple varieties.[12]

Cotton of staple lengths above 7/8" continued to be in great demand during 1941-2 from the Sterling Area countries for being substituted for American cotton. As noted above the export of this type of cotton to non-Empire countries was banned in August 1943.

11. I.C.C. Committee's Report, 1940, p. 94.
12. *Review of the Trade of India*, 1940-1, p. 16.

Table No. 93 gives figures regarding the import of cotton into India during the war period.

TABLE 93

Imports of Cotton into India during 1939-43

(Source :—*Review of the Trade of India*)

(In Thousand bales of 400 lbs. each)

Description	1939-40	1940-1	1941-2	1942-3
Americans ..	52	49	11	—
Egyptians ..	221*	228*	191	203
East Africans ..	202	215	402	182
Soudans ..	—	—	170	93
Total ..	468	499	770	490

* Egyptians and Soudanese together

During the first four months of the 1939-40 season there occurred a hectic boom in the Indian cotton market and the Indian cotton began to sell at a premium of 147 cent-points over Americans in December 1939. It was, therefore, actually cheaper to import American cotton than to buy Indian cotton and imports increased sharply. During the following months, however, a reaction set in and the prices of Indian cotton receded. As the shipping position became tight imports of cotton into India came to be more and more dependent on the availability of shipping space and of supplies and the requirements of the war. Gradually the Indian cotton market became isolated and the comparative price considerations in regard to foreign cottons ceased to regulate the quantum of imports especially during and after the 1942-3 season. During the early years of the war the Egyptians, East Africans and Sudanese cottons having lost their normal peace-time markets had become orphan cottons and as the sea lanes to India were

comparatively open and safe India became a home for them. With the victory in Tunicia, the Mediterranean and the Arabian Sea became rather freer and safer for transport of goods and shipping. The shipping position was also somewhat easy. This improvement in the situation increased the investment value of Egyptians and speculators rushed in to take advantage of the situation. As a consequence the finer varieties of Egyptians could not be procured except at prohibitive prices. The Government of India banned free and unlicensed purchases of Egyptian cottons at unregulated prices and their import into India. In March 1943 the Government of India in consultation with other consuming countries introduced the principle of controlled buying. This scheme regulated India's purchase during the cotton year 1943-4. Purchases were made by the Co-ordinating Committee in a pool from which allocations were made to India. Similar arrangements for procuring adequate supplies of East African and Sudanese cotton for India were also made.

In February 1945 the Indo-East African price agreement in regard to cotton was signed. Under the terms of this agreement 'the prices of East African cottons were fixed at about Rs. 120 lower than the previous year, B.P. 52 being priced at Rs. 150 dock-delivery, new mill terms. The reduction in the case of Sudanese cottons was about Rs. 100 as compared with the previous season.' [13]

Table No. 94 gives the monthly index of wholesale prices of raw cotton during the war period.

The technical position of Indian cotton on the eve of World War II was very favourable to a rise of prices. The declaration of war brought on an orgy of speculation and a hectic boom developed in the Indian cotton market. The Government of Bombay issued an Ordinance on 22 September, 1939, declaring option dealings in cotton void. It lapsed after six weeks but in December 1939, the Government of Bombay made an Act incorporating in it the essential provision of the Ordinance. The quotation for M. G. F. G. Broach increased

13. Mehta, *Indian Cotton Review*, 1944-45, p. 12.

TABLE 94

Monthly Index of Wholesale Prices of Raw Cotton in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)

Base 19 August, 1939 = 100

Months	1939	1940	1941	1942	1943	1944	1945
January ..	—	186	114	138	176	209	199
February ..	—	167	114	123	199	211	194
March ..	—	163	128	110	250	204	196
April ..	—	160	132	105	242	195	183
May ..	—	146	147	117	259	188	178
June ..	—	110	157	182	261	187	183
July ..	—	113	166	150	247	184	182
August ..	—	118	152	130	238	184	176
September ..	124	125	160	155	233	182	168
October ..	123	121	137	175	240	182	179
November ..	141	126	152	165	193	180	180
December ..	186	120	152	174	200	190	186

by 100 per cent. and reached Rs. 337 in January 1940. The artificial boom, however, could not be sustained for long and from January onwards cotton prices sharply receded. M. G. F. G. Broach reached Rs. 243 in March 1940. This decline widened the cotton parity and foreign demand reviewed. The loss of European markets and unfavourable war news accentuated this downward trend and on 2 July 1940 M. G. F. G. Broach touched Rs. 147-8-0. Between September and December 1940 the Broach (April-May 1941) contract fluctuated within a range of Rs. 33-12-0. From January 1941 onwards there was an upturn. The freezing of Japanese assets on 22 July 1941 dealt a severe blow to the Indian cotton market in general and to Oomras in particular which mostly depended on exports to Japan. Opening at about Rs. 247 on the eve of the freezing order the Broach (July-August 1941) contract collapsed to Rs. 197-8-0 on 28 July. After the declaration of war by Japan the price of Broach (April-May 1942) came down from Rs. 252 on 5 December 1941 to Rs. 148 on 30 April 1942.

During 1941-2 the cotton market in Inida finally lost all touch with foreign cotton markets. 'On 24 July 1941 the Reserve Bank of India issued a circular withdrawing the availability of the U. S. dollars for the payment of differences owed on futures business in New York market except for such business as was prior to that date. The effect of the Notification was to sever the speculative contact between Bombay and New York markets. Price control and the scheme of concentration and import restrictions in the U. K. added considerably to the isolation of the Bombay market.'[14] The Indian cotton market became a purely domestic affair, particularly after the freezing of Japanese assets on 26 July 1941.

The Government of India tried to tackle the problem of the burdensome surplus of short staple cotton created by the loss of Japanese market by various measures. The specifications of the Supply Department were lowered so as to absorb about 4,00,000 bales more of short staple cotton. As already described the 'Grow-More-Food and Less-Short-Staple Cotton' campaign was launched and the Cotton Cess Fund was set up. By a Notification issued on 26 January 1942 the Government of India stated that they had in view 'not merely immediate steps to steady the market by making purchases of raw cotton of the types concerned as suitable occasion arises, but also to assist the cultivators to change over from short staple to other more useful crops, whether cotton of longer staples or entirely different crops, preferably food-grains.'[15]

The new cotton contract based on ¾" fine Jarilla was framed and introduced on 15 July 1942. It replaced the Broach, Bengal and Oomra contracts which had served the trade for nearly twenty-five years. These contracts, based on growths that had lost their main prop by the loss of foreign markets and that were not required by the mill industry in Bombay, had become anomalies. The new contract tried to establish a closer identity between the hedges contrast and the varieties of cotton required by the domestic textile industry.

14. *Review of Trade of India*, 1941-2, p. 23.
15. *Ibid*, pp. 23-24.

The opening rate (of the new contract) was fixed at Rs. 351-4-0 per candy (January delivery) at a premium of Rs. 136 on Broach July-August. The new contract was based on Khandesh Jarilla cotton of a staple length of three-quarters of an inch but several other varieties of cotton with staple lengths varying from ¾" minimum to ⅞" maximum were also tenderable against the contract. Cotton could be tendered only in four classes for each growth, namely, extra-superfine, superfine fine (basis) and fully good, cotton below fully good being untenderable. The delivery months were January, March, May, July and September. An important feature of the new contract was that, in certain circumstances, it provided for up-country delivery, thus overcoming the difficulty caused by the shortage of transport.[16]

The new Indian Cotton (*Jarilla*) Contract based on ¾" Jarilla, in spite of wide fluctuations worked fairly smoothly till March 1943, when there developed a speculative boom. The contract touched Rs. 600 early in March 1943, and violent fluctuations ensued during the following month. On 30 April 1943, the Cotton Options (Forward Contracts and Prohibition) Control Order banning options and prohibiting forward contracts in the new crop (1942-3) was issued by the Government of India. In spite of this the speculative orgy continued, and on 17 May, a record high level of Rs. 660 for May delivery and Rs. 673 for July delivery was touched. The Government of India intervened, and by an order under the Defence of India Rules, on 18 May 1943, all the outstanding contracts in the Bombay market were terminated at Rs. 565 for May contract and Rs. 568 for July contract. Mills were directed not to purchase *Jarilla* at prices exceeding Rs. 550. The Government of India also announced fair prices for a number of varieties of cotton, and recommended to the mill owners that they should not pay prices exceeding these. The closure of the hedge contract and the announcement of 'fair' prices by the Government of India affected the speculative market adversely and cotton prices began to slide down. The downward course continued unabated during the following months. On a resolution by the Indian Central Cotton Committee and a recommendation by the Textile Control Board, the Government of India permitted the resumption of future

16. *Review of the Trade of India*, 1942-3, p. 13.

trading in terms of the Indian Cotton Contract, on 28 October 1943. The Textile Control Board had recommended the floor of Rs. 500 and the ceiling of Rs. 650 for *Jarilla* ¾". This recommendation was, however, not accepted, and the Government of India fixed the maximum and minimum prices at Rs. 550 and Rs. 400 respectively for *Jarilla* ¾".

On 18 November 1943, the Government of India, by an official notification, fixed the maximum and minimum prices for about 14 varieties of cotton. In a *communique,* issued on the same day, the Government of India reiterated its promise.

'..to buy new crop 1943-44 season cotton by whomsoever offered in Bombay, Karachi or up-country centres at the floor prices prescribed by it or their up-country equivalents, except that the Government will not buy any cotton unless the Indian Cotton Contract in the market of the East India Cotton Association in Bombay is quoted at the floor of Rs. 400 per candy, and then Government will buy basic *Jarilla* Khandesh ¾" staple at the floor price of Rs. 400 per candy and other styles at the floor prices prescribed or at the market rate for those styles, whichever is lower. Government intend to carry through this policy with the utmost determination regardless of the quantity of cotton offered...In the event of cotton reaching the ceiling prices named above, Government will requisition such cotton as required by mills. The requisition price may be either the ceiling price or any price down to 5 per cent. below that ceiling price at the discretion of Government.

By another notification on 25 February, 1944, the Government of India fixed the maximum and minimum prices for 11 other varieties of cotton.

The relationship established between the floor of Rs. 400 for contract *Jarilla* to be touched in the market of the East Indian Cotton Association and the commencement of Government purchases proved defective in actual practice. As it happened twice or thrice during the season, spot prices for varieties other than *Jarilla* had actually declined below the floor and yet the Government could not be legitimately expected to buy them.....The Government restricted their purchases only to medium and long staple cottons.[17]

After the resumption of the forward market on 28 October 1943 'the market fluctuated within a range of Rs. 89. The

17. Mehta, *Indian Cotton Review,* 1943-4, p. 11.

main trend was bullish during the first three months, then the market downtrended, all early improvement was steadily lost and as the season closed, the market was officially battling around the fixed floor of Rs. 400 for *Jarilla'*.[18]

The Government of India fixed the ceiling and floor prices of the 1944-5 crop *Jarilla* ¾″ fine at Rs. 550 and Rs. 350 respectively. The relationship between the floor set for contract *Jarilla* and Government purchases was broken and the Government undertook to make purchases of individual spot cottons at the floors set for them. 'Medium staple cottons like the *Kalagin* and *Dholleras* were placed in the same category as the floorless *Oomras* and *Bengals*.... Certain upward adjustments in respect of the ceilings and floors for Westerns, Uplands and saw-ginned varieties of Sind and Punjab American were made.'[19]

Official trading in the new crop of the 1944-5 season commenced on 19 September 1944 with Jarilla March 1945 contract at Rs. 434-8-0. 'Four important by-laws of the East India Cotton Association governing the new crop futures contracts were effected. These were: (a) a change in the staple basis from ¾″ to 13/16″ for LSS. Punjab American and Sind-American, roller-ginned and saw-ginned; Westerns and Karunganni; and to ⅞″ for Surti, Navsari, Rajpipla, 289F and N. T., Punjab American and Sind-American roller-ginned and saw-ginned, Cumptas and Cambodias. In respect of Jarillas, Broach and all 4Fs., the staple stipulations were left unchanged. Dholleras and Kalajin, Bijapur, Bagalkot and Miraj were omitted from the revised schedule; (2) the weightage was reduced from 18¾ per cent. to 12½ per cent; (3) the deposit payable on the net open position was reduced from Rs. 25 to Rs. 12-8-0 per bale; and (4) the right of the last buyer at the floor price to invoice back to the seller at Rs. 7-8-0 discount was conceded.'[20]

18. *Ibid*, p. 10.
19. *Ibid*, p. 14.
20. Mehta, *Indian Cotton Review*, 1944-5, p. 10.

The range of the seasons fluctuations was very wide, about Rs. 141-12-0. The market ruled dull during the opening months. Later a series of Allied successes, reports of damage done to the next cotton crop, further reduction of cotton acreage contemplated by the I. C. C. Committee stimulated activity in the market and the Jarilla March 1945 Contract touched the season's best at Rs. 466-8-0 on 27 January 1945. During the next month the undertone in the market remained very firm. In February the Government of India sold Broach lying on their account, both in the up-country centres and Bombay. In March 1945 a squeeze of the Jarilla March 1945 developed and the Jarilla March and May 1945 contracts touched Rs. 455 and Rs. 460 respectively on 7 March. During that month the Government of India sold over 10,000 bales of their 1943-4 stocks of 289F and N. T. to Bombay mills.

The victory over Germany in May 1945 led only to a temporary flare-up in the market but the fear that the U.S.A. will be releasing one million bales of cotton for Europe damped the market. The declining trend was arrested by an attempt at a squeeze in Jarilla September 1945. The sudden end of war with Japan in August 1945 was a highly bearish factor for the Indian cotton market. Heavy liquidations were made and the market developed a downward trend. The Jarilla September contract declined by Rs. 23 in a single hour on 11 August 1945. It continued to decline and touched the floor set by the Government of India on the last day of the season. When the floor was touched Government purchases began.

The floor and ceiling for the 1945-6 crop were left unchanged at Rs. 350 and Rs. 550 respectively by the Government of India.

2. JUTE

Table No. 95 gives the acreage under and production of jute during the war period.

The 1938-9 jute crop was a short one and the prices of jute partly as a result of this strong statistical position and

TABLE 95

Acreage and Production of Jute during 1939-44

(Source :—*Official Crop Forecasts*)

	1939-40	1940-1	1941-2	1942-3	1943-4
(Thousand Acres) ..	3,161	5,669	2,160	3,333	2,602
(Thousand Bales) ..	9,750	13,183	5,474	9,062	6,949

partly as a result of increased demand from overseas had gone up. These better prices were reflected in increased acrage and out-turn in 1939-40. The outbreak of war stimulated overseas and internal demand and the statistical position was considered very strong. On 17 October 1939 the Bengal Jute Regulation Ordinance was issued for preparing an accurate record of lands on which jute was cultivated in that year. Shortly after this the Jute Regulation Bill was introduced into the Bengal Legislative Assembly. The Bill aimed at stabilizing jute prices by prohibiting the cultivation of jute except under licence and fixing quotas of land for jute cultivation. The Bill, however, was postponed because of unfavourable public reaction. In February 1940 the Jute Regulation Ordinance was promulgated which provided 'that no grower should grow jute on an area in excess of that entered in the record (for 1939 crop). The intention was to limit the next season's area sown to jute to that sown in 1939-40. But jute at that time was considered to be in a particularly strong positoin and the Bengal Government was persuaded not to take action under this Ordinance.'[21] The Government decided to confine themselves merely to propaganda for voluntary restriction.

This propaganda was of course of no avail in the face of the high level of jute prices in the first quarter of 1940 and

21. *Review of the Trade of India*, 1939-40, p. 23.

in 1940-1 probably the largest jute crop ever was harvested. While area increased by about 75 per cent. over the previous season, the out-turn increased by more than 30 per cent. With the loss of Continental markets as also shrinking internal demand together with the largest jute crop the market for raw jute became over-supplied and jute prices sagged. 'On 19 August 1940 the Government of Bengal issued a *communique* that they had decided to resort to a scheme of crop restriction and on 26 September it was announced that the 1941 acreage would be only one-third of the total recorded area on which the crop was grown in 1940'.[22]

The area under jute declined to 2·16 million acres and the out-turn to 5·47 million bales during 1941-2 . Prices on the internal market improved and demand from overseas was also brisk. In November 1941 the Bengal Government announced their decision to fix the quota for the 1942-3 crop at five-eighths of the area sown in 1940. With the entry of Japan into the war and the cutting off of Pacific markets the prospect for jute became gloomier and to meet the situation the Government of Bengal issued a Press Note in April 1942 advising the growers to plant jute to the extent of only ½ of the 1940 acreage.[23] The acreage in 1942-3 increased by about 60 per cent. over the previous season and the out-turn by about 70 per cent.

The Bengal Government had fixed the quota of 1943-4 acreage at 5/8 of the 1940 acreage. The acreage declined to 2·6 million as compared with 3·3 million during the previous season. The decline in the area under jute was largely due to the catastrophic rise in paddy prices during the period and the resulting comparative advantage of planting rice in lieu of jute. Paddy prices had increased about 8 times while jute prices had only doubled and as paddy was in most cases an alternative crop for jute acreage that was under jute during the preceding season was diverted to paddy.[24]

22. *Review of the Trade of India*, 1941-2, p. 25.

23. *Review of the Trade of India*, 1942-3, p. 14.

24. *cf.* the following from a Note by the Secretary, Indian Central Jute Committee quoted by Burns, *op. cit.*, p. 18.

(*Continued on next page*)

Table No. 96 gives the production of jute mills during the war period.

TABLE 96

Production of Jute Manufactures and Consumption of Raw Jute by Indian Mills During 1939-45

(Source :—*Monthly Survey of Business Conditions* and *Review of the Trade of India*)

	1939-40	1940-1	1941-2	1942-3	1943-4	1944-5
			Thousand Tons.			
Jute Manufacture Production ..	1,277	1,108	1,259	1,053	947	975
Consumption by Mills in the Indian Jute Mill Association ..	1,288	989	1,222	1,202	964*	—

*Incomplete.

(*Continued from last page*)

'It is important to note that during the years under consideration the same price correlation between jute and paddy has been generally maintained. Recently there has been a very serious disturbance in this price correlation, and as paddy is in most cases an alternative crop for jute, this variation in the price correlation between jute and paddy will definitely vitiate the above conclusion, viz., that the jute acreage in any one year is directly correlated with the jute prices in the previous season. It holds good only when the price correlation between jute and paddy remains unaltered. If, however, as has happened this year (1943), the price of paddy rules disproportionately high, the cultivators will grow paddy instead of jute even with a rise in price for jute. This is because though jute prices might have doubled, paddy prices have increased about eight times. In the language of the cultivator, formerly one maund of jute would exchange for two maunds of rice, whereas this year one maund of rice is exchanging for 2 or 3 maunds of jute. To be exact, the margin for the cultivation of jute will go down up to that stage at which a cultivator would expect an equal return from the land whether he puts it under jute or paddy, having regard to the suitability of the land for growing jute or paddy, and having regard to the price correlationship between jute and paddy. If, for example, a particular acre of land is expected to yield either 12 maunds of jute or 24 maunds of paddy, the cultivator would put jute on that land as long as he expects that the price-relation between jute and paddy would not be less than 2-1. If he expects a price relationship which is less than 2-1 he would not put jute on it but would put it under paddy. This is a new problem for jute.'

With the outbreak of war the jute industry was flooded with orders and the restrictions on mills were removed one after the other in a short period. By a special relaxation of the provisions of the Factory Act the mills had been working 60 hours per week since the middle of November 1939.[25] The total consumption of raw jute by the mills in 1939-40 was estimated at 1·3 million tons which was 16 per cent. higher than that of the previous year. In January 1940 the British Government decided to postpone the date for the completion of the sand-bag orders from 30 April to 31 August 1940 and as a consequence it became necessary for jute mills to reduce their working hours from 60 to 54 per week. The loss of Continental markets for jute manufacture and the gloomy export prospects made a further slackening necessary and on 19 August 1940 the hours per week were reduced to 45. 'As even this did not have the desired effect, the mills decided to curtail production further by closing down for one week in every four in the months of September to November. The arrangement was further extended in December 1940 and January 1941'.[26] The consumption of raw jute by mills during 1940-1 declined by about 30 per cent. compared with that of the previous year.[27]

During 1941-2 demand revived. In August 1941 two large Government orders for 197 million sand-bags were placed with the Jute Mill's Association and considerably higher prices than before were offered. The working hours were increased from 45 to 54 per week and in October they were further increased to

25. *Review of the Trade of India*, 1940-1, pp. 18-19.

26. *Ibid*, p. 19.

27. In a conference of jute interests sponsored by the Government of India on 4 December 1940 the Indian Jute Mills' Association had agreed to recommend to its members the adoption of a buying programme under which they were to aim at making purchases of raw jute at agreed prices up to specified amounts by specified dates. The minimum quantity stipulated was 37½ lakh *bales* to be purchased before 15 April 1941. But this schedule could not be adhered to in the face of languishing demand. The purchases of mills fell short by 18·81 lakh maunds of the agreed quantity and even these were far in excess of the requirements of mills *Ibid.*, p. 21.

60 per week. Towards the end of 1941 with the entry of Japan into war the situation again changed. The Pacific markets were lost soon after December 1941 and submarine activity necessitated the shipping of goods from the West Coast ports. Stocks, in consequence, began to accumulate with mills and the market generally sagged. Consumption during 1941-2 was larger by about 20 per cent. over the preceding year but was about 5 per cent. lower than that attained during 1939-40.

The declining market at the beginning of 1942-3 led the Indian Jute Mill Association to reduce the working hours of mills from 60 to 54 per week and to seal 10 per cent. of their looms, with effect from 18 May 1942.[28] The outlook gradually changed with increased government orders, rising off-take of jute manufactures, etc. The Indian Jute Mills' Association decided to unseal their full complement of looms and to increase working hours to 60 per week from 1 March to 15 May 1943.[29] The overall consumption during 1942-3 was, therefore, only slightly smaller than during the preceding season.

It seems, however, that the original restrictions were re-imposed in the middle of May 1943. Hours were reduced to 54 per week. In June 1943 an order for 700 million yards of hessians was placed with the industry by the U.S. Government. As a consequence though all the sealed looms were released the working hours continued to be 54 per week. Shortage of coal during July led the Jute Association to close the mills for an entire week to accumulate coal stocks. This arrangement had to be continued during the following months of the year.[30] Inevitably the total consumption of raw jute decreased by about 20 per cent. during 1943-4.

In the following year coal difficulties continued to hamper production. The Government of India requisitioned a number of Jute mills and the non-requisitioned mills were asked to increase their production to meet the Allied demand. A

28. *Review of the Trade of India*, 1942-3, p. 14.
29. *Ibid*, p. 14.
30. 'A Bird's Eye-View of Conditions in the Jute Mill Industry', *Commerce*, Annual Review Number, 1943, p. 878.

scheme to achieve this end was drawn up and put into effect by the Indian Jute Mills' Association and some mills were asked to work two shifts.[31]

Table No. 97 gives the exports of raw jute by their destinations during the war period.

TABLE 97

Exports of Jute from India According to their Destinations during 1939-44

(Source :—*Review of the Trade of India*)

(Thousand Bales)

	1939-40	1940-1	1941-2	1942-3	1943-4
United Kingdom ..	1,084	516	818	497	558
Other parts of the British Empire ..	32	29	39	34	26
U.S.A. ..	284	256	557	694	272
France ..	478	117	—	—	—
Italy ..	155	29	—	—	—
Brazil ..	193	65	85	49	85
Japan ..	76	53	15	—	—
Belgium ..	185	5	—	—	—
Spain ..	90	111	28	—	—
Other Countries ..	407	181	221	86	53
Total ..	3,181	1,362	1,763	1,360	994

The total exports during 1939-40 were about 20 per cent. smaller than those during the preceding year. This was due to the fall in, and afterwards the stoppage of, exports to Germany and Italy. Belgium also cut down her purchases as compared with the preceding year. In contrast with this the off-takes of the U.S.A., France, Brazil and the U.K. were larger than those of the previous year.

31. *Commerce*, Annual Review Number, 1944, p. 745.

In 1940-1 the exports of raw jute recorded a sharp decline of about 57 per cent. over that of 1939-40. The loss of Continental markets, which before 1939 took 51 per cent. of the total exports of raw jute, was mainly responsible for this. The off-take of other consumers was also smaller during the year 1940-1 than in 1939-40. The U.K. nearly halved her purchases and the U.S.A. also purchased a slightly reduced quantity as compared to the year before.

In 1941-2 exports increased by 4,01,000 bales. A part of this was accounted for by the increase of about 3 lakh bales in the purchases by the U.S.A.[32] The U.K. took 302,000 bales more during the year. The Dundee mills had small stocks and their demand was keen. By the Control of Jute (No. 3) Order on 6 October 1941 the Jute Controller in the U.K. took over all jute arriving in that country on and after that date. 'The price fixed was the same as that paid by spinners plus £3 per ton, spinners being allowed to keep all stocks they had in hand. All fresh purchases had to be made from the Jute Controller on the base of £43 for Daisee 2/3 ... Under the new system, as it affected the trade at Calcutta, the Controller in the U.K. was to buy from merchants in the U.K. who made their offers in competition. After the close of the business the Controller obtained the names of shippers in India and then the Ministry of Shipping allotted the necessary freight among the shippers as far as possible *pro rata* to sales. It was also announced that all unshipped contracts would be shipped in chronological order and that the Controller would take over all contracts whether shipped or not'.[33] There were also increases in the off-takes of 'Other Countries' and Brazil.

Exports declined almost to the 1940-1 level during 1942-3. The decline was marked in the off-takes of the U.K., Brazil and 'Other Countries'. In the U.K. under the concentration

32. The U.S. Office of Price Administration and Civil Supplies issued an order early in August 1941 fixing the maximum prices for different qualities of hessian cloth. These were based on the prices prevailing in Calcutta on 29 July 1941—*Review of the Trade of India*, 1941-2, p. 26.

33. *Review of the Trade of India*, 1941-2, p. 27.

scheme fewer jute mills were working and all non-essential uses of jute manufactures were eliminated. As a consequence, demand was small. On the other hand the U.S. purchased an even bigger amount than that of the preceding year. The U.S. demand was keener because after the occupation of the Phillippines by the Japanese the supplies of Manilla hemp were cut off and the U.S. had to use jute for the manufacture of ship ropes. In March 1942 the U.S. War Production Board issued the Jute Conservation Order. Under the provisions of this Order the use of raw and processed jute for civilian purposes was severely restricted. 'On 1 September 1942, the Defence Supplies Corporation became the sole purchasing agent for all raw jute imported into the country and importers were allowed to sell to producers for civilian use only such jute as was rejected by the Corporation because of damage in shipment. The object of the measure was to build up an adequate stock pile in order to ensure the requirements of all manufacturers engaged in war orders'.[34]

Total exports fell by about 27 per cent. during 1943-4. Exports to the U.K. improved slightly. In the U.K. the jute industry was suffering from a shortage of labour and the consumption of jute could not attain the 1941-2 level. The off-take of the U.S.A. was sharply reduced during the year. 'In November 1943, the formation of a Jute Importers' Group consisting of ten New York jute importing firms was announced by the War Production Board. The Group was entrusted with the work of handling all matters covering the clearance and distribution of raw jute imported into the country'.[35]

Table No. 99 gives the monthly index number of wholesale prices of jute during the war period.

Jute prices before the beginning of the war were declining and shortly before the war the Government of Bengal had issued an Ordinance fixing the minimum price in the futures market at Rs. 36 per bale. The outbreak of war changed the

34. *Review of the Trade of India*, 1942-3, p. 15.
35. *Review of the Trade of India*, 1943-4, p. 16.

TABLE 98

Monthly Index of Wholesale Prices of Raw Jute in India during 1939-45

(Sources :—*Monthly Survey of Business Conditions in India*)

Base 19 August, 1939 = 100

	1939	1940	1941	1942	1943	1944	1945
January ..	—	247	96	132	189	205	199
February ..	—	219	91	132	193	208	199
March ..	—	194	90	119	202	217	199
April ..	—	177	93	120	219	217	200
May ..	—	178	100	118	246	218	199
June ..	—	145	123	120	241	216	199
July ..	—	118	138	125	222	211	199
August ..	—	103	141	121	202	212	199
September ..	124	89	182	127	189	213	199
October ..	127	86	174	141	189	202	199
Novebmer ..	187	86	165	165	190	199	199
December ..	254	94	145	186	193	199	—

whole aspect and prices firmed up. In September 1939 jute mills tried to control the prices of raw jute by an informal agreement among themselves not to purchase it at more than a certain price. But the statistical position of jute was so strong that the agreement could not check the rise in jute prices. Prices continued to shoot up and the index touched the peak at 254 in December 1939. In January 1940 the British Government postponed its order for sand-bags from April to August and this had a damping effect on jute manufactures and in turn on raw jute. The crop was also the largest ever. The demand languished and the index of jute prices declined to 177 in April 1940. The loss of Continental markets and the shrinking internal market as a consequence of lower off-take by jute mills exerted a downward pressure on the market. Prices continued to decline, the index reaching 86 in November 1940. The precipitous fall in jute prices led the Bengal Government to call a conference of jute interests in May 1940, but nothing came out of it. On 10 May 1940 the Government of Bengal fixed the minimum prices of hessians and jute in the futures

market by an Ordinance. The minimum rate for raw jute future was fixed at Rs. 60 and the maximum at Rs. 90 while the corresponding rates for hessians were Rs. 13 and Rs. 21. This measure could not prevent trading of actual commodities at prices fixed as minimum, especially when considerable stocks of the old crop were waiting for liquidation and when the new crop was expected to be very large. 'Actually, ready transactions in jute and jute manufactures at prices below the minima fixed for the futures trading were reported to have taken place shortly after the issue of the Ordinance. The only effect of the Ordinance was to bring the futures trading to a standstill as it was impossible to put through any transaction at the minimum prices fixed by Government'.[36] The futures market remained closed upto 2 June 1940. On 3 June 1940 the Bengal Government announced that it had decided to purchase ready L.J.A. firsts (old crop) offered below a certain minimum rate. Some purchases were made but the weight of the new crop was such that prices continued to be on the down grade. Shortly after this there was concluded a gentleman's agreement between the Government of Bengal and the Indian Jute Mills' Association by which the latter agreed to do everything to maintain jute prices, particularly by requiring the jute mills to make purchases at certain minimum prices. The Government agreed not to control the prices of jute or jute manufactures during the following six months.[37] This eased the situation slightly but could not prevent the fall in jute prices. This was because the mills were not under any obligation to purchase any specified amounts and as the prices at which they were required to purchase were considerably higher than those prevailing in the market they tried to meet the situation by a reduction in their off-take of raw jute.

In November 1940 the index number touched 86 and the situation became still more critical. On 4 December 1940 the Government of India called a conference of the representatives of jute growing provinces and the Indian Jute Mills' Associ-

36. *Review of the Trade of India*, 1940-1, p. 19.
37. *Ibid.*, p. 20.

ation. In this conference the Indian Jute Mills' Association agreed 'to recommend to its members the adoption of a buying programme under which they were to aim at making purchases at agreed prices up to specified amounts by specified dates. Any inability on their part to maintain the programme was to be made good by corresponding purchases on account of the Government.... The minimum quantity stipulated was 37½ lakhs bales to be purchased before 15 April 1941 (15 lakhs bales by 15 January, 25 lakhs bales by 15 February, 32½ lakhs bales by 15 March and 37½ lakhs bales by 15 April)'.[38]

In the next four months there was heavy buying by middlemen though the total purchases of mills fell short of the stipulated by some 18·81 lakh maunds. Though this exerted a downward pressure the demand from middlemen for one reason or another was buoyant and particularly because of the announcement by the Bengal Government in November 1940 regarding the restriction on the acreage of the next jute crop. The index of jute prices, after fluctuating, rose to 93 in April 1941. In the following two months the market livened up. Two big orders for 111½ yards of hessian cloth from the Government of India were received towards the end of April 1941. The enquiry from the River Plate countries and North America was brisk and was expected to be brisker. Under this stimulus prices of raw jute revived and began to surge up. The index shot up to 184 in September 1941.

The increase sanctioned by the Bengal Government for the next year's crop and the concentration of jute orders from the U.K. in the hands of the Jute Controller and the fixing of the buying price as from October 1941 acted as bearish factors and prices trended downwards. The situation of the jute market became worse with the opening of hostilities in the Pacific area. All the Pacific markets which had supported the Indian jute market after the loss of the Continental markets were now closed. In view of the slump in prices the Board of Control of the East India Jute Association fixed Rs. 56 per bale as the minimum price at which transactions in the Associ-

38. *Ibid.*, p. 21.

ation were to be permitted. But there was no buying support coming on and the market could not be supported. The jute market collapsed under the strain and the index slid down to 118 in May 1942.

By the Raw Jute Taxation Act of Bengal enacted on 18 August 1942 a tax of two annas per maund of raw jute purchased by the occupier of a jute mill or purchased and dispatched outside Bengal by any means of transit by a shipper of jute was imposed by the Bengal Government. The proceeds of the tax were to be utilized for (1) the execution of measures for the stabilization of Jute prices, (2) improvement and organization of the marketing of raw jute and (3) generally furthering the interests of jute growers of the province and of the industry as a whole.[39]

The Index of raw jute prices continued to fluctuate between 118 and 125 during the period from May to August 1942. Shipping difficulties, smaller off-take by mills, air raids on Calcutta and difficulties of moving jute from up-country centres because of the inadequacy of transport facilities were some of the reasons for the stagnant jute market during this period. Prices began to look up again from September 1942 consequent upon the rising demand for jute manufactures, and the decision of the Indian Jute Mills' Association to unseal their full complement of looms as well as to increase the working hours to 60 per week. Overseas demand, especially from the U.S.A., which could not import Manilla hemp anymore, also revived. Considerable inflationary pressure also came to be exerted on all prices during this period. The index went up to 186 by December 1942 and continued to increase further.[40-41] It attained the peak at 286 in May 1943. From then onwards prices began to recede. This was mainly due

39. *Review of the Trade of India*, 1941-2, p. 29.

40-41. Because of the difficulties of internal transport, stocks of jute began to accumulate with the primary producers from September 1942 onwards. As a consequence, though jute prices were ruling high in Calcutta the middlemen were offering very low prices to primary producers. 'The Government of Bengal, therefore, acting in conjunction with the Government of India, evolved a scheme for granting short-

to the smaller demand forthcoming from the jute mills as they began to suffer from coal shortage. The mills reduced the hours of work and revived all the older practices of reducing production for meeting the situation. The index of raw jute prices declined to 189 in September 1943. In the following months it remained almost steady at that level but with the turn of the year there was a slight recovery. This was chiefly the result of the larger enquiry from the mills following an improvement in the coal situation. The firm tone of the jute market in the early months of 1944 could also be partly traced to the announcement of the Bengal Government that they would 'guarantee a minimum price of raw jute on the basis of Rs. 15 per maund for Indain Jute middles at Calcutta (other qualities or grades of raw jute to be in parity with this price). The government further stated that it would buy all crop offering, old and new, up-country or at Calcutta, in order to maintain prices at the above level in Calcutta and at parity levels up-country. A maximum price of raw jute was also fixed on the basis of Rs. 17 for Indian Jat middles in Calcutta, with the right of the Government of India to requisition on the basis of the maximum price'.[42] In March 1944 the index increased to 217. In April 1944 the Government of India fixed the maximum and minimum prices for raw jute and jute manufactures by enacting the Jute (Price Control) Order. 'The maximum price of White Jat Jute (Tops) was fixed at Rs. 19 per maund. Prices of other qualities were fixed in relation to this price, the lowest maximum rate being Rs. 13 per maund for Jungli Bottoms. The minimum prices for these

term loans to small jute growers to enable them to hold at least a part of the crop until traffic conditions improved. The loans were at the rate of Rs. 5 per *bigha*, subject to a maximum of Rs. 15 and were limited to holders of licences for jute cultivation, whose areas licensed in 1942 did not exceed three *bighas*. As a condition to the loan, the borrower were required to certify that he held jute to the value of at least twice the amount of the loan applied for. A sum of Rs. 2 crores was advanced by the Government of India to the Provincial Governments to enable them to grant these loans'.—*Review of the Trade of India*, 1942-3, p. 15.

42. *Commerce*, Annual Review Number, 1944, p. 765.

qualities were fixed at Rs. 17 per maund and Rs. 11 per maund respectively. In regard to all these qualities an extra 8 annas was allowed for Tossa jute'.[43] During the next two months prices continued to be at the ceiling. The mills were apprehensive of coal supplies and were, therefore, making smaller purchases. The prices of raw jute consequently were pushed on the down grade. In October prices touched the minimum fixed by the government. When the matter was represented to the Government of India the latter established a Jute Purchasing Panel and entrusted to it the task of buying raw jute whenever prices were marked down below minimum levels.[44] The index of jute prices touched 199 in November 1944 and has remained steady at that level till December 1945.

3. Wool

Almost nothing can be said regarding the quantity or trend of production of wool in India during the war period, because of the lack of statistics in that regard. As the results of the 1945 Cattle Census have not been made available even a rough estimate regarding trends in production cannot be made.

Table No. 99 gives the figures regarding the imports of raw wool into India during the war period.

TABLE 99

Imports of Raw Wool into India during 1939-44

(Source:—*Report of the Marketing of Wool and Hair in India*, 1945 p. 15)

(Thousands of lbs.)

	1939-40	1940-41	1941-2	1942-3	1943-4
Through British India Ports ..	7,689	22,855	22,174	19,440	25,543
Through Land Frontier Routes ..	23,144	16,315	6,895	—	—
Total ..	30,833	39,170	29,069	—	—

43. *Review of the Trade of India*, 1943-4, p. 16.

44. *Commerce*, Annual Review Number, 1944, p. 265.

Total imports rose by about 8 million lbs. in 1939-40 over that of the previous year, the larger proportion of which came through land frontier routes. During the next year imports increased still further. Imports of wool by land frontier routes declined by about 7 million lbs. while those from overseas increased slightly less than three times those of the previous year. The level of imports from overseas was generally maintained in the following years, but the imports through land frontier routes, judging from the incomplete statistics furnished by the *Review of the Trade of India*, showed a declining tendency during the war period. Imports from overseas increased during the war to meet the demands of the Indian woollen mill industry which received a considerable stimulus because of war orders.

This was reflected in the tremendous rise in the consumption of wool by the Indian woollen mill industry. Information on this point is scanty. According to the *Report on the Marketing of Wool and Hair in India* the requirements of the mills alone, during 1941-2 and 1942-3 had gone up to 42·53 million lbs. and 41·11 million lbs. respectively.[45]

Table No. 100 gives details regarding the utilization of imported and indigenous wool by the Federation of Woollen Mills in India during two war years.

Indigenous wool was used by the Indian mills to a very large extent than they used to do before 1939. All the wools imported from abroad were used for making goods other than blankets. During 1942-3 mills used larger quantities of 'indigenous wools' for making 'other goods'. The volume of Defence Orders was so enormous that upto the end of 1943 the entire manufacturing capacity of the industry was requisitioned for the purpose. When the volume of Defence Orders decreased the Government of India issued the Woollen Goods (Control) Order on 12 February 1944 under the provisions of which some manufacturing capacity was released for meeting civilian demand.

45. *Report on the Marketing of Wool and Hair in India*, 1946, p. 37.

TABLE 100

Utilization by Federation of Woollen Mills in India of imported and indigenous wools during 1941-3

(Source :—*Report on the Marketing of Wool and Hair in India*, 1947, p. 36)

	1941-2		1942-3	
	Other goods Lbs.	Blankets Lbs.	Other goods Lbs.	Blankets Lbs.
Imported :				
Tops 60s or over ..	18,73,421	—	19,90,755	—
56s/58s ..	1,51,850	—	1,43,646	—
50s and below ..	18,61,235	—	16,08,088	—
Combing wool 60s or over ..	1,17,000	—	5,79,000	—
56s/58s ..	13,22,300	—	9,99,000	—
50s and below ..	73,11,202	—	66,18,972	805
Clothing wool 60s or over ..	16,39,661	—	11,14,602	—
56s/58s ..	1,52,000	—	1,25,000	—
50s and below ..	47,26,145	17,108	39,71,410	—
Total Import of Wool ..	191,54,314	17,108	170,67,473	805
Indigenous :				
Dessi blacks, greys, etc. ..	—	79,99,172	—	79,19,260
White and Yellows Joria, Bikaner, etc. ..	3,02,000	14,400	1,24,000	12,850
Miscellaneous other types ..	1,71,419	98,34,907	26,25,167	95,66,876
East Indian and Unclassified ..	10,62,972	30,76,285	16,98,436	20,91,789
Total of indigenous wools ..	24,36,391	209,24,764	44,47,603	195,90,775
Grand Total ..	215,90,905	209,41,872	215,15,076	195,91,580
Total of wools and tops over April, 1941/March 1943 ..	836,39,433 lbs.			

Table No. 101 gives the figures of the exports of wool of Indian origin during the war period.

TABLE 101

Exports of Raw Wool of Indian Origin during 1939-44

(Source :—*Review of the Trade of India*)

(Million Tons)

	1939-40	1940-41	1941-42	1942-3	1943-4
Total Exports ..	52·8	30·8	39·6	19·0	22·1
To United Kingdom ..	33·3	26·5	16·5	15·0	11·8
To U.S.A. ..	18·8	4·3	21·7	4·0	5·7

Exports of wool in 1939-40 were slightly lower than during the preceding year. Exports to the U.K. declined from 45 million lbs. during 1938-9 to 33·3 million lbs. during this year, but those to the U.S.A. advanced markedly from 9 million lbs. during the preceding year to 18·8 million lbs. during 1939-40. An Adviser to Government, Woollen Industry, was appointed by the Government of India with effect from 1 October 1939. At the beginning of the war the Government of India placed an embargo on the export of black, grey and coloured wool to all destinations and prohibited the export of white and yellow wool to any destination except the U.K.[46] This was done, as the Press Note dated 17 November 1939 stated, 'with a view to securing that the supplies required for war purposes by themselves and by His Majesty's Government are forthcoming in sufficient quantities.' Only contracts outstanding on 8 September 1939 were allowed to be executed. By a subsequent Notification the Government of India decided to permit shipments of white and yellow wool to destinations

46. *Indian Trade Journal*, Vol. 135, p. 721.

other than the U.K. before 31 March 1940, provided the quantities to be exported were within the quota allotted to shippers for the half-yearly period ending 31 March 1940, for contracts entered up to 18 November 1939.[47]

During 1940-1 exports fell sharply by about 40 per cent. over the pervious year. The decline in the off-take of the U.S.A. was very large as compared with the decline in the off-take of the U.K. During the year the export of "ginned" and "burry" wool to the U.K. was permitted, provided the Adviser to Government, Woollen Industry, certified that it was unfit for manufacturing blankets.[48] On 3 July 1940 the British Ministry of Supply announced a revised schedule of buying prices for raw wool.[49] During the last quarter of the year the Government of India decided to permit shipments to the U.K. of specified varieties of South Indian black and grey wools, provided they were not required by the Government Buying Agents (Messrs. Binny & Company) for meeting demands of mills engaged in Government work or were unsuitable for them.[50] By a Notification of 26 October 1940 the imports of knitting wool into India by voluntary workers for knitting into weaving apparel for the defence forces were exempted from customs duty.[51]

During 1941-2 exports recovered to some extent. The increase was solely due to the very large increase in the off-take of the U.S.A. which even compensated for the marked decline in the exports to the U.K. A Press Note dated 30 June 1941 stated that the exports of wool of specified qualities permitted by a Notification during the last quarter of 1940-1 could not be any longer permitted.[52] Imports of raw and carded wool into India by sea from Iran and Iraq were prohibited by a notification of 20 December 1941.[53]

47. *I.T.J.*, Vol. 136, p. 6.
48. *I.T.J.*, Vol. 138, p. 593.
49. *I.T.J.*, Vol. 138, p. 219.
50. *I.T.J.*, Vol. 140, p. 22.
51. *I.T.J.*, Vol. 139, p. 232.
52. *I.T.J.*, Vol. 142, p. 85.
53. *I.T.J.*, Vol. 143, p. 774.

Exports declined by more than 50 per cent. during 1942-3. The off-take of the U.K. was only slightly marked down as compared with the previous year but that of the U.S.A. had shrunk slightly below the level of 1940-1. Exports to the U.K. declined sharply to 11·8 million lbs. but those to the U.S.A. were marked up by 1·7 million lbs. over the previous year. A new customer was Iraq which took 4·5 million lbs. during 1943-4.[54] The United Kingdom had granted a subsidy of 5·79 per cent. to wool exporters from the Dominions. In April 1943, this privilege of increased payments paid to Dominion growers was extended to Indian exporters. This amounted to an additional payment of 12 per cent. of the value of goods.[55]

Table No. 102 gives the monthly index of wholesale prices of wool during the war period.

TABLE 102

Monthly Index of Wholesale Prices of Wool in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)

(Base 19 August, 1939 = 100)

	1939	1940	1941	1942	1943	1944	1945
January ..	—	135	147	169	147	176	241
February ..	—	141	147	162	147	176	241
March ..	—	137	147	162	147	176	241
April ..	—	132	147	162	147	191	239
May ..	—	132	156	162	153	217	241
June ..	—	121	162	158	162	217	241
July ..	—	126	162	147	162	210	241
August ..	—	131	162	147	162	210	241
September ..	100	132	169	147	152	228	241
October ..	104	147	171	147	176	238	241
November ..	122	147	171	147	176	241	241
December ..	128	147	171	147	176	241	—

54. *Review of the Trade of India*, 1943-4, p. 93.

55. *Report on the Marketing of Wool and Hair in India*, 1946, pp. 44-45.

Prices of Indian wool shot up along with those of all other commodities in India at the beginning of the war. The index went up from 100 in September 1939 to 141 in February 1940. The continuance of open auctions of Indian wool at Liverpool helped to keep up the price up to March 1940. In that month the U.K. Wool Control Order was promulgated. It immediately had repurcussions on the Indian market and prices began to go down. In June 1940 Indian export houses stopped making advances to Liverpool exporters and prices declined still further. The index touched 121 in June 1940. There was a slight recovery subsequently but the arrival of the new crop in September 1940 kept the prices low. In the subsequent months local demand improved considerably and stocks of yellow wool were reduced appreciably. Prices improved and the index touched 147 in October 1940 and remained at that level till April 1941. The undertone of the market remained strong and prices showed a tendency to rise. In October 1941 the index reached 171. The arrival of the new crop eased the position slightly and the index declined to 162 in February 1942. The accumulation of large stocks in the Indian market and the apprehension of smaller demand from the United Kingdom brought down the prices still further and the index remained steady at 147 from July 1942 to April 1943. In March 1943, 15,000 bales were shipped to Basra and expectations of a high foreign demand for wool were entertained. Prices recovered as a consequence. In July 1943 the U.S.A. began to make purchases at Karachi and these purchases were continued during subsequent months. This lent further support to prices and the index went up to 176 in October 1943 at which level it remained up to April 1944. Prices began to increase in subsequent months and the upward trend was strengthened by huge American purchases from August 1944 onwards. The local demand was also buoyant and prices increased still further. The index climbed to 241 in November 1944 and remained at that level till the end of 1945.

4. GROUNDNUT

Table No. 103 gives the acreage and production of groundnut in India during the war period.

TABLE 103

Estimated Area under and production of groundnut in India, during 1939-45

(Source :—*Official Crop Forecasts*)

	1939-40	1940-41	1941-2	1942-3	1943-4	1944-5
Thousand Acres ..	8,410	8,770	7,070	7,697	8,531	9,841
Thousand Tons ..	3,165	3,702	2,586	2,858	3,305	—

The 1939-40 crop was slightly smaller than that of the preceding year. With the outbreak of war in September 1939 a brisk demand for groundnut developed and the prices went up. The higher prices were a direct inducement to the cultivators and the acreage of the 1940-1 crop showed a considerable increase. The acreage increased by about 4 per cent. but the total yield increased by about 17 per cent. With the fall of France and the loss of Continental markets demand flagged and groundnut prices receded. Surplus groundnut stocks increased and the problem of their disposal became acute. Though increasing quantities were being absorbed by the Indian crushing industry, which was expanding under the stimulus of war-time demand for groundnut oil, it could not absorb the whole of the supplies of groundnuts that would have ordinarily been exported.[56] The problem of the surplus stocks had to be, therefore, tackled by other devices also.

In September 1940 the buying price for bulk purchases of groundnut in India for their requirements had been fixed by the British Ministry of Food at £10 per ton. When groundnut prices receded during the latter part of 1940 this buying price became out of line with the actual market prices and the profit margin of the exporters widened.

56. *Commerce* Annual Review Number, 1943, p. 763.

One obvious remedy for the situation was to reduce the fixed prices. As, however, an important part of the scheme was to help the groundnut producer, the Ministry of Food decided at the request of the Government of India, to adhere to the buying price, but at the same time to recover from the shippers a rebate, to be credited to a special fund, equivalent to the difference between the buying price and the prices actually paid by shippers to sellers. The fund so formed was to be used for the benefit of the cultivators. On the 20 February 1941, a Conference was held in New Delhi between the representatives of the Government of India and those of Madras, Bombay and Hyderabad State to discuss the details of the proposal. The Conference came to the conclusion that it was not practicable to enforce restriction of output by compulsion, but it was necessary to carry on propaganda directed towards a reduction of acreage. It was also agreed that it was difficult to devise practicable measures for a direct distribution of money to the cultivator. It was, therefore, decided that the most suitable method of helping the cultivator was to encourage the consumption of the crop partly by propaganda, drawing attention to the use of groundnut oil as an illuminant, and partly by increasing the consumption of groundnut cake as cattle food and manure. The Government agreed to contribute on an equal basis with His Majesty's Government towards this fund and it was also decided that a small Committee should be constituted for the purpose of assisting the working of the scheme. Other efforts to solve the general problem of oil seeds surplus included the various schemes initiated by the Board of Scientific and Industrial Research for exploring the possibilities of industrial utilization of vegetable oils.[57]

The arrangement regarding the transfer of the rebate received from exporters to the fund 'was actually adapted for all purchases made by His Majesty's Government since the 12th January 1941. The contributions ceased to accrue after January 1941 owing to the rise in market price of groundnuts above the level of £10 per ton. The total sum accrued on this account amounted to about £1,32,000 but a refund of £32,000 was subsequently made to His Majesty's Government as a partial set off against the premium they had to pay in later months owing to the rise in prices.'[58]

As a result of the slump in prices as well as the official propaganda aimed at a reduction of groundnut acreage the

57. *Review of the Trade of India*, 1940-1, p. 23.
58. *Review of the Trade of India*, 1941-2, p. 31.

1941-2 crop was about 30 per cent. smaller than that of the previous year. During 1941-2 prices looked up and under their stimulus there was an increase of 9 per cent. in acreage in the 1942-3 crop. During the following years prices, as a result of various factors, went up considerably and the acreage under groundnut during 1943-4 and 1944-5 also increased remarkably.

Table No. 104 shows the exports of groundnut from India by their destinations during the war period.

TABLE 104

Exports of Groundnut from India by Destinations during 1939-44

(Source :—*Review of the Trade of India*)

(Thousand Tons)

Countries	1939-40	1940-41	1941-2	1942-3	1943-4
France ..	99	25	—	—	—
United Kingdom ..	108	214	306	196·8	181·7
Belgium ..	47	5·7	—	—	—
Italy ..	19·5	—	—	—	—
Germany ..	53	—	—	—	—
Netherlands ..	126	13·2	—	—	—
Other countries ..	95	80·3	88·7	61·1	59·2
Total ..	548·6	338·5	395	257·9	240·9

During 1939-40 the prices of groundnuts ruled higher than those during the preceding year. Because of the shorter crop exports were also lower than those of the preceding year. During the latter part of the year the exports suffered severely because of the outbreak of war and the consequent shipping difficulties. In 1940-1 the export markets on the European Continent were lost to India and exports recorded a very sharp decline. The U.K. became the most important consumer of Indian groundnuts and absorbed a quantity more than twice that of the preceding year. From the outbreak of war the U.K. Government had assumed complete charge of the

trade in all oilseeds in that country. In September 1940 it was announced that for the time being the British Ministry of Food would be making the bulk of its purchases in India of groundnuts at £10 per ton f.o.b. Indian port. During the subsequent months however, groundnut prices in India slumped heavily while the prices paid by the Ministry of Food remained unchanged. The setting up of the Fund for the relief of groundnut cultivators has already been referred to. With the declaration of war by the Japanese in December 1941 and the subsequent occupation of several Far Eastern countries of Japan meant a total cutting off of the large supplies of copra that were received from these countries by the United Nations. To make good this short-fall in the supplies of fat demand for oil seeds of all types increased considerably and the U.K. absorbed a larger amount of Indian groundnuts during 1941-2 than during the preceding year. Groundnut prices in India went up and the Ministry of Food had to revise its buying price to £15·5 per ton in June 1941. During 1942-3 the prices of groundnut in India, under inflationary pressure, shot up still further. During the year they advanced by 137 per cent. The buying prices of the Ministry of Food were, therefore, not attractive to Indian sellers and the necessary supplies had to be procured by raising buying-prices. 'The decrease in exports (during 1942-3) was by no means due to a lack of demand but to shipping difficulties and a marked reduction in supplies available for export.'[59] Total exports during 1943-4 were slightly lower than those of the previous year. The U.K. continued to be the principal buyer.

Table No. 105 gives the monthly index of groundnut prices during the war period.

The 1938-9 groundnut crop which came to the market during 1939-40 was smaller than the preceding one. The prices during the earlier part of 1939 were generally higher than those prevailing during the preceding year. The outbreak of World War II intensified the demand for groundnut

59. *Review of the Trade of India*, 1942-3, p. 17.

TABLE 105

Monthly Index of Wholesale Prices of Groundnut in India during 1939-45

(Source :—*Survey of Business Conditions in India*)

(Base 19 August, 1939 = 100)

Months	1939	1940	1941	1942	1943	1944	1945
January ..	—	110	75	111	220	237	223
February ..	—	108	75	118	249	232	224
March ..	—	111	80	109	278	243	217
April ..	—	116	85	117	303	241	210
May ..	—	118	85	127	336	239	207
June ..	—	101	89	151	314	238	212
July ..	—	93	100	175	294	255	248
August ..	—	86	117	185	294	248	257
September ..	104	88	115	177	302	229	251
October ..	105	88	108	189	299	206	253
November ..	112	81	113	177	266	213	253
December ..	114	77	112	203	243	217	—

and the prices began to surge up. The index number of groundnut prices increased from 100 in September 1939 to 114 in December 1939. There was a slight recession in the subsequent months but it went up to 118 in May 1940. The loss of Continental markets and the large increase in the 1939-40 crop resulted in large surplus stocks. Though with the outbreak of the war the prospects of exports were gloomy the surplus of the 1938-9 crop had been almost wholly absorbed by the increase in demand from the indigenous oil crushing industry.[60] But the surplus during 1940-1 was so large that it could not be expected to be so absorbed. Groundnut prices broke and a downward movement began. The index touched 75 in February 1941. The Fund for the relief of groundnut growers was instituted in January 1941 and propaganda to reduce the acreage under groundnuts was vigorously carried on by the Government. There was a reduction in the 1941-2

60. *Review of the Trade of India*, 1940-1, p. 22....The expansion of the oil crushing industry in India during this period was evident from the fact that exports of groundnut oil from British India amounted to 8·7 million gallons in 1940-1 which was double the quantity exported during the previous year. *Ibid.*

crop as a result of these measures and the expectations of a short crop led to a revival of demand. Prices steadily mounted and the index went up to 117 in August 1941. It fluctuated between 117 and 109 up to March 1942. The entry of Japan into the war and the loss of copra supplies from the Far Eastern lands led to a spurt in oil-seed prices. This increased demand together with the pressure of inflationary forces in the country resulted in a sharp increase in groundnut prices. From 117 in April 1942 the index rapidly went on increasing with occasional fluctuations and reached the peak at 336 in May 1943. Speculation in the groundnut contract was rife during this period strengthened by the widening of the futures contract in groundnut.[61] The Bombay Government order freezing groundnut stocks was issued in May 1943. The Government of India shortly afterwards banned all forward business in groundnut. The Seeds Traders' Association took measures to liquidate all outstanding contracts in groundnut. As a consequence prices receded sharply. The index of groundnut prices, reached 232 in February 1944. There was then an upturn and in July the index rose to 255. A sharp decline followed, the index sliding down to 206 in October 1944. From this time until June 1945 the index fluctuated between 210 and 224. During the following months there was a sharp increase in prices the index touching 253 in November 1945.

5. Linseed

Table No. 106 gives the acreage and production of linseed in India during the war period.

TABLE 106

Acreage and Production of Linseed in India during 1939-45

(Source :—*Official Crop Forecasts*)

	1939-40	1940-41	1941-2	1942-3	1943-4	1944-5
Thousand Acres ..	3,713	3,583	3,340	3,408	3,533	3,461
Thousand Tons ..	467	430	361	411	381	391

61. *Commerce*, Annual Review Number, 1943, p. 889.

In 1939-40 the trading conditions in the linseed market were favourable. Though the acreage under the 1939-40 crop was smaller by 4 per cent. than that of the previous season the actual out-turn of the crop was larger by about 5 per cent. During the latter part of 1939-40 prices of linseed went up rapidly but from February 1940 they developed a sagging tendency. The 1940-1 crop consequently showed a decline of about 4 per cent. in acreage and 7 per cent. in yield over that of the previous year. During the subsequent year also prices did not recover appreciably and the acreage planted to linseed in the 1941-2 season declined by 7 per cent. over the previous year. The yield was also exceptionally poor being smaller by about 16 per cent. Prices looked up during the following year and began to rise continuously. The acreage under linseed during 1942-3 increased slightly over that of the previous season *i.e.*, by 2 per cent. but the yield was larger by about 13 per cent. Prices continued on the upgrade during the following year and the 1943-4 crop showed an increase of 4 per cent. in acreage over the previous season. The yield was, however, lower by about 8 per cent. In the calendar year 1943-4 forward trading in linseed was banned and the prices after rising to a peak showed a tendency to decline. Though general expectation of a falling market was reflected in a slight fall in the 1944-5 crop amounting to about 2 per cent. But there was an increase of about 3 per cent. in the total yield over that of the previous season.

Table No. 107 gives the exports of linseed from India since 1939-40 by destinations.

The small crop of the previous season and the shipping difficulties after the outbreak of the war were mainly responsible for the reduction in total exports during 1939-40 as compared with the preceding year. The U.K. continued to be the largest buyer. The U.K. Government had assumed full control of oil seeds trade in that country and took over all stock in the hands of importers and under contract at fixed prices, on the outbreak of the war. With the progress of the war in 1940 India completely lost the Continental markets. The demand for linseed was, however, on the upgrade. Linseed oil was

TABLE 107

Exports of Linseed from India According to their Destinations during 1939-44

(Source :—*Review of the Trade of India*)

(100 Tons)

	1939-40	1940-41	1941-2	1942-3	1943-4
United Kingdom ..	172·5	199·6	211·6	126·0	2,6
France ..	2·4	1·3	—	—	—
Italy ..	·4	—	—	—	—
Belgium ..	—	—	—	—	—
Germany ..	6·0	—	—	—	—
Australia ..	30·5	35·5	39·5	31·5	27,6
Others countries ..	7·4	1·4	5·2	3·2	6,5
Total ..	219·2	237·8	256·3	160·7	36,7

an essential article for aircraft and in naval construction and this intensified the demand for linseed oil and consequently that for linseed. The statistical position of Indian linseed was very strong because of the successive short crops in Argentina. Because of the restrictions placed on the purchases from ' hard currency area ' by the U.K. sufficient supplies of linseed could not be procured from Argentina. In the circumstances, it was feared that Indian supplies of linseed might fall short of Allied requirements. The Government of India, therefore, by a notification in April 1940 banned the exports of linseed together with rapeseed and castor seed, to neutral countries. It was also declared that His Majesty's Government had given an assurance that the prices of linseed will be based on the parity of prices of Argentine linseed and a due account of the normal premium enjoyed by Indian over *La Plata* seed would be taken. The situation changed completely with the fall of France, as this meant the complete loss of Continental markets and the restrictions on the exports of linseed and castor seed to neutral countries were relaxed by the Government of India in June 1940. The 1939-40 crop, which came into the market during 1940-1 was larger than that of the previous year and

the 1940-1 crop in Argentina recorded an increase of about 44 per cent. over that of the previous year. This radically changed the position and instead of a shortage the problem of disposing of the surplus linseed supplies had to be faced by the Government of India.

As in the case of groundnuts, His Majesty's Government undertook in August 1940 to maintain their buying price for Indian linseed at £12-10 f.o.b. per ton. When subsequently the market price fell appreciably below this level they also agreed to the transfer to the Government of India of a rebate based on the difference between the agreed price and the prevailing market price. The contribution which thus accrued amounted to about £28,000 but a refund of £13,000 was made to His Majesty's Government as a partial set off against the premium which they had to pay owing to the subsequent rise in prices above the agreed level. The net contribution of £15,000 was entrusted to the Imperial Council of Agricultural Research to be utilized for the financing of schemes which would directly or indirectly benefit linseed cultivators.[62]

Total exports during 1940-1 were higher than during the preceding one. Though the Continental markets were lost the U.K. market, the principal market of Indian linseed, was still comparatively open. The take off of linseed by the U.K. recorded an increase of more than 16 per cent. over that of the preceding year. An expansion in the internal demand for crushing also absorbed a part of the surplus.

During 1941-2 exports increased to 256,300 tons mainly accounted for by the larger purchases by His Majesty's Government as well as the increased Australian off-take. Most of these exports took place during the last quarter of the year. Exports declined considerably during the following year. This was mainly due to 'shipping shortage and the increase in domestic requirements and did not, therefore, reflect the growing demand for this commodity in overseas markets'.[63] As during the previous years the bulk of the exportable surplus was bought by the U.K. The buying price of the U.K. Food Ministry had to be revised from £15 per

62. *Review of the Trade of India,* 1941-2, p. 33.
63. *Review of the Trade of India,* 1942-3, p. 17.

ton to £15-8-9 per ton in June 1942 and supplies forthcoming even at that revised price were not sufficient to meet their requirements. Australia figured as an important buyer though her off-take decreased by 8,000 tons over the previous year.

Total exports declined still further during 1943-4 to 37,000 tons. Exports to the U.K. declined to 2,600 tons and those to Australia to 28,000 tons. The linseed prices in India were experiencing a boom, largely of speculative origin, during the preceding year and the British Ministry of Food had raised its buying price in March 1943 to £30-7-6 per ton. But even these rates had to be raised during the subsequent months. As a consequence of this the Ministry explored other markets and was reportedly successful in making purchases in Argentina on more advantageous terms. Demand for Indian linseed was consequently sharply reduced.[64]

Table No. 108 gives the monthly index numbers of linseed prices during the war period.

TABLE 108

Monthly Index of Wholesale Prices of Linseed in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)

(Base 19 August 1939 = 100)

Months	1939	1940	1941	1942	1943	1944	1945
January ..	—	154	94	122	187	197	220
February ..	—	125	88	121	190	180	217
March ..	—	127	95	121	198	179	217
April ..	—	136	95	120	215	189	223
May ..	—	133	98	127	254	210	229
June ..	—	106	104	144	225	218	240
July ..	—	99	112	165	210	221	270
August ..	—	93	122	160	214	219	262
September ..	108	103	116	180	215	199	255
October ..	110	101	109	199	233	202	251
November ..	130	101	118	175	220	205	264
December ..	156	99	123	173	200	221	—

64. *Review of the Trade of India*, 1943-4, p. 17.

The declaration of war intensified the demand for linseed and prices shot up in anticipation of a still keener demand. Linseed stocks in the U.K. were requisitioned by the U.K. Government shortly after the declaration of war as already noted and prices for Indian and *La Plata* linseed and linseed oil were fixed. The prices fixed for linseed oil were revised upwards in October and November 1939 and this encouraged the bullish tone of the market.[65] The index of linseed prices in India increased to 154 in January 1940. This rise was largely anticipatory and with the steady worsening of the export situation the prices suffered a sharp break in February 1940. The index touched 127 in March 1940. In April 1940 in anticipation of a shortage in linseed supplies, the Government of India banned its export to neutral countries. The progress of German arms on the European Continent changed the whole outlook. The loss of Continental markets was complete and in June restrictions on exports to neutral countries were withdrawn. The 1939-40 crop was larger than that of the preceding season. The 1940-1 crop of *La Plata* linseed had also recorded an increase of 44 per cent. over that of the previous season. These factors together exerted a strong bearish pressure on the market and the index, with slight fluctuations, reached 88 in February 1941. It should be observed, however, that linseed prices were much more resistant to world forces than the groundnut prices. The very strong statistical position of Indian linseed, the increased offtake by the U.K. Government at high prices, and the increasing internal demand were mainly responsible for this.

The statistical position was further strengthened by the decrease of 7 per cent. recorded in the yield of the 1940-1 linseed crop. 'As the weight of the new crop exhausted itself towards the end of May 1941 there was a rising tendency in linseed prices. At the same time, Indian millers became interested in the commodity and the volume of internal consumption rose to a certain extent. Prices, therefore, showed a large increase after May and the index number of linseed prices which was 88 in February rose to 98 in May and advanced

65. *Review of the Trade of India*, 1939-40, p. 25.

to 116 in September 1941'.[66] The 1941-2 crop began to come into the market by the end of 1941 and it was the smallest crop recorded for many years being nearly 16 per cent. smaller in yield than that of the preceding year. During the last quarter of 1941-2 the export demand had suddenly improved. With the Japanese occupation of the Far Eastern territories the copra supplies of the Allies were cut off and in consequence the Allied demand for other oil seeds increased considerably. By the end of March 1942 the statistical position of Indian linseed became so strong that prices began to advance rapidly and the index number shot up from 121 in March to 165 in July 1942. The upward trend was interrupted because of the temporary closure of the market in August 1942, but it re-asserted itself under the steadily growing inflationary pressure and the accompanying speculative activity in the country. In May 1943 the index number reached the peak of the season at 254. 'Recognizing the unrestrained speculative activity in this, in May, the Marwari Chamber of Commerce fixed Rs. 12 and Rs. 16 as the 'floor' and 'ceiling' rates for purposes of forward business'.[67] In the same month the Government of India promulgated the Oilseeds (Forward Contract Prohibition) Order and prohibited forward trading in most of the oil seeds with effect from 31 May 1943. All contracts outstanding on that date were closed out at fixed rates by the Government. Prices were checked in their upward surge and the downtrend was strengthened by the smaller off-take of linseed by the U.K. Food Ministry during 1942-3. The 1942-3 crop was larger than that of the preceding season. The prices, therefore, gradually though in a fluctuating manner came down and in March 1944 the index number reverted to 179. No purchases were made by the British Ministry during the first three months of 1944. Prices revived later and the index touched 221 in July 1944. For the next nine months the index fluctuated between 199 and 223. Then under the pressure of scarcity conditions in the country the prices of linseed went

66. *Review of the Trade of India*, 1941-2, p. 33.

67. 'Behaviour of Oil-seeds Market in 1943', *Commerce*, Annual Review Number, 1943, p. 889.

up in sympathy with other oilseeds and foodgrains. The index rose to 270 in July 1945 but declined to 251 in October 1945.

6. Castor Seed

Table No. 109 gives the acreage and yield of the castor crop during the war period.

TABLE 109

Acreage and Yield of Castor seed in India during 1939-44

(Source :—*Official Crop Forecasts*)

	1939-40	1940-41	1941-2	1942-3	1943-4	1944-5
Acreage (1,000 Acres) ..	1,005	1,021	958	1,364	1,202	1,468
Production (1,000 Tons) ..	97	105	91	147	109	131

The acreage under castor seed in 1939-40 was smaller by 1,93,000 acres and the yield by 14,000 tons as compared with those of the preceding year. The short-lived boom in castor seed prices during the early months of the war did not increase the acreage appreciably during 1940-1 but the yield was larger by about 8,000 tons. The slump in the prices of castor seed influenced sowings in the next season and the acreage declined to 9,58,000 acres during 1941-2. The yield also decreased by 14,000 tons. The subsequent boom in castor seed prices was reflected in a sharp increase in acreage to 13,64,000 acres in 1942-3 and an increase of 56,000 tons in yield over the previous year. Acreage declined to 12,02,000 acres in 1943-4 and the yield declined by 38,000 tons over the previous year.

Table No. 110 shows the exports of castor seed from India by their destinations during the war period.

As in the decade before the outbreak of World War II the U.K. continued to be the largest single buyer of Indian castor seed. In 1939-40 and 1940-1 the U.S.A. suddenly appeared as a large buyer of it.

TABLE 110

Exports of Castor seed from India According to their Destinations during 1939-44

(Source :—*Review of the Trade of India*)

(100 Tons)

	1939-40	1940-41	1941-2	1942-3	1943-4
United Kingdom ..	120	354	141	211	106
U.S.A. ..	133	145	—	—	—
Belgium ..	5	—	—	—	—
France ..	20	96	—	—	—
Italy ..	7	18	—	—	—
Other Countries ..	119	57	59	75	36
Total ..	404	670	200	286	142

Total exports of castor seed jumped suddenly from about 8,000 tons during 1938-9 to 40,400 tons in 1939-40. This was largely due to the increasing demand for castor oil in aircrafts, etc. Exports increased to 67,000 tons during the next year largely because of the increased off-take of the U.K. and of France. A large proportion of the exports went to the U.K. In 1941-2 total exports fell by more than 50 per cent. over the previous year. They increased slightly during the next year but were nearly halved in 1943-4. The U.K. remained the principal buyer throughout these years.

Table No. 111 gives the quarterly price quotation per cwt. of castor seed Ordinary F.A. at Bombay.

The movement of the prices of castor seed conformed broadly to the pattern of price movements of other oil seeds during the war period. The increased demand for castor oil for war purposes was reflected in castor seed prices and on the outbreak of war prices jumped to Rs. 11-1-0. This boom was, however, anticipatory and could not be maintained for long. Prices broke and a downtrend began which continued for a long time. In

TABLE 111

Wholesale Prices of Castor seed during 1939-44

Per Cwt. of Ordinary F.A. Bombay

(Source :—*Review of the Trade of India*)

	1939			1940			1941			1942			1943			1944		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
January		—		11	1	0	6	2	0	8	5	0	16	8	0	15	12	0
April		—		9	5	0	6	6	0	8	2	6	18	8	0	16	8	0
July	5	14	0	7	3	0	6	6	0	11	12	0	20	8	0		—	
October	7	9	0	7	5	0	7	4	6		—		19	10	0		—	

July 1941 prices touched Rs. 6-6-0 per cwt. The increased foreign demand for oil seeds during the closing months of 1941, the subsequent declaration of war by Japan and the cutting off of copra supplies, lent support to castor seed prices and they firmed up. In April 1942 the price per cwt. had risen after fluctuations to Rs. 8-2-0. Then a rapid increase began under the gathering pressure of inflationary forces in the country and in April 1943 the quotation touched Rs. 18-8-0 and increased to Rs. 20-8-0 in July of the same year. Forward transactions in castor seed were prohibited by the Government of India in May 1943. Prices receded thereafter to Rs. 19-10-0 in October 1943 and further to Rs. 15-12-0 in January 1944.

7. Tea

Table No. 112 shows the production of tea in India during the war period.

In response to expanding demand the production of tea in India was increasing from 1936. War lent a further stimulus to this demand. Though the Continental markets were lost they were of very little significance to the Indian tea industry. On the other hand because of the necessity of building up stocks against the uncertainties of war, demand from overseas

TABLE 112

Production of Tea in India during 1939-45

(Source :—*Review of the Trade of India,* and *Monthly Survey of Business Conditions in India*)

	In Thousand lbs.					(Million lbs.)	
	1939	1940	1941*	1942*	1943*	1944†	1945†
Assam ..	2,52,728	2,59,663	2,88,738	3,08,879	2,98,685	407·56‡	434·96‡
Rest of Northern India ..	1,21,434	1,25,447	1,31,396	1,60,024	1,70,551		
Southern India ..	78,434	78,771	80,953	95,152	1,04,538		
Total ..	4,52,596	4,63,881	5,01,087	5,64,055	5,73,774		

*Subject to Revision.
†Provisional.
‡These figures relate to Northern India only. Corresponding figures for South India are not available.

was further augmented. The production of tea in India expanded to meet this demand. During 1942 the progress of Japanese arms cut away such an important producer of tea as the Netherlands East Indies which had supplied, on an average, 150 million lbs. annually and India and Ceylon were called upon to make up the gap as best as they could. Indian production reached its peak at 573 million lbs. in 1943. From that time onwards, however, production in northern India showed a decline mostly because of the shortage of labour, shortage of fertilizers, transport difficulties and the approach of war operations in the vicinity of the tea plantations in north-east India. In contrast, however, the tea industry in south India recorded an increase in its production even after 1943.[68]

Figures regarding the acreage under tea are not available but in 1944 the International Tea Committee agreed to allow new plantations of about 11,000 acres in India.[69]

Table No. 113 gives the total exports of tea from India according to their destinations.

During the whole of the war period the International Tea Control Scheme remained in operation and the exports were regulated according to the quotas fixed under it. The scheme renewed for a period of five years in 1938, expired in 1943 but was further extended for the duration and two financial years after the end of hostilities. In accordance with the changing circumstances during the war period the export quotas were revised from time to time.

The export quota for 1939-40 was fixed in the first instance, at a reduced figure of 90 per cent. as compared with 92½ per cent. during the previous season. This reduction in the quota together with the rising consumption of tea in world tea mar-

68. *cf. Commerce*, Annual Review Number, 1944, p. 140. The figures of tea production in South India as given by this source are as follows:—

1942—94 million lbs. 1943—98 million lbs. 1944—105 million lbs.

69. 'Post-War Problems of Planting Industry'—*Commerce*, Annual Review Number, 1944.

TABLE 113

Exports of Tea from India According to their Destinations during 1939-45

(Source :—*Review of the Trade of India*)

(Thousand Lbs.)

		1939-40	1940-41	1941-2	1942-3	1943-4	1944-5
Total	..	3,56,695	3,49,490	3,81,952	3,22,911	4,13,090	4,13,722
United Kingdom	..	2,86,981	3,15,145	2,88,222	2,52,452	2,78,261	—
Canada	..	27,144	14,503	30,545	9,153	32,322	—
Australia	..	3,675	649	7,950	13,359	19,981	—
U.S.A.	..	13,414	9,313	23,608	18,607	59,966	—

kets lent support to tea prices and during the first half of 1939 prices of tea were ruling at a higher level than in the preceding season.

The whole situation changed radically with the outbreak of hostilities. The entire tea trade in the U.K. was taken over by the government and all the bonded stock in that country and subsequent imports were requisitioned. London auctions were suspended indefinitely and re-export trade was temporarily stopped. The Minister of Food announced his decision to enter into a short term contract with Indian tea producers for the supply of tea to the U.K. for the rest of the year.

> A Tea Controller for India was appointed to administer the emergency tea control scheme. The selling prices were fixed on the basis of the market prices ruling in London during the period from 21 to 25 August (1939)....The export sales in India were suspended from 26 September to 16 October 1939 to allow a thorough examination of the situation. When the sales were resumed, they were restricted to 25,000 chests a week. Subsequently it was announced that the Tea Controller for India would require 85 per cent. of the export quota at the credit of individual estates as on the 15 September, together with a similar percentage of any subsequent allotments. Early in October (1939) the International Tea Committee increased the export quota for 1939-40 from 90 to 95 per cent. of standard export.[70]

The short term contract with the British Food Ministry was only for the remaining part of the year 1939 and was replaced by a long term contract for the 1940 season. Under this the Ministry of Food contracted to purchase 323 million lbs. which included 30 million lbs. for re-export from the U.K. The balance of the exportable surplus was to be exported directly from India to out-markets. The allocation between tea estates was to be done by the Indian Tea Licensing Committee presided over by the Tea Controller of India. The price was fixed on the basis of the average price realized during the three years immediately prior to the war, plus one penny per pound to cover additional cost of production due to war conditions.[71]

70. *Review of the Trade of India*, 1939-40, p. 52.
71. *Review of the Trade of India*, 1940-1, p. 49.

In July 1940 the Continental markets, which absorbed about 80 million lbs. annually in normal times, were lost and it was felt that this would result in a glut in the world tea market. To meet this the International Tea Restriction Committee announced a reduction in export quotas and India's quota was reduced from 95 to 90 per cent. for the year ending March 1941. Requirements of the British Government were, however, not affected by this. An Ordinance was also issued simultaneously authorizing the Government of India to alter the Indian export allotment any time during the financial year. India's export quota for 1940-1 was fixed at 34,49,18,624 lbs. International demand for tea, however, was on the upgrade because of the need for laying up adequate stocks felt by the U.S.A., the U.K. and other countries. The export quotas fixed by the International Tea Committee were, therefore, felt to be unnecessarily restricting the available supplies of tea. The Committee, therefore, raised the quotas to 92½ per cent. from October 1940. The revised export allotment for India for 1940-1 came to be 35,44,99,697 lbs.

The Food Ministry in Britain contracted for the purchase of the same quantity of tea as during the preceding year at the same prices during 1941-2 also. Early in the year the export quota for India for 1941-2 was fixed at 90 per cent. by the International Committee. Foreign markets were, however eager to purchase large quantities and towards the end of May 1941 it was raised from 90 to 95 per cent. The demand from overseas markets was, however, still buoyant and the quota was raised to 100 per cent. early in August 1941. Even this, however, could not cope with the demand and finally the quota was raised to 110 per cent. in November 1941.

During 1941-2 exports to the U.K. declined from 315·1 million lbs. during the preceding year to 288·4. This was, however, much more than compensated for by the larger off-takes of Canada, the U.S.A. and Australia who together purchased 6 million lbs. as compared with about 2·4 million lbs. during the previous year. This larger off-take was to be mainly attributed to the anxiety of these countries to lay in stocks in view of the possibility of the hostilities spreading to the Pacific theatre.

The outbreak of Japanese war in December 1941 changed the whole position in a very marked manner. The Netherlands East Indies occupied by Japan in the early months of 1942 exported annually on an average 150 million lbs. of tea. These supplies were now lost and the gap was left to be made good by increased production in India and Ceylon. For 1942-3 the British Food Ministry had contracted for supplies of Indian tea to the extent of 315 million lbs. at the same prices as those fixed for the previous year.

In the situation created by the entry of Japan into the war there were not enough supplies going round and it was felt that they shall have to be allocated or rationed out to the different out-markets. 'The system of centralized buying was, therefore, extended to out-markets and the Ministry of Food undertook to purchase the entire exportable surplus of tea from India and allocate to out-markets the supplies left over after meeting the requirements of U.K. The existing contracts with the Ministry of Food were thus extended to cover an additional quantity of 107 million lbs. which represented the estimated requirements of out-markets during 1942.'[72] From September 1942 the entire export surplus was bought by the British Ministry of Food and the prices fixed were the same for out-markets as those for Britain.

The export quota for 1942-3 was fixed at 479 million lbs. but it was felt that this would cut into the supplies for internal use. In October 1942, therefore, the Government of India announced that under any circumstances they could not allow the internal reserve of tea to fall below 130 million lbs. and in view of the production of 555 million lbs. exports would not be allowed to exceed 421½ million lbs.[73]

During 1942-3 exports to the U.K. declined still further. Exports to Australia were larger than during the previous year and those to the U.S.A. slightly lower than those during the preceding year.

72. *Review of the Trade of India*, 1942-3, p. 32.
73. *Ibid.*, p. 32.

For the year 1943-4 the exportable limit was fixed at 421½ million lbs. by the Government of India, i.e., 110 per cent. of the standard quota. The entire exportable surplus was bought by the British Ministry of Food. As already noted the prices fixed by the Ministry of Food were the average of the prices for the 3 pre-war years plus a certain allowance for increases in the cost of cultivation since the beginning of the war. During 1942-3 this allowance was fixed at 2½d. per lb. and it was raised to 3d. per lb. for the year 1943-4.

Exports increased during 1943-4 to 413 million pounds. The off-takes of Canada and the U.S.A. showed the most remarkable increase of more than three times over their off-takes of the preceding year. Australia also bought a larger quantity. The off-take of the U.K. increased only slightly.

The Tea Control Act 1938 which expired on 31 March 1943 was replaced by another similar Act extending control over tea for the duration of war and 2 years afterwards. Some modifications were made in the new Act. Without conferring the right to extend the tea plantations the relevant sections of the Act were amended in such a way as to extend tea plantations by a percentage which, in actual working, amounted to about 1½ per cent.[74]

The Government of India in April 1944 fixed the exportable quota of tea for 1944-5 at 364 million lbs., i.e., 95 per cent. of India's standard exports. This reduction in the export quota was in view of the expected decline in production and the need to keep the internal market adequately supplied. In response to demand from abroad and the more favourable expectations regarding the production of tea during that season, the Government of India increased the quota by a further 15 million lbs. i.e., altogether 99 per cent. of standard exports, in October 1944. During this year the Food Ministry agreed to pay 5d. per lb. of tea over the basic price, to compensate for the increase in the cost of production since the

74. *Commerce*, Annual Review Number, 1943, p. 883.

beginning of the war, with provision for quarterly revisions up to ½d., either way, if the costs changed.[75]

For the year 1945-6 the export quota was fixed by the Government of India at 376 million lbs. or 98 per cent. of India's standard exports. By a notification dated 26 May 1945, the Government of India fixed the rate of the customs duty levied under the Indian Tea Cess Act 1943, at Re. 1-4-0 per 100 lbs. exported from India with effect from 1 June 1945.[76]

Table No. 114 gives the monthly index number of wholesale tea prices during the war period.

TABLE 114

Monthly Index of Wholesale Tea Prices in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)
(Base 19 August, 1939 = 100)

	1939	1940	1941	1942	1943	1944	1945
January ..	—	118	149	173	171	260	155
February ..	—	101	142	189	185	257	155
March ..	—	—	128[3]	162	222	261	155
April ..	—	—	174	253	258	155
May ..	—	—	—	186	264	260	155
June ..	—	94[1]	168	175	272	140	156
July ..	—	94[2]	179	161	264	140	160
August ..	—	115	186	127	268	155	164
September ..	104	118	159	138	269	155	164
October ..	114	132	169	149	273	155	164
November ..	122	131	166	154	249	155	164
December ..	122	136	122	160	241	155	—

1. Relates to the W.C. 22nd June.
2. Do. 6th July.
3. Relates to the W.C. 1st March.

The outbreak of the war in September 1939 was followed by an intensification of demand from abroad as well as at home. Because of the closure of re-export trade from Britain the orders from foreign countries were diverted from London

75. 'A Bird's-Eye View of Planting Industries in 1944' *Commerce*, Annual Review Number, 1944, p. 746.
76. *Indian Trade Journal*, Vol. 167, 1945, p. 277.

to Calcutta. The depreciation of the sterling on the outbreak of war conferred a comparative benefit on Indian tea as compared to Java tea and a large part of the orders from markets formerly served by Java were diverted to India. Consequently there was intense demand for Indian tea and prices recorded a steep advance. The index number reached the peak of the season at 122 in December 1939. After this, however, prices began to sag partly because of the satiation of foreign markets and partly because of larger supplies that were expected. They continued to decline and in July 1940 the index reached 94. In July 1940 the export quota was reduced from 95 to 90 per cent. This had a stimulating effect on the prices. The upward trend was maintained till January 1941 when the index rose to 149. Prices eased a little thereafter. Under increased demand from abroad prices began to mount again from June 1941 and the index touched 186 in August 1941. In August the export quota was raised from 95 to 100 per cent. and this eased the market immediately. The index declined to 159 in September 1941. The demand was, however, intense and it again increased to 166 in November 1941. In that month the export quota was increased to 110 per cent. and in response the index of tea prices receded to 122 in December 1941.

As noted previously the entry of Japan into the war and the occupation by her of Far Eastern territories created a large gap in world tea supplies and led to an intensification of demand for tea. Tea prices surged up and the index suddenly shot up to 173 in January 1942 and after fluctuating reached 186 in May 1942. There was a drop in prices during the following 3 months but from September 1942 they began to rise again until the index touched the peak at 272 in May 1943. The rise was mainly confined to the prices of tea for internal consumption. Since September 1942 the whole export surplus was bought by the British Ministry of Food at contracted fixed prices and free market for exports did not exist. The rise in the internal market was due mainly to the gathering inflationary pressure on prices and the consequent speculative activity together with transport difficulties. It slightly eased off during the following months and the index

continued to fluctuate between 273 and 241 up to June 1944 when there was a sharp drop to 140. In April 1944 the Government of India levied an excise duty of 2 as. per lb. on tea and coffee. From August 1944 the index stood steady at 155 up to May 1945. There was then a slight rise and it remained steady at 164 from August 1945 till the end of the year.

8. Coffee

Table No. 115 gives figures regarding the production of coffee in India during 1939-43.

TABLE 115

Production of Coffee in India during 1939-43

(Source :—*Review of the Trade of India*)

	1939-40	1940-41	1941-2	1942-3
Million lbs. Cured Coffee ..	34·8	31·4	33·8	37·9

As a result of the war the Indian coffee industry lost its export market on the European Continent and the industry was faced with a crisis. In consultation with the coffee planters a scheme was evolved by the Government of India to meet this emergency. The scheme came into force on 21 December 1940, with the promulgation of the Coffee Market Expansion Ordinance which was to be in force till 31 August 1941. During that period the Indian Coffee Cess Act 1935 was to be deemed as repealed, without prejudice, however, to the continuing validity of any action that would have been taken by the Indian Coffee Cess Committee which was not inconsistent with the provisions of the above Ordinance.

Under the provisions of this Ordinance the Indian Coffee Market Expansion Board was established. The control of the scheme was placed in its hands. It consisted of the members of the Indian Coffee Cess Committee with the addition of some others. The powers and duties of the Coffee Cess Committee

were to be continued by the Board. The principal executive officer was to be the Coffee Controller, a government official appointed by the Government of India. Under the provisions of this Ordinance all growers owning coffee estates of an aggregate of 25 acres and more were to be registered and all coffee curing establishments were to be licensed. The crop on each registered estate, whether cured on uncured, was to be divided into two parts, one for internal sale and the other for delivery to a surplus pool. All registered growers were free to sell on the internal market the quota of cured coffee so allotted but a license was necessary for the sale of any uncured coffee included in a quota. An excise duty at the rate not exceeding one rupee per cwt. was to be levied on quotas allotted for internal sale. The balance of the crop delivered to the surplus pool was to be controlled by the Board. Only the Board was authorized to export coffee and was to arrange for export sales. The Board was given the power to release from the surplus pool coffee for sale on the internal market for keeping prices stable. The sale proceeds of the surplus pool were to be divided proportionately between growers delivering to the pool. Two separate funds were to be manitained by the Board. The proceeds of the customs and the excise duty and the licensing fee received were to be credited to the General Fund meant for the promotion of cultivation, manufacture and sale of Indian coffee. All funds realized from the sale of coffee by the Board from the surplus pool were to be credited to the Pool Fund. The Board was authorized to borrow on the security of either of these two funds for any purposes for which it was authorized to spend from those funds. The Central Government was to have power to fix the maximum wholesale prices of coffee.

By a Press *communique* dated 21 October 1941 the Government of India in the Commerce Department announced that at a conference of coffee interests it was unanimously recommended that the control scheme should be continued by legislation and that its duration should be the duration of the war and one coffee crop year more thereafter.

The control scheme with some amendments was then embodied into the Coffee Market Expansion Act of 1942, which

became law on 2 March 1942. Similar legislation was passed and brought into effect in the Indian States of Mysore, Travancore and Cochin. One of the important amendments introduced in this Act was the bringing down of the limit for compulsory registration of owners of coffee estates from 25 and above acres to 10 and more acres. By a notification dated 24 October 1942 the limit was further brought down to 5 and more acres. Even this limit was abolished by a notification dated 28 August 1943 which made registration compulsory ' to all persons owning land planted with coffee plants aggregating less than 10 acres '. Thus all the coffee estates irrespective of their size were brought under control.

By further amendments during 1943-4 the powers of the Indian Coffee Board (the altered designation) were enhanced further for the tightening of the control. The internal quota was abolished and all the planters were asked to deliver all the crop to the pool established by the Board. The Board undertook to make outright purchases of all coffee in estates of less than 25 acres and for doing this the limit on the borrowings of the Board was raised to Rs. 1 crore by the Government of India.

Table No. 116 shows the exports of Indian coffee according to their destinations during the war period.

TABLE 116

Exports of Coffee from India According to their Destinations during 1939-44

(Source :—*Review of the Trade of India*)

(Cwt.)

	1939-40	1940-41	1941-2	1942-3	1943-4
United Kingdom ..	46,000	2,700	33,400	29,000	14,000
France ..	28,000	16,000	—	—	—
Norway ..	37,000	2,000	—	—	—
Australia ..	6,000	2,700	5,300	—	—
Iraq ..	11,000	6,600	8,800	13,000	12,000
Bahrein Islands ..	5,000	5,000	8,700	8,000	1,000
Arabia ..	2,000	5,200	13,400	15,000	5,000
Total ..	1,68,000	52,000	84,000	82,000	60,000

The total exports during 1940-1 fell very considerably below the level of the preceding year mostly because of the loss of Continental markets. The off-take of the U.K. was the smallest yet recorded mostly attributable to shipping difficulties. In the following 2 years the off-take of the U.K. revived but not to the 1939-40 level. Total exports during 1941-2 and 1942-3 were about 50 per cent. of those in 1939-40. The off-take of Middle East countries remarkably increased during this period, probably because they were cut off from the other sources of supply. The off-take of Arabia increased from 2,000 cwt. in 1939-40 to about 15,000 cwt. in 1942-3. Australian off-take declined during the period. Total exports declined further during 1943-4. The off-take of the U.K. was nearly half that of the preceding year and those of Arabia and Bahrein Islands also recorded sharp decreases. Exports to Ceylon improved considerably from 10,000 cwts. in 1942-3 to 27,000 cwts. in 1943-4.[77]

Table No. 117 gives the monthly index of wholesale coffee prices in India during the war period.

TABLE 117

Monthly Index of Wholesale Prices of Coffee in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)
Base 19 August, 1939=100

	1939	1940	1941	1942	1943	1944	1945
January ..	—	122	117	147	279	316	352
February ..	—	128	114	143	334	311	352
March ..	—	128	124	142	388	305	352
April ..	—	126	126	142	398	311	352
May ..	—	118	126	152	359	334	355
June ..	—	115	126	161	365	353	360
July ..	—	115	130	171	367	352	350
August ..	—	115	142	227	368	352	351
September ..	100	115	148	232	359	352	346
October ..	100	116	148	237	354	352	347
November ..	101	117	148	246	329	351	345
December ..	117	118	148	240	323	350	—

77. *Review of the Trade of India*, 1943-4, p. 101.

There was a short boom in coffee prices at the outbreak of the war and the index touched 128 in February 1940. The prices then trended downwards and the loss of Continental markets further accentuated the fall. In February 1941 the index after fluctuating touched 114. The control instituted in December 1940 gradually influenced the prices and they began to revive. Increased internal demand lent further support to the market and in September 1941 the index rose to 148, where it remained steady for about 4 months afterwards and then slid down to 142 in March 1942. From May 1942 a rapid upward trend developed and in 1943 the index shot up to the war-time peak of 398. This rise was attributed generally to too excessive forward sales by the Coffee Board, short crop and increased internal demand, high speculative activity and loose administration of the control scheme.[78] The Coffee Controller at this stage issued a warning that the Government of India would not hesitate to use its powers to bring down coffee prices from the high levels then prevailing. This had a bearish effect on the market and prices began to decline. The index after fluctuating reached 329 in November 1943. The Coffee Controller tried to stabilize the prices in May 1943 on the basis of F.A.Q. Mysore-Coorg 'A' size, Arabia cherry and Robutsa cherry, with proportionate variations for other grades and qualities. These were revised downwards in the beginning of December 1943. From June 1944 the index fluctuated around 350. At the end of December 1944 wholesale prices of coffee sold from the pool were fixed. On 19 February 1944 the retail prices of coffee were fixed. For this purpose the Board divided India into 3 zones and fixed separate prices for each. Zone I comprised the Province of Madras and Coorg; Zone II, Bombay, C.P. and Berars, Orissa, Ajmere and Merwara; Zone III, the rest of India. Retail prices so fixed were revised upwards by a notification dated 29 April 1944. These were

78. 'War Efforts of Planting Industry,' *Commerce*, Annual Review Number, 1943, pp. 882-83. The Indian Coffee Board did not agree with this view however. According to them 'Indian prices have been finding ultimate parity with world price levels, and it has been the export price which has dictated the internal price level'. *Ibid.* Into the absurdities of this contention there is no need to enter here.

revised slightly downwards by a notification dated 17 March 1945.

9. Tobacco

Information regarding tobacco during the war period is meagre to a degree and in the following a brief sketch is attempted from such information as is available.

Figures regarding acreage and production of tobacco are available for British India only and there too only in respect of the first two war years. In 1939-40 the acreage was 1·181 million acres as against 1·156 during the preceding year. It declined to 1·126 in the following year. In 1939-40 the production was 4,49,000 tons. It was 4,23,000 tons during the following year.

Table No. 118 shows the exports of tobacco from India during 1939-44 according to their destinations.

TABLE 118

Exports of Tobacco from India According to Destinations during 1939-44

(Source :—*Review of the Trade of India*)

(Million Lbs.)

	1939-40	1940-41	1941-2	1942-3	1943-4
Total Exports ..	62·0	75·3	65·5	38·2	16·9
United Kingdom ..	16·2	20·0	34·6	26·3	4·5
China ..	19·6	24·0	5·3	3·6	—
Burma ..	13·1	16·3	10·1	—	—
Dependencies ..	4·3	6·7	6·5	3·6	4·8
Netherlands ..	0·58	—	—	—	—

Total exports declined in 1939-40 by about 3 million lbs. as compared with the previous year. Exports to the U.K. declined from about 37 million lbs. during 1938-9 to 16·2 million lbs. Japan almost wholly disappeared from the Indian market as a customer during this year. On the other hand China increased her off-take from about 4 million lbs. during 1938-9 to 19·6 million lbs. during this year probably because she was not able to import from the U.S.A.

Exports recorded a sharp increase during 1940-1. The increase was largely due to the increased off-take all round. The U.K. and China each took about 4 million lbs. more than during the preceding year. Burma increased her purchases by about 3 million lbs. over the preceding year and Aden and Dependencies purchased about 2·4 million lbs. more. During this year Ceylon took about 1 million lbs. from India.

Exports declined to 65·5 million lbs. during 1914-2. This was largely due to the sharp decrease in exports to China from 24 million lbs. during 1940-1 to 5·3 million lbs. in 1941-2, as a result mostly of the entry of Japan into the war and the occupation of Burma, Malaya, etc., closing the routes, that were uptill then open, to China. The same reason explains the fall in the off-take of Burma. Exports to the U.K. increased by 14·6 million lbs. during the year.

The Far Eastern war and the tight shipping position led to a sharp decline in exports during 1942-3. Exports fell by 27·3 million lbs. China, Malaya and Netherlands were practically out of the picture. Exports to the U.K. were also low, recording a decrease of about 8 million lbs. The lower off-take all round was only slightly off set by the Australian off-take of 2·5 million lbs., the Russian off-take of 1·4 million lbs. and the Egyptian off-take of 1·3 million lbs. during the year. Exports declined further during 1943-4 to 16·9 million lbs. the U.K.'s off-take declined heavily from 26·3 million lbs. in 1942-3 to 4·2 million lbs. in 1943-4. But Aden and Dependencies took 1·2 million lbs. more than in the preceding year. The off-takes of Ceylon and Egypt were also larger being 1·8 million lbs. and 3·9 million lbs. respectively.

Table No. 119 gives the imports of tobacco into India during the war period.

Imports increased considerably during the first three years and those during 1941-2 were more than two times those in 1939-40. In the subsequent years they declined to the 1940-1 level. Most of these imports were of unmanufactured tobacco and more than about 80 per cent. of them were on an average derived from the U.S.A. Cigarettes came mainly from the U.K.

TABLE 119

Imports of Tobacco into India during 1939-44

(Source :—*Review of the Trade of India*)

(Million Lbs.)

	1939-40	1940-41	1941-2	1942-3	1943-4
Others ..	5·8	8·0	13·8	7·9	9·7
Cigarettes ..	1·37	1·38	1·34	0·75	·05
Total ..	7·2	9·4	15·1	8·6	9·75

By a notification dated 1 August 1942 the Government of India banned the manufacture of cigarettes in India containing American tobacco exceeding 30 per cent. by weight of the total weight of the tobacco in the cigarette.[79] This restriction was abolished by a notification of 14 October 1944.[80]

Table No. 120 gives the monthly index number of wholesale prices of tobacco.

TABLE 120

Monthly Index of Wholesale Prices of Tobacco in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)

(Base 19 August, 1939 = 100)

	1939	1940	1941	1942	1943	1944	1945
January ..	—	114	56	52	52	221	596
February ..	—	114	51	52	57	233	586
March ..	—	109	49	54	69	241	638
April ..	—	95	47	52	131	251	581
May ..	—	83	47	51	131	300	462
June ..	—	84	49	47	135	426	348
July ..	—	82	57	47	117	559	388
August ..	—	77	63	48	117	581	383
September ..	100	71	61	45	132	580	403
October ..	97	71	60	45	203	598	403
November ..	97	60	55	52	216	649	362
December ..	107	58	56	52	221	656	—

79. *Indian Trade Journal*, Vol. 146, 1942, p. 220.

80. *I.T.J.*, p. 108, 1944.

The information regarding price trends in the tobacco market during the war period is almost completely lacking and the index number shows such violent fluctuations that it is not possible to explain its behaviour without very detailed information. The following comment is restricted to such facts as are known.

Tobacco prices initially declined at the outbreak of war but went up after two months and the index of tobacco prices rose up to 114 in February 1940. Then a recession set in and prices declined continuously over a long period, the index touching 47 in May 1941. Prices firmed up subsequently and the index touched 61 in October 1941. But this recovery was only shortlived and prices began to decline again, the index reaching 45 in November 1942. Prices then advanced sharply. The index jumped from 69 in March 193 to 131 in April 1943. This sudden rise might be partly explained by the imposition of an excise duty on tobacco with effect from 1 April 1943. The index increased to 135 in May 1943 but declined to 117 during the subsequent two months. In September 1943 it jumped suddenly to 132 and then began literally to rocket. By successive increases it reached 656 in December 1944. It eased off to 586 in February 1945. By a notification dated 17 February 1945 the Government of India fixed the maximum prices in respect of some brands of pipe-smoking tobacco.[81] By another notification of 3 March 1945 the maximum prices of certain brands of cigarettes were fixed. The maximum prices of certain pipe brands fixed by the notification of 17 February 1945 were revised upwards by the notification of 12 March 1945.[82] The index of wholesale prices declined to 348 in June 1945 but again began to go up. In October 1945 it was 403.

By a resolution dated 10 April 1945 the Government of India announced their decision of setting up the Indian Central Tobacco Committee. The committe was to undertake improvement of tobacco cultivation, tobacco research, marketing statis-

81. *I.T.J.*, Vol. 156, 1945, p. 227.
82. *I.T.J.*, Vol. 156, 1945, p. 330.

tics, curing, etc. The Government of India was to appoint a Tobacco Adviser to assist the committee's work as well as a whole-time Secretary for the committee, but their pay, etc., was to be met by the committee from its own funds. After the imposition of the excise duty on cured tobacco in 1943 the Government of India had decided to give a non-lapsable grant of Rs. 10 lakhs per year to the Imperial Council of Agricultural Research for financing measures for the improvement of the production and marketing of tobacco pending the establishment of an Indian Central Tobacco Committee. The unspent balance of the grant already made to the Imperial Council of Agricultural Research was to be taken over by the committee and the non-lapsable grant of Rs. 10 lakhs per year was to be now made to the Indian Central Tobacco Committee.[83]

10. Hides and Skins

Information regarding the supply and production of hides and skins during the war period is completely lacking. According to the Livestock Census of 1940, which did not cover U.P. and Orissa, there were about 110 million heads of cattle, including buffaloes in India. There were about 25 million sheep and about 30 million goats. The results of the 1945 Livestock Census are not available. It is not possible, therefore, to formulate any precise idea regarding the production and supply position of hides and skins during the war period. It becomes necessary to rely on certain qualitative considerations to get even a rough idea about it. According to the information available in the hides and skin markets in the country the war period, especially after 1942 was characterized by an extreme paucity of supplies. According to the trading circles there were several reasons for this. During the first three years of the war there was an excessive killing of animals which considerably reduced their number. During the first three years, therefore, the supply position could not have been presumably bad. The real and insistent scarcity of supplies became manifest from 1942. During that year the dry meat business with Burma came to an end and the

83. *I.T.J.*, Vol. 157, 1945, p. 86.

slaughtering business became depressed and reduced supplies. The closing of frontiers deprived the Indian market of the supplies of hides and skins from Nepal. Due to the considerable rise in the prices of milk, cattle became dearer and this combined with the falling consumption and demand for meat because of its rising prices considerably reduced slaughterings.[84] This was further accentuated when during 1943 some provincial governments put restrictions on the slaughter of cattle.

The internal demand for raw hides and skins multiplied manifold during the war period and a large part of this enhanced demand flowed from the Government of India for war purposes. The demand of the Supply Department reached its peak during 1942 when the supplies of raw hides necessary to fulfil the orders of tanned hides of the Department amounted to 17 million lbs. during the second half of the year alone.[85] In 1943 the Supply Department orders totalled 29 million lbs. of tanned hides and in 1944 they dropped to 14·5 million lbs.[86] This broadly gives an idea about the buoyancy of the internal demand during the war period.

Table Nos. 121 and 122 give the export of raw hides and skins according to quantity and value and according to destinations respectively.

The total exports of hides and skins during 1939-40 recorded a slight decline over those of the preceding year. The fall was largely due to the smaller off-take of cow hides by the Continental countries, which even a very remarkable increase in the U.K.'s off-take over the previous year could not compensate. In the case of buffalo hides, though the U.K. and the U.S.A. appeared as buyers on the market in contrast with the preceding year, the off-take of Continental countries was markedly low and the total exports of buffalo hides recorded a decline over the preceding year. The smaller

84. *Commerce*, Annual Review Number, 1943, p. 890.
85. *Commerce*, Annual Review Number, 1942, p. 754-C.
86. *Commerce*, Annual Review Number, 1944, p. 764.

TABLE 121

Exports of Hides and Skins from India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)

	Quantity (Tons)						Value (Rs. Lakhs)					
	1939-40	1940-41	1941-2	1942-3	1943-4	1944-5	1939-40	1940-41	1941-42	1942-3	1943-4	1944-5
Raw Cow Hides ..	10,200	5,800	7,600	2,900	1,815	365	68	50	74	30	21·41	640
Buffalo Hides ..	1,500	1,300	1,000	1,100	673	—	10	9	8	11	8·81	—
Other Hides ..	200	100	300	400	—	—	1	2	2	4	—	—
Goat Skins ..	18,700	19,000	25,100	15,500	15,313	9,597	308	237	326	262	293·06	241·78
Sweep Skins ..	800	300	700	500	655	1,569	11	8	55	19	61·83	107·16
Other Skins ..	300	100	100	100	—	—	[illegible]	2	8	7	—	—
Total Hides and Skins ..	31,700	26,600	34,800	20,500	19,600	—	406	308	473	333	409	—

TABLE 122

Exports of Hides and Skins According to Destinations during 1939-44

(Source :—*Review of the Trade of India*)

(In Thousand Rupees)

	1939-40	1940-41	1941-2	1942-3	1943-4
Raw Hides					
United Kingdom ..	2,601	2,332	4,619	2,558	1,317
U.S.A. ..	901	1,852	2,082	1,033	1,609
Italy ..	669	68	—	—	—
Spain ..	—	62	—	—	—
France ..	153	478	—	—	—
Belgium ..	102	13	—	—	—
Germany ..	587	—	—	—	—
Netherlands ..	172	—	—	—	—
Other countries .	2,610	1,242	1,703	953	1,314
Total ..	7,928	6,086	8,434	4,544	4,240
Raw Skins					
U.S.A. ..	19,615	16,665	27,667	21,661	29,013
United Kingdom ..	7,429	4,459	9,569	5,708	5,785
France ..	2,056	2,114	—	—	—
Other countries ..	3,565	1,457	1,642	1,402	1,867
Total ..	32,665	24,695	38,878	28,771	36,665

off-take of Continental countries was obviously due to the difficulties of transport consequent upon the beginning of the war.

Exports declined by about 15 per cent. during the next year. The largest declines were recorded by cow hides, which fell from 10,200 tons in 1939-40 to 5,800 tons in 1940-1, and sheep skins, which declined from 800 tons in 1939-40 to 300 tons in 1940-1. All others also recorded moderate declines except goat skins which were slightly marked up. In regard to cow hides the off-take of the U S.A. was double that of the preceding year but the purchases of all other countries including the U.K. were very much smaller than during the previous year. In regard to sheep skins also the off-take of U.S.A. was

about double that of the previous year but the purchases of all other countries were very small.

Total exports increased by more than 30 per cent. over the previous year during 1941-2. Marked increases were to be observed in the exports of cow hides and goat skins. The exports of buffalo hides recorded a decline. The increased off-take of cow hides was to be largely traced to the increases in the off-takes of the U.K. from 2,300 tons in 1940-1 to 4,300 tons in 1941-2 and that of Turkey from 100 tons in 1940-1 to 1,200 tons in 1941-2. The U.S.A.'s off-take was slightly less than during the previous year. The increase in the exports of goat skins was due to the larger purchases of both the U.K. and the U.S.A. The decline in the exports of buffalo hides was largely due to the smaller off-take of the U.K. though the U.S.A.'s off-take was larger than during the preceding year.

In 1942-3 exports fell sharply by 43 per cent. over those of the previous year. The decline was shared by all the lines, except buffalo and other hides, though it was more marked in cow hides and goat skins. Exports of raw buffalo hides were slightly higher over the previous year, in spite of a decline in the U.S.A.'s off-take. The latter was more than compensated for by the increase in purchases of the U.K. Exports of cow hides to the U.K., the U.S.A. and Turkey showed marked decreases.[87] The decline in goat skins was also largely due to the smaller off-take of both the U.S.A. and the U.K.

In 1943-4 the exports dropped by about 4 per cent. Besides the rising internal demand, the main cause of this fall

87. Because of the rise of prices on the internal market the prices offered by the British Ministry of Supply became unattractive and sufficient supplies could not be procured at those prices. 'At the beginning of May (1942), the Ministry of Supply in London became the sole buyer of kips from importers and made certain changes in the contract between buyers and sellers to meet the altered circumstances now prevailing. For instance, provision was made for any prolonged delays which might occur before shipment was possible'—Madras Correspondent, 'Hides and Skins Trade feels real Impact of War', *Commerce*, Annual Review Number, 1942, p. 754-C.

was the smaller off-take of the U.K., because of the very poor supplies coming forth at the prices offered by the British Ministry of Supply. Throughout the year the Ministry kept its prices unaltered. But towards the end of the year it could hold out no longer and on 1 December a general increase of 12½ per cent. in the scheduled prices was announced from London.[88] 'Business with New York in dry salted goat skins was hampered by two causes, the system of measurement of the skins prescribed by buyers in New York, and the low ceiling prices fixed.'[89]

The buying prices fixed by the British Ministry of Supply were, as noted already, revised upwards in December 1943. Early in 1944 Mr. Wright Henderson, the Assistant Controller of the Hides Section in the British Ministry of Supply came to India in order to evolve a combined scheme between the two governments for buying tanned hides and increasing the output. 'The Ministry of Supply prices were raised again from 12½ to 25 per cent. for various weights and grades and the full buying scheme was published on 15 May 1944 under which a government buying organization was established here to buy all available supplies. Purchases were to be divided between the U.K. and India, but Indian needs were to come first.'[90] In October the prices were further revised upwards by about 3 as. per lb. These prices were to stand up to the end of the year, when it was announced, they would be reduced by 1½ annas and would be further reduced from 1 April 1945.

In spite of these measures, however, the quantity of kips sold to the Joint Purchasing Organization did not improve. The local prices ruled consistently above the ceiling prices and the attempt at controlling the internal price of raw hides proved a complete failure. The Ordinance fixing these prices was finally cancelled in June 1945. In May the British Ministry

88. Madras Correspondent, 'Hides and Skins Export Trade deteriorates', *Commerce*, Annual Review Number, 1943, p. 890.

89. *Ibid.*

90. Madras Correspondent, 'Hides and Skins Market in 1944', *Commerce*, Annual Review Number, 1944, p. 764.

of Supply raised its schedule of kip prices by an average of about 6 as. per lb., or 25 per cent. But this did no good because internal prices also increased and offerings remained as poor as before. In the beginning of August the British Ministry of Supply announced a bonus scheme. Under this scheme suppliers of kips were entitled 'to claim a bonus at the end of the month according to the number of bales delivered to the Ministry in that month, with a minimum delivery to qualify for a bonus, of 1,500 bales. From 1,500 to 1,999 bales the bonus paid was 2 as. and this increased by stages to 7 as. bonus for 3,000 bales and above.' [91]

During the war years the Allies were faced with the problem of sharing the available supplies of hides and skins. Certain arrangements between the U.K. and the U.S.A. in this regard were arrived at informally during 1941 and 1942. In 1943 the U.S.A. and the U.K. formalized these arrangements by what came to be known as the International Hide and Skin Agreement. Shortly afterwards Canada came into it. By the autumn of 1943 hides available for purchase were being divided between the U.K. and the U.S.A. and other countries by a joint office in Washington. 'The agreement was extended to cover goat skins and tanned sheep skins, though informal arrangements were also made for a time for allocating raw sheep skin supplies.' [92]

Table No. 123 gives the monthly index number of wholesale prices of hides and skins during the war period.

With almost all other commodities the prices of hides and skins shot up for a brief period at the beginning of the war. The index number of wholesale prices of hides and skins increased from 99 in September 1939 to 130 in January 1940. The prices of skins began to decline from the middle of March 1940 though the prices of hides remained steady at the January level up to June 1940. From June 1940 prices of both hides and skins began to fall rapidly and the combined

91. 'Hides and Skins Markets in 1945', *Commerce* Annual Review Number, 1945, p. 996.

92. *Economist*, 7 September 1946, p. 391.

TABLE 123

Monthly Index of Wholesale Prices of Hides and Skins in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)

(Base 19 August, 1939 = 100)

	1939	1940	1941	1942	1943	1944	1945
January ..	—	130	98	117	125	125	144
February ..	—	130	96	117	125	126	146
March ..	—	129	95	117	125	128	146
April ..	—	127	98	114	125	128	146
May ..	—	126	99	113	114	128	146
June ..	—	103	106	119	112	128	146
July ..	—	93	106	119	112	128	156
August ..	—	93	106	111	112	128	156
September ..	99	93	110	108	112	128	156
October ..	111	86	116	114	115	130	156
November ..	113	93	121	124	124	134	156
December ..	126	98	123	125	125	137	—

index of hides and skins prices touched the bottom at 86 in October 1940. Among the many causes that brought in this decline in prices were the initial disproportionate increase in prices which could hardly be sustained for long, the fall of France and the almost complete loss of Continental markets, the difficulties of transport and shortage of shipping space, etc. From November 1940 prices again improved. The index number of hides prices increaesd from 112 in November 1940 to 119 in December 1940 and remained steady at that level for the whole of the next twelve months. The index of skin prices, however, fluctuated and the combined index of hide and skin prices gradually increased to 123 in December 1941. The year 1942 was characterized by increasing transport difficulties, rising internal demand both on government and private account, less slaughter because of the rising prices of milk and meat, as well as the loss of the meat market in Burma. The demand for hides on account of the Supply Department of the Government of India rose so high during the year that ' no less

than 17,000,000 lbs. of raw hides became necessary to complete the contracts of tanned leather for the second half of the year alone.'[93] 'One of the most important events which affected supply was the fall of Burma which was a big export market for Indian meat. The direct result was the closure of the Shahadra (Agra) and Khoraisagar (C.P.) slaughter-houses... This was mainly responsible for the shortage of hides'.[94] The index number of hides and skins prices was steady at 117 during the first three months of 1942 but declined to 113 in May 1942. 'The fall in the prices towards the middle of the year was brought about by a pretention of ample stock on the part of the tanners.'[95]

Statutory control on leather trade was introduced from 1 September 1942. A Controller of Leather and Tanning Industries was appointed by the Government of India with his office at Cawnpore and 27 tanneries in different parts of the country were put under his control. 'The control placed the tanneries under obligation to purchase their raw hides at prices fixed by the Government.'[96] The tanners, however, found it impossible to procure adequate supplies at the prices fixed by government as prices continued to rule high in the open market. 'Although the average flat rate for the market centred round about 2½ lbs. per rupee, prices rose as much as 2 lbs. and at times it was depressed to the level of 3 lbs. to 3¼ lbs. per rupee.'[97] This was reflected in the movement of the combined index of hides and skins prices during the period. From 113 in May 1942 it roes to 119 in June and came down to 108 in September 1942. From that level it again went up and reached 125 in December 1942.

During the year 1943 the demand for leather on the part of government was markedly low as compared with the previous year. The 'approximate total demand for sale and

93. Cawnpore Correspondent, 'Hides and Skins Trade in 1942' *Commerce*, Annual Review Number, 1942, p. 754 C.
94. *Ibid.*
95. *Ibid.*
96. *Ibid.*
97. *Ibid.*

harness leather being only 25 and 4 million lbs. respectively for the whole of the year.'[98] In spite of this, as well as the drop in the exports due to the unattractive prices offered by the British Ministry of Supply, a keen shortage of supplies was felt throughout the year because of the large increase in internal demand. There was also paucity of supplies due to smaller slaughterings consequent upon the rise in the prices of milk and gloomy prospects in the meat markets. 'The chief feature in marketing hides during the outgoing year was the introduction of the scheme of raw hides control by the Government of India. This Department was created under the Controller of Leather and Tannery Industries, Cawnpore, and it started functioning almost from the beginning of this year.'[99] The prices fixed by Government were much below the prevailing market rates and great difficulties were encountered in enforcing them. Events headed towards a crisis in July 1943. Cawnpore tanners combined and decided to come out of the market. 'The lull continued for few weeks without any transaction when the market coming down to the rates very near the Government rates, business was restored.'[100] The combined index of hides and skins prices was steady at 125 during the first three months of 1943 but declined to 112 in July 1943 and remained at that level up to September 1943. It increased to 125 in December 1943.

Virulent activities of the bag tanners in the Punjab affected supplies in the Cawnpore market considerably and this combined with other factors led to the promulgation of the Hides (Movement) Control Order on 2 December 1943. According to the provisions of this order 'no person was to offer any consignment of any kind of raw hides of cattle or buffaloes for transport by rail from a railway station in Northwest India to a railway station outside it except under license.[101]

98. Cawnpore Correspondent, 'Hides Trade in the year 1943', *Commerce*, Annual Review Number, 1943, p. 890.
99. *Ibid.*
100. *Ibid.*
101. *Indian Trade Journal*, Vol. 151, p. 265.

For the first nine months of 1944 the combined index of hides and skins prices was comparatively stable. From 125 in January it increased to 128 in March and remained unchanged at that level up to September 1944. This stability in the prices was partly due to the introduction of various control measures during the year. The Hides Movement (By Rail) Control Order 1944 was promulgated by a notification dated 27 March 1944 by the Government of India. According to the provisions of this Order, which nullified the previous Order of 2 December 1943, India was divided into five zones and a Zonal Officer was posted at the headquarter of each zone. They were under the Director, Tanning and Footwear, Department of Supply, designated as the Hides Controller. Removal and transport of hides from one zone to another was prohibited except under a permit.[102] 'In spite of the removal of certain operators from the Cawnpore market by the provisions of the zonal scheme, another element crept into the trade and brought about serious competition. These were the bag tanners who were still beyond the boundaries of control measures and were freely making purchases at high rates both from the source as well as from the central markets. The disappearance of heavy hides from the Cawnpore market towards the latter part of the year, bringing in its train a shooting up of prices from 10 to 17 ounces per rupee according to the various grades, was the direct result of the bag tanners.'[103] This factor largely explains the increase in the combined index of hides and skins prices which shot up from 128 in September 1944 to 146 in February 1945. To meet the situation created by the activities of the bag tanners the Government of India by a notification of 25 November 1944 fixed the maximum prices of raw buffalo hides to be charged by licensed Arhatdars and hide merchants.[104] By an amendment dated 3 January 1945 the maximum prices fixed were declared to be not those to be changed by Arhatdars, etc., but those 'to

102. *Indian Trade Journal, Vol.* 153, p. 35.

103. Cawnpore Correspondent, 'Cawnpore Hides Market', *Commerce,* Annual Review Number, 1944, p. 764.

104. *Indian Trade Journal,* Vol. 155, p. 275.

be charged to utilizers.'[105] By the notification of 24 February 1945 the sellers of buffalo hides were allowed to include in the weight of the wet-salted buffalo hides, brushed clean, the weight of salt at the rates prescribed therein.[106] The maximum prices of raw cow hides and cow calves hides were fixed by a notification of the Government of India dated 6 January 1945 with effect from 1 February 1945.[107]

Besides these measures of price control, the Government of India launched a systematic campaign against the bag tanners and freezed quite a large quantity of their production that could be utilized after proper tanning for war purposes and also fixed the maximum prices of hides tanned by that process.[108]

The control of raw cow hide prices remained mostly a thing on paper only. A notification of 31 January 1945 announced that the maximum prices fixed previously would be operative from 1 March 1945.[109] By a further notification of 3 March the date was postponed to 1 April.[110] A final notification dated 11 June 1945 cancelled the original notification of 6 January 1945 !![111]

11. Lac

Table No. 124 gives the production of lac in India during the war period.

Production during 1940-1 showed a decline over the preceding season. The decline was confined to the *Baisakhi* crop. All others recorded an increase over the previous year. The 1941-2 crop was much larger, accounted for mainly by the rise in *Baisakhi* and *Kusmi*. There was a small decline in total production in 1942-3 so far as the figures reveal. But

105. *Indian Trade Journal*, Vol. 156, pp. 34-35.
106. *Indian Trade Journal*, Vol. 156, p. 254.
107. *Indian Trade Journal*, Vol. 156, pp. 64, 65, 66
108. *Commerce*, Annual Review Number, 1944.
109. *Indian Trade Journal*, Vol. 156, p. 138.
110. *Indian Trade Journal*, Vol. 156, p. 294.
111. *I.T.J.*, Vol. 157, p. 374.

TABLE 124

Production of Lac in India during 1939-45

(Source :—*Indian Trade Journal*)

(Thousand Maunds)

	1939-40	1940-41	1941-2	1942-3*	1943-4*	1944-5*
Baisakhi ..	1109	633	874	1038	372	770
Jethua ..	25·7	37·6	91	102·5	67	12·5
Katki ..	188·5	408	289	131	202	135
Kusmi ..	42·5	118	166	82	186	40
Total ..	1365	1197	1420·5	1353	827	957

* Final Forecasts.

during 1943-4 lac production recorded a very sharp decline over the preceding year. The decline was marked in the *Baisakhi* and *Katki* crops, the other two showing increases. In 1944-5 production increased slightly. There was a large decline in the *Kusmi, Katki* and *Jethua* crops but a sharp increase in *Baisakhi.*

Table No. 125 gives the imports of lac into India during the first three years of the war.

TABLE 125

Imports of Lac into India during 1939-42

(Source :—*Indian Trade Journal*)

(Maunds)

	1939-40	1940-41	1941-2
Rail ..	2,05,041	2,40,099	3,27,328
Land ..	3,06,500	1,53,500	3,35,500
Total ..	5,11,541	3,93,509	6,62,828

Imports during 1940-1 decreased sharply but in 1941-2 they increased much more than those in 1939-40. No figures for the period after 1941-2 are available. But with the occupation of lac producing countries by Japan, they must have been negligible.

Table No. 126 gives the exports of lac from India according to varieties and destinations.

TABLE 126

Exports of Lac from India According to their Destinations during 1939-44

(Source :—*Review of the Trade of India*)

	1939-40	1940-41	1941-2	1942-3	1943-4
Shellac					
United Kingdom ..	54,517	36,500	35,706	35,501	32,484
U.S.A. ..	2,64,932	2,54,406	3,39,695	1,72,251	1,62,344
Germany ..	15,832	—	—	—	—
France ..	8,470	5,360	—	—	—
Japan ..	15,271	9,725	3,359	—	—
Canada ..	6,462	7,204	16,515	3,153	6,907
Australia ..	6,527	7,836	10,215	3,275	—
Other countries ..	60,111	48,095	58,237	22,890	5,454
Total ..	4,32,122	3,69,126	4,63,727	2,40,702	2,03,557
Button Lac					
United Kingdom ..	12,150	6,867	10,648	5,164	3
U.S.A. ..	4,345	6,259	8,340	6,505	2,834
Other countries ..	8,011	3,270	5,734	2,387	3,626
Total ..	24,506	16,396	24,722	14,056	6,463
Seed Lac (Total Export) ..	2,69,999	2,01,681	2,70,042	58,154	20,894
Stick Lac (Total Export) ..	1,173	801	321	—	—
Other kinds (Total Export) ..	32,132	6,485	7,581	8,345	5,115
Total all kinds ..	7,59,932	5,94,489	7,66,393	3,21,257	2,36,029

The total exports of all kinds of lac increased by about 1,15,000 cwt. in 1939-40 over the previous year. The increase was not marked in the exports of shellac and seed lac. In 1940-1 exports declined, mostly because of the loss of Continental markets and shipping difficulties. The decline was shared by all the types of lac. Exports revived in 1941-2 and were slightly more than in 1939-40. The increase was mostly due to the very large increase in the off-take of shellac by the U.S.A. and increased off-take of button lac by both the U.K. and the U.S.A. In the following year exports shrank to about 50 per cent. of those of the preceding year. The decrease in shipments of shellac to the U.S.A. and Australia was mainly responsible for this. Exports were further marked down during 1943-4. All kinds of lac shared the decline but in stick lac and seed lac and other types of lac it was most remarkable. The off-takes of all countries were less than those during the preceding year.

Exports of shellac to the U.K. in 1939-40 were slightly lower than about half of those during the preceding year but those of seed lac were almost unchanged. In 1940-1 exports of shellac fell to 36,000 cwt. and remained roughly at that level during the following two years. Exports of seed lac in 1940-1 were slightly more than 50 per cent. of those during the preceding year. They increased to 10,648 cwt. in 1941-2 and were 5,164 cwt. in 1942-3. In 1943-4 the U.K.'s off-take of button lac dwindled to almost nothing.

Exports of shellac to the U.S.A. in 1939-40 were about two times those during the previous year and those of seed lac about three times as big. In the following year exports of shellac decreased slightly but those of seed lac increased by about 50 per cent. over the previous year. In 1941-2 shellac exports increased by about 85,000 cwt. and those of seed lac by about 2,000 cwt. Exports fell sharply during the next two years mostly due to the blockade of sea routes to the U.S.A. by Japan.

Australia and Canada imported considerably larger quantities of shellac during 1939-40 and 1941-2 than they used to do before the outbreak of World War II. In 1941-2 the exports

of shellac to Canada and Australia were about three times and 2½ times larger respectively than those in 1938-9. In the following two years exports to these countries also declined.

By a notification dated 30 September 1944 the Government of India promulgated the Lac Export Control Order. By this Order the export of lac, which was not of a standard grade and shellac and button lac which was not free from orpiment was prohibited. The export prices of all kinds of lac were also fixed.

Table No. 127 gives the monthly index number of wholesale lac prices in India during the war period.

TABLE 127

Monthly Index of Wholesale Prices of Lac in India during 1939-45

(Source :—*Monthly Survey of Business Conditions in India*)

(Base 19 August, 1939 = 100)

	1939	1940	1941	1942	1943	1944	1945
January ..	—	230	210	485	457	507	507
February ..	—	180	176	482	457	507	507
March ..	—	198	197	484	457	507	507
April ..	—	185	217	461	457	507	507
May ..	—	179	210	356	457	507	507
June ..	—	161	290	412	457	507	507
July ..	—	145	414	442	467	507	507
August ..	—	169	412	457	507	507	507
September ..	134	157	406	457	507	507	507
October ..	134	160	432	457	507	507	507
November ..	170	194	446	457	507	507	507
December ..	241	218	404	457	507	507	—

The demand for lac was bound to increase with the outbreak of war, it being an important constituent of munitions, etc. Prices rose in anticipation of this demand and the index of lac prices reached 241 in December 1939. Prices then receded and the index declined to 145 in July 1940. Shipping difficulties and the unfavourable export outlook generally kept the market low. Export demand sharply increased during the earlier months of 1941 and this combined with the short crop

of the preceding season exerted a strong upward pressure on prices. The index number went up from 210 in May 1941 to 290 in June and shot up to 414 in July. Though fluctuating, the market continued to rule high and in January 1942 the index touched 485. On 12 March 1942 the Government of India fixed the maximum price of Shellac T.N. at Calcutta at Rs. 66-8-0 per maund of 82-2/7 lbs. At any other place other than Calcutta, according to this notification, prices were to be determined and fixed by the provincial governments with regard to the normal relation between the prices at such place and Calcutta.[112] Prices suffered a short recession probably because of this. By a notification dated 10 June 1942, the Government of India cancelled the earlier notification and lac prices were decontrolled. The index rose to 442 in July 1942. On 14 July 1942, the Government of India fixed the maximum prices of Shellac T.N. at Calcutta at Rs. 64 per maund of 82-2/7 lbs.[113] The index touched 457 in August 1942 and remained at that level up to June 1943. By an amendment of the earlier notification the Government of India on the 17 December 1942 fixed the maximum prices of other kinds of lac besides the Shellac T.N., at Calcutta.[114]

By a notification issued on 23 July 1943 the ceiling prices of lac were revised. The new ceiling for the Shellac T.N. at Calcutta was fixed at Rs. 71 per maund of 82-2/7 lbs. Price-ceiling for other qualities were also revised.[115] Since then to the end of 1945 the index number of lac prices remained steady at 507.

12. Mica

Table No. 128 gives figures regarding the output of mica in India during the first 5 years of the war period, as well as the figures regarding exports during the same period.

112. *Indian Trade Journal*, Vol. 144, p. 735.
113. *Indian Trade Journal*, Vol. 146, p. 148.
114. *I.T.J.*, Vol. 147, p. 589.
115. *I.T.J.*, Vol. 150, p. 156.

TABLE 128

Production and Exports of Mica during 1939-43

(Source :—*Report of the Mica Inquiry Committee 1944-45*, 1946)

Year	Bihar	Madras	Rajputana	Other Provinces and States	Total	Exports (Block Splittings and Waste)
1939 ..	85,662	22,869	9,189	2,876	1,20,596	1,98,893
1940 ..	84,270	26,688	27,583	1,754	1,40,295	1,70,323
1941 ..	1,28,955	15,121	39,084	1,232	1,84,392	2,08,331
1942 ..	1,21,774	18,344	44,359	865	1,85,342	2,02,997
1943 ..	1,03,168	20,271	34,973	869	1,59,581	1,84,674

To judge from the figures regarding exports the output of mica declined in 1940 but sharply went up during the next two years. There was again a recession in 1943. Production seems to have increased, in so far as can be judged from the admittedly defective figures regarding output in the above table, in all areas except Madras which seemed to be marking time. The stimulus to production during the war period was obviously due to the considerable demand for mica in war production. Mica was an important strategical material and was needed in large quanties by the belligerent countries.

Table No. 129 gives figures regarding production of mica block from factory and mine dump in Bihar.

TABLE 129

Production of Mica Block from Factory and Mine Dumps in Bihar during 1942-44

(Source :—*Report of the Mica Inquiry Committee 1944-45*, p. 9)

	1942	1943	1944
From Mine Dumps ..	30,781	17,835	12,537
From Factory Dumps ..	18,039	6,925	5,820
Total ..	48,820	24,760	18,357

Figures regarding the exports of mica from India according to their destinations are not available for the war period. Only figures in regard to the imports of Indian mica into U.S.A. are available. These are embodied in Table No. 130.

The proportion of splittings in the total exports of mica increased from 75 per cent. in 1939 to 89 per cent. in 1941. It declined to 68 per cent. by 1943 and went down to 63 per cent. during the first half of 1944. Total exports (in quantity) reached their peak in 1941 when they recorded an increases of 65 per cent. over the 1939 level. The export price of splittings

TABLE 130

Quantity and Value of Exports of Mica from India during 1939-44

(Source :—*Report of the Mica Inquiry Committee* 1944-45, p. 91, 92, 94)

	1939	1940	1941	1942	1943	1944 (First Half)
Block						
Quantity (Cwts.) ..	31,595	18,885	23,042	30,650	46,062	25,423
Value (in Rs.) ..	6,774,641	5,953,895	8,622,227	11,413,753	14,247,761	10,904,050
Splitings						
Quantity (Cwts.) ..	95,643	1,05,802	1,79,709	1,49,790	95,178	46,814
Value (in Rs.) ..	8,479,960	9,978,846	17,925,713	17,253,858	15,487,403	16,394,458
Total Cwts. ..	1,27,238	1,24,687	2,02,751	1,80,440	1,41,240	72,238
Total to U.S.A. in lbs. ..	1,769,814	6,283,139	10,694,560	10,228,470	14,247,964	—

increased much faster and to a greater extent than that of block mica. While the export prices of block mica per cwt. advanced by 30 per cent. during 1939-43, those of splittings went up by about 85 per cent. during the same period. The prices increased sharply during 1944 the export prices of block and mica splittings recording increases of 90 and 300 per cent. respectively over the 1939 level.

The Mica Control Order was promulgated on 25 May 1940. It reproduced the Bihar and Orissa Mica Act 1930, repealed in 1938 by the Congress Ministry, with a few modifications and additions. Under the older Act its day-to-day administration was kept in the hands of the District Magistrate, but he had no power to refuse a proprietor's certificate or even a miner's or dealer's licence. He had also no option in the matter of endorsing the names of agents on licences and certificates, or in restricting the number or the location of the godowns which might be opened by licencees and registered proprietors. The Inspector of Mica Accounts was appointed by the local government for inspecting mica mines and mica dumps and for checking stocks and accounts. In practice the Inspector worked under the District Magistrate. The removal of mica without a pass was punishable with imprisonment extending up to one year. Licences were subject to cancellation by the local government if (1) the licensee was convicted of an offence under the Indian Penal Code, committed in respect of mica, or (2) he was guilty of repeated failure to comply with any of the provisions of the Act. Licences were not liable to cancellation solely by reason of a conviction from which there was no appeal. The granting of a fresh licence to a person whose licence was cancelled was subject to the sanction of the local government.

The Mica Control Order 1940 retained the District Magistrate in charge of day-to-day administration and he was given powers to give licences, with the proviso that a licence must be granted to a person who, on 1 April 1938, held a valid mica miner's or dealer's licence under the old Act. Everything else was the same as in the old Act excepting a slight extension of the powers of cancellation of certificates. The liability of

cancellation was incurred, not with repeated failure, but by first failure to comply with the provisions of the Order.

With some minor amendments the Mica Control Order, 1940 remained in force for the following four years. On 31 May 1944, sevral important changes were made in it. The first and the most important change was the provision for the appointment of a Mica Controller by the provincial government. All the powers previously exercised by the District Magistrate were transferred to this officer. The Mica Controller was to be advised by a committee, in all matters connected with the administration of the Mica Control Order. The Mica Controller was appointed on 8 March 1945 and the Advisory Committee on 18 September 1945.

The second important amendment provided that 'no licensee or proprietor should buy or sell or otherwise transfer crude mica or block mica which has not been sorted into sizes in the manner prescribed in the fifth Schedule of that Order, unless the largest rectangular area of sound mica which could be obtained there from was less than three square inches. Another amendment gave the Controller powers to prescribe the areas in which dealers must locate their godowns. A third amendment gave the Controller discretion in the matter of endorsing the names of agents on proprietors' certificates and licences.

Another amendment made the grant of a proprietor's certificate discretionary. In the case where a refusal was indicated the Controller was to send the case to the provincial government whose decision was final. Another amendment gave the provincial government absolutely discretionary power to cancel a proprietor's certificate or a miner's or a dealer's licence, after giving reasons for the same and after hearing whatever the defendant had to say in that regard. By a further amendment the initial fee for a miner's or a dealer's licence was raised from Rs. 50 to Rs. 250 and the annual fee from Rs. 25 to Rs. 150. The last important amendment provided that the provincial government may from time to time issue general instruction for guidance of the Controller in the dis-

charge of his functions under the Order, and requiring the Controller to act in conformity with those instructions.[116]

13. MANGANESE

Table No. 131 gives the production of Manganese ore in India and its value during 1939-43.

The production of manganese ore in India recorded a slight increase during 1940 but showed a continuous decline from that year up to 1943. The output in 1943 was 28 per cent. less than that in 1939. Several mines closed down during the period because of the scarcity of labour and difficulties of shipping. Total number of mines increased from 113 in 1939 to 154 in 1940 but declined to 90 in 1943. So also the total labour employed in the manganese mines in India declined from 35,159 in 1940 to 24,271 in 1943. As between the various producing areas in the country the production in C.P. increased from about 5·5 lakh tons to 6·5 lakh tons in 1940 and remained at about that level up to the end of 1942. In 1943 it dropped sharply to 4·6 lakh tons. Production in Mysore, Sandur and Madras showed almost throughout the period a continuous decline.

The price of manganese ore declined from about Rs. 15 per ton in 1939 to Rs. 14 per ton in 1940. It remained at that level during 1941 but increased to Rs. 19 during 1942. During the following year it declined to Rs. 18.

Figures regarding the exports of manganese from India during the war period are not available, except for the year 1939-40. During that year the total exports jumped from 4,56,000 tons during the previous year to 7,19,000 tons. Of these 2,67,000 tons or 38 per cent. went to the U.K., 1,41,000 tons or about 20 per cent. to the U.S.A., 194,000 tons or about 27 per cent. to Japan and 50,000 tons or about 7 per cent. to France.

116. Summarized from *Report of the Mica Enquiry Committee, 1944-5*, 1946, pp. 83-86.

TABLE 131

Production of Manganese Ore in India by Provinces during 1939-43

(Source :—Labour in the Manganese Mining Industry, *Report of the Labour Investigation Committee* 1945, pp. 1, 2)

(Tons)

	1939	1940	1941	1942	1943
Central Provinces ..	5,46,028	6,52,755	6,39,348	6,43,773	4,61,676
Bombay ..	52,549	49,098	—	28,744	35,230
Bihar ..	35,803	32,452	53,308	21,156	15,316
Madras ..	34,640	29,536	14,665	3,083	7,740
Orissa ..	—	—	—	—	400
Total British India ..	6,69,020	7,63,841	7,07,321	6,96,756	5,20,362
Value ..	Rs. 98,06,630	Rs. 106,60,971	Rs. 99,80,877	Rs. 1,28,48,327	Rs. 91,28,270
Sandur ..	1,22,596	46,862	11,470	6,933	3,171
Bonai ..	17,796	2,097	24,935	9,761	39,957
Mysore ..	1,677	816	672	630	300
Keonjhar	33,560	28,760	45.245	42,789	31,210
Patna ..	—	1,200	1,500	400	300
Total Indian States ..	1,75,629	1,05,735	83,822	60,513	74,938
Value ..	Rs. 4,86,476	Rs. 4,65.735	Rs. 4,56,409	Not Available	
Grand Total Production ..	8,44,649	8,69,576	7,91,143	7,57,269	5,95,300
Grand Total Value ..	Rs. 102,93,106	Rs. 111,26,706	Rs. 10,437,286	—	—

CHAPTER IV

POST-WAR PROSPECTS OF INDIAN RAW MATERIALS

1. Raw Cotton

The post-war prospects of Indian raw cotton can be gauged only with reference to the possible post-war cotton plan for India. In drawing up such a plan, as a part of the general post-war economic plan, it would be unwise to set up as its goal a return to the position before World War II. That position was clearly unhealthy. Before World War II slightly more than half of the cotton crop in India was cultivated for export. The bulk of it was of the short staple variety. The excessive dependence on exports left the Indian cotton cultivator at the mercy of the foreign consumers of Indian cotton. No government, much less the Government of India—which was in addition unwilling to do anything in that respect—could control the extent of the foreign off-take from year to year and as a result could not help the cultivators in their distress except to a very small extent. The demand for the Indian short staple cotton both at home and abroad was inelastic. It was also gradually but steadily shrinking as the textile industry in India and abroad went more and more fine and began to use an ever larger proportion of medium and long staple varieties. Yet again the yields of cotton per acre in India were probably the lowest in the world and much land under cotton was being uneconomically used for serving the shrinking and uncertain export markets. Lastly, the Indian textile industry was continuously going fine and its growing requirements of medium and finer staple cottons were being satisfied by imports from abroad.

This unhealthy situation broadly speaking could be remedied in three directions. Firstly, by adjusting production mainly with a view to meet the internal demand, i.e., of the

Indian textile industry[1] and a substantial reduction in the dependence on foreign exports ;[2] secondly, by improving the quality of the Indian cotton crop by encouraging medium and long staple and discouraging short staple varieties ; thirdly, by increasing per acre yields and reducing cotton acreage to make possible a much more rational use of India's land resources for meeting high priority needs in regard to food and fodder.

Since its inception in 1922, as noted previously, the Indian Central Cotton Committee had been making persistent attempts at improvement of yields and the discouragement of short staples and encouragement of medium and long staples. The difficulties in the way of such improvement were numerous and intractable and the results achieved by the I.C.C. were in the circumstances, though not striking, not insignificant. The position on the eve of the outbreak of World War II has been summed up thus by Dr. W. Burns : 'In 1939, except for the shortage of cotton above 1 1/16 inch, India was in sight of a reasonably balanced production except for the fall in Japanese and Continental takings of short staple cotton.'[3]

During the war period, under the stress of pressing circumstances, a veritable revolution has occurred in Indian cotton. The acreage under cotton was severely restricted and a very large switch-over from short to medium and long staples took place. It must be admitted that as a consequence of this huge transformation during so short a period of about 6 years much economic misery was inflicted on the cotton cultivators. But the transition is now a *fait accompli* and the next step

1. This was stressed by the Annual Report of the I.C.C. Committee for 1943. 'Whatever policy is decided upon, it is of the utmost importance that the requirements of the Indian mill industry, which,.... ..is the best customer of Indian cotton, must be constantly kept in mind and efforts made to cater for it as fully as possible'. (p. 11).

2. This has been accepted in a very general manner by the Second Report on Reconstruction Planning : 'As far as possible, export of raw materials should be replaced by exports of semi or fully manufactured goods'. (p. 23).

3. W. Burns, *Technological Possibilities of Agricultural Development in India*, A Note, 1944, p. 83.

would be to draw up a 'cotton plan' according to the Indian cotton requirements of the post-war period and to put it into practice by continuing and modifying where necessary, the present controls over acreage, prices, etc.

The cotton requirements of Indian textile industry during the post-war period will mainly depend upon the state of demand for Indian cotton textiles. Broadly speaking, the demand for cloth in India is elastic to a large degree. During the decade preceding World War II the average *per capita* consumption of cloth in India was about 16 yards. This was far below the minimum necessary requirements. Indian population is an expanding one and if the post-war economic plans succeed in maintaining in this country, employment at the highest possible level and the prices of the necessaries of life at reasonable levels, a steadily rising demand for cotton cloth can be expected in the future. The experience during the war period also shows that the demand for finer varieties of cloth increases when wage rates and income levels rise in India.

The Panel appointed by the Government of India in 1945 to advise them on post-war planning of the cotton textile industry has recommended that the productive capacity of mill-made cloth should be increased from 4,800 million yards to 7,200 million yards per annum, i.e., a 50 per cent. increase over the present maximum capacity and this recommendation has been accepted by the Government of India.[4] This expansion will mean, when fully realized, a total cotton consumption of about 6·5 million bales of 400 lbs. each annually. This would give a rough idea about the quantum of post-war demand for raw cotton from the Indian textile industry.

The demand for Indian textiles from foreign countries increased considerably during the war period, for reasons detailed earlier. The Near Eastern markets served by Japan before World War II have been annexed by India during the war period. Table No. 132 shows the total imports of textiles into these countries before World War II and the respective shares of Japan and India in them.

4. *Times of India*, 4 May 1946.

TABLE 132

Total Imports of Textiles into various Countries before World War II and the Shares of Japan and India in them.

(Source :—Adapted from *Commerce*, 1945 Annual Review Number, p. 965)

(In Million Yards)

	West Africa	East Africa	South Africa	Levant	Siam	Malaya	Dutch East Indies	Australia	Total
Total Imports ..	400	500	250	150	85	125	800	200	2,510
Imports from Japan ..	40	270	40	65	80	60	550	70	1,175
Do. India ..	10	30	2	—	—	4	—	2	48

The peak of Indian textile exports was reached during 1942-3 when India exported 819 million yards of cotton textiles. Under the Textile Control Order the maximum limit on exports was placed at 600 million yards per year. Table No. 132 shows that this quota nearly meets half of the total demand met by Japan in these markets before World War II. To what level India will be able to raise the level of her textile exports during the post-war period will depend upon the capacity of the Indian textile industry to satisfy home demand and produce for exports. But it will be primarily determined by the prospects of India's retaining and improving the position India has gained in these markets during the war. These will very largely depend upon the future of the Japanese textile industry. In these markets the bulk of the demand is for rougher and coarser varieties of cloth and the U.K. and the U.S.A. who specialize in finer varieties will not be able to compete with India in these lines. India's position in these markets will be untenable only if the Japanese textile industry is rehabilitated and re-equipped on a scale that will enable it to function at anywhere near the pre-World War II level. In this field China might be India's potential rival but Chinese textile industry is in its infancy and she has also a large home market to serve. Again India has a considerabe lead over China in textile production and this makes the prospects of Chinese competition in the near future not so formidable.

From the meagre information at present available, the possibility of a revival of Japanese textile industry on a scale envisaged above appears to be a remote possibility. According to the figures supplied by the Japanese Textile Control Association there are at present (1946) only 28 lakh spindles in Japan as compared with 137 lakh in 1937, a peak production year of the pre-war period. In addition to the 28 lakh spindles some 3 lakh more could be restored and placed in production. During the war Japan scrapped much of her textile machinery and now there were only 2,500 weaving concerns as compared with 41,000 in 1937. There are 1,21,000 looms in Japan. The Association estimates domestic requirements of cloth at 2,200 million yards and according to its estimate of the present capacity of Japanese textile industry,

it can turn out approximately 1,690 million yards of cloth per year. Granting the existence of 30 lakhs spindles 2,55,000 more spindles and 1,500 more looms will be required to satisfy home demand alone. According to the Japanese estimate they can manufacture spindles at the rate of a million a year. But steel has high priority and expansion of physical plant will not be probably allowed. Coal shortage is also acute. The textile industry in Japan is based on the resident labour system and the critical food position is hampering the textile industry. Moreover, it is also short of cotton supplies.[5]

The possibility is, therefore, that the Japanese textile industry will be maintained at the level at which it will be able to satisfy home demand and be able to export to a small extent to pay for the imports of coal, food, etc.[6] In the markets formerly served by Japan there is little prospect of a revival and re-appearance of Japanese competition on a large scale. The opportunity is India's and she can maintain and extend her share in the Near Eastern markets.

The demand for cotton from the Indian textile industry in the post-war period might be, therefore, expected to be considerably buoyant and expanding. It might be expected to consume an increasing proportion of the total Indian cotton crop in that period. It is of course assumed that the capacity of the Indian textile industry will be adequate to the task and that it will operate at normal efficiency.

The next consideration would be to assess the extent of demand for Indian cotton in markets abroad during the post-war period. To begin with some broad trends in the international cotton markets may be noted. In a survey of the world cotton textile industry in the post-war period *The Economist* pointed out that the war-time period of under consumption has led to enormous accumulations of raw cotton stocks while manufacturing capacity has been seriously short

5. *Times of India*, Special Correspondent's reports, 21, 26 February and 19 March 1946.

6. *The Economist*, 2 February, 1946, p. 190.

throughout the world, not merely in relation to pent up demand for cotton goods but also in relation to pre-war capacity. At the end of the past cotton season (1944) estimates of stocks exceeded 28 million bales equivalent to a year's consumption before the war and to more at the rate of present intake.[7] Of the total carry-over of raw cotton about 11 million bales were held in the U.S.A. and the rest in other producing countries.

The U.S.A. being the single largest holder of cotton stocks as well as the biggest producer of cotton took the initiative in calling in April 1945 a meeting of the International Cotton Advisory Committee in Washington. The committee was made up of representatives of cotton growing countries. It decided that 'international collaboration in the management and liquidation of the world exportable surplus is preferable to any form of international action on the part of the individual exporting countries in disposing of their own surplus supplies.'[8] Smaller producing and consuming and importing countries were invited to join the Advisory Committee. A study group formed of the representatives of the Governments of the U.S.A., the U.K., France, Brazil, India and Egypt, was to draft definite proposals for international collaboration. The programme of action so evolved was to be submitted to a conference of the International Cotton Advisory Committee. Details of later developments are not available.

In November 1944 the U.S. Government granted an export subsidy of 4 cents per lb. to home produced cotton. The subsidy has been continued for the next year. It is reported that the U.S. Government has arranged to extend a considerable amount of credit to eight European countries for exporting 8,00,000 bales of cotton to them, through the U.S. Export-Import Bank. As per reports, similar cotton credits are being arranged for China and Japan. The U.S. Government also lifted the restrictions on cotton acreage in 1946.

7. "A Contrast in Cotton", *The Economist*, 4 August 1945.
8. *Ibid.*

In these circumstances, the prospects for the exports of Indian raw cotton in the post-war period are not bright.[9] The Indian Trade Commissioner in the U.S.A. reports that fairly brisk demand for Indian short staple cotton might be expected.[10] This cannot be, however, quantitatively very significant. Japan was India's biggest customer of raw cotton before World War II. At present it is estimated that the Japanese textile industry is capable of consuming from 12 to 13 lakh bales of raw cotton annually. It is reported that arrangements for importing one lakh bales per month into Japan are being made by the Occupation authorities. Thus the total imports allowed each year into Japan are even less than the total average imports of Indian cotton alone into Japan before the war, which was about 1·5 million bales on an average per year. As already remarked large credits by the U.S.A. are reported to have been arranged and a very large proportion of the total cotton imports into Japan will be of American origin.

Regarding the Chinese demand for Indian cotton in the post-war period, the Report of the Chettur Trade Mission to China (1946) is very optimistic. The Report states that though China's textile industry has suffered grievously during the war—only 4 million spindles in existence, half of them expected to be in work by the end of 1946 and the whole by the end of 1947—plans for doubling the capacity in spindles and looms during the next three years have been made. China will not be able to meet all the demand for raw cotton thrown up by the expanded textile industry as she will have to concentrate more on food production. China's cotton deficit was estimated at 2·5 million bales. Indian cotton might be preferred in China because a large part of the Japanese-owned textile mills are better suited to Indian cotton.[11] This appears to be too optimistic a picture. It must not be forgotten that

9. cf. Report of the Indian Trade Commissioner in Australia, *Indian Trade Journal*, Vol. 158, pp. 166-8; 'Report of the Indian Trade Commissioner in Canada', *Indian Trade Journal*, Vol. 159, pp. 6-12

10. *Indian Trade Journal*, Vol. 158, pp. 456-7.

11. *Times of India*, 10 August, 1946.

the U.S.A. has already arranged for cotton credits to China. Moreover, peace is not yet in sight in China, apart from the difficulties of securing machinery, etc., for expansion. Taking all these factors into consideration it is reasonable to conclude that the demand from China for Indian raw cotton is likely to be limited during the post-war period. The same is true of the Continental markets where also the U.S.A. has arranged for huge cotton credits.

It was reported sometime back that the Government of India was also contemplating the granting of credits to China for marketing Indian cotton in that country. Nothing definite in that regard is known at the time of writing. If this comes about, however, it will be clearly unwise. For Indian cotton exports must be maintained at a level at which they will not be burdonsome. Their quantum should be again such that it could be maintained without any great effort and financial cost in the face of world competition. Indian cotton exports have already dwindled down considerably during the war. During the last two years they have been round about 4 lakh bales. A slightly large quantity of exports can be maintained by India with great ease and without any extra effort. It would be economic prudence to stabilize them at some such level in the post-war period.

Dr. W. Burns has observed: 'The planning of target for cotton production is difficult as any consideration of this crop involves national and international policy. Roughly, I suppose, we may look on the production of 1940-1 (6 million bales of 400 lbs. each)...as a sort of maximum for peace conditions, with a continuing endeavour to shift the centre of gravity of staple length higher and higher and particularly to develop staple of 1 1/16 inch and above.' [12]

In view of the discussion that has gone before this seems to be rather an inadequate target. It will have to be increased by another 2 million bales to meet the requirements of the home textile industry and those of the handlooms. If the

12. *op. cit.*, p. 88.

target is put at 8 million bales, it will also leave a fair and reasonable margin for exports

Dr. Burns does not discuss the limitations on the process of substituting medium and long staple varieties for short staples. The farthest limit to which this process can go cannot be, therefore, indicated, as also the irreducible minimum to which the production of short staples can be pushed. There is bound to be such a minimum and efforts should be made to attain that level.

The acreage under cotton shall have to be the minimum necessary, under constantly improving technological conditions of agriculture, to produce the necessary supplies of cotton. If yields per acre are increased much less land than at present will grow the requisite supplies. A maximum limit on acreage planted to cotton must be placed and this should be revised downwards every year, the gap being made up by increased yields. Food and nutritional requirements shall have to be given high priority in post-war years in India and land set free by the reduction of cotton acreage will materially help to fulfil these priorities.

There is an allied problem in this connection to which the Famine Commission has recently drawn attention. They observe: 'It should be recognized that while cotton is classified as a non-food crop it produces an important feed for cattle in the form of concentrates, cotton seed and cotton seed-cake and the oil is also used as one of the raw materials in the manufacture of *Vanaspati* (edible fat) ....The restriction on the area under cotton must be judged with these facts in view.'[13] The problem is, however, not difficult of solution. Cotton seed is substitutable to a very large degree and a deficiency in its supplies can be easily made good by an increased cultivation of other oil seeds, such as groundnut. In some regions actually the land previously sown to short staple cotton has been brought under groundnut.

13. *Final Report of the Famine Inquiry Commission*, p. 14.

What type of cotton should be grown for export is one of the questions posed by the 23rd Report of the I. C. C. Committee. In view of the conclusion that export should be stabilized at a low level this becomes a rather insignificant question. Obviously all the production of finer staples will be consumed at home and these varieties will not be available for export abroad. It is also doubtful where they will be able to compete in the world market.[14] In this connexion the Cotton Correspondent of the *Times of India* has observed: He (the Indian cotton cultivator) can best secure that share (of international trade in cotton) by growing the cotton other countries require. In that direction it would seem that the greatest possibilities lie in the "specialist" descriptions Sind Deshi, the rougher styles of Punjab Deshi, Comilla, Assam and the higher grades grown in the Central Provinces. Broadly speaking, such descriptions are not produced in other countries. They thrive best here and the world looks to India to provide them.'[15]

The cutting down of India's cotton exports during the post-war period will make India only a modest supplier of cotton in the world market compared to her former position of the second largest supplier. If again she confines her exports to specialized varieties not produced elsewhere, as suggested above, India will be a supplier of specialized types, enjoying a sort of monopoly in that respect. The reduction of India's raw cotton exports is likely to be largely replaced by increased exports of cotton textiles.

During the war textile industries have developed in various countries. As the *Report of the Cotton Board Committee* has pointed out:

> The expansion of cotton industries in other countries has depended on whether they had a large import gap to fill or not. In South America and Near East countries generally which were largely dependent on imports, local industries have increased their output by working double and treble shifts. Brazil and Mexico, which even in

14. *cf.* previous discussion regarding import duty on raw cotton.
15. *Times of India*, 5 June, 1945.

pre-war days supplied virtually all their own requirements have expanded their industries to the extent to which they have been able to extend their export trade. Mexico is exporting almost entirely to adjacent Central American countries, but Brazil is developing a world-wide trade.[16]

In the post-war world, therefore, there will be a tendency towards the processing of a continuously growing proportion of cotton in the country in which it is harvested. Trade in raw cotton might be expected to stabilize at a much lower level than in former days. The U.S. will, however, long remain the largest exporter of cotton in the world.

2. Jute

Jute is an important fibre crop. It developed in India as an export crop. Gradually, however, the jute mill industry in India became the largest consumer of raw jute. During the war this development was accelerated and the Indian jute mills came to consume more than 75 per cent. of the total raw jute produced. The bulk of demand for raw jute has flowed and is likely to flow from the Indian jute mill industry and in estimating the prospects of raw jute during the post-war years it is necessary, in the first instance, to appraise the post-war prospects of the Indian jute manufacturing industry.

These latter, as is obvious, will depend upon the demand for jute manufactures during that period. It must be remembered in this connexion that of the total jute manufactures produced in India only a small percentage was absorbed in India during the period before the outbreak of World War II. This position is not likely to be altered radically in the post-war period. For the jute mill industry the external market will continue to be of crucial importance.

The demand for jute manufactures in the post-war world might be affected by the growth and development of jute substitutes. During the war many a country was starved of raw jute supplies and efforts have been made to substitute

16. *Report of the Cotton Board Comdittee to Enquire into Post-war Problems,* submitted to the President of the Board of Trade, 1944, p. 37.

jute by indigenous products with government backing and even by compulsion. Production of jute has expanded in Brazil during World War II. These efforts will of course continue but, on the whole, are not expected to affect the prospects of raw jute to any marked degree.

Jute products are under constant threat from the paper industry products and during the war the latter seem to have stolen a march on jute in at least one respect.[17] Jute yarns and twine are used in the backing of carpets and also in linoleum in the U.S.A. and Canada. During the war, because of the shortage of jute, paper substitutes were tried for that purpose. 'Enquiries reveal that this twine, which is made entirely from paper, is reported to have stood the test very well and is being actually preferred to the jute twine previously used. It is understood that a similar feeling prevails in the U.S.'[18]

Jute has also to compete with cotton, and other textiles. It is difficult to estimate the effect of this competition on the prospective consumption of raw jute. On the whole, however, it would appear that the substitutes competing with jute are not completely successful as substitutes and that the demand for jute will not be very materially affected during the post-war period because of these substitutes. Weighing all the available evidence on these points Messrs. Porter and Cooper of the U.S. Department of Agriculture observe:

> With the consumption of jute and jute manufactures so closely related to the volume of production of certain agricultural products and the level of industrial activity, apparently Indian jute would suffer more over short periods of time from a worldwide business depression, were it to occur, than from competition with other products. Over a

17. 'Paper bags and paper products are considered the chief competitors mainly because of their much lower costs, although they are not found very satisfactory and have no salvage value'—Indian Trade Commissioner in Canada, 'Report on the Prospects of Post-War Trade in Canada', *Indian Trade Journal*, Vol. 159, p. 7.

18. *Ibid*, p. 8.

longer period of years, however, competition with other products probably would be increasingly important.[19]

The demand for jute products in the post-war world therefore need not be expected to stabilize at a lower level than before World War II because of the development of substitutes.

Next, it is necessary to consider how far the demand for jute manufactures will be satisfied by other countries with manufacturing jute industries and how far they will curtail the market of the Indian jute manufactures.

Before World War II, India's chief competitors in this respect were Britain, Germany, France and Belgium. The post-war prospects of the jute industry at Dundee (Britain) appear to be poor. It was losing ground to India even before the war. Before the war, for many standard products Indian costs for labour, administration and supervision (allowing for differences in the efficiency of labour) were not more than 70 per cent. of costs in Dundee. It only held its own in the sphere of the highest quality products, such as linoleum hessian. But during the war these and such other qualities were successfully produced by Indian jute mills. The prospects of the Dundee jute industry regaining this lost ground are very distant.[20]

During the war many jute mills in Dundee have been converted to the manufacture of other products. As *The Economist* remarked: 'Since the long-term prospects of the industry are not very bright because of Indian competition, and as employment in the district of Dundee depends in no small measure on jute, it would seem desirable to retain some of the new industries that have occupied the mills during the war'.[21] It further remarks, however, that this will not

19. Porter and Cooper, *Statistics on Jute and Jute Manufactures with a Brief Survey of the Industry*, Bureau of Agricultural Economics, U.S.D.A., June 1945, p. 3.

20. *cf.* Fogarty, *Prospects of Industrial Areas of Great Britain*, Nuffield College, 1945, pp. 134-42.

21. *The Economist*, 26 May 1945, p. 708.

happen because short-term considerations only will have the upper hand. The discussion, however, makes it clear that Indian jute industry is not likely to meet with much competition from Dundee in the world markets during the post-war period.

To what extent Germany and other Continental countries will be restoring their jute manufacturing industries during the post-war period cannot be said. From available information it would appear that these industries will not again be restored to their former levels. About the U.S. jute industry and its prospects also no information is available. The Indian Trade Commissioner at Washington noted that the samples of jute yarn from India were well-received in the U.S.A. and that local interests were afraid that Calcutta might flood the American market with jute yarn.[22] Generally it would not be unfair to conclude from this and such other information as is available that Indian jute manufactures are not likely to meet with any serious competition from this quarter.

Internal demand for raw jute is thus likely to be bright in the post-war period and might very likely increase in volume as India annexes the markets formerly served by Dundee. It also follows that demand for raw jute from the U.K. and the Continent cannot be expected to be at the old pitch and might probably decline markedly. In the post-war period, therefore, exports of raw jute might be at a much lower level than before 1939. This decline will be compensated for by the likely increase in the exports of jute manufactures from India.

All this will have an important bearing on the planning of jute during the post-war period. Before the war nearly 40 per cent. of the total raw jute produced was exported and 60 per cent. was consumed internally. In planning for jute during the post-war period the production target will have to be fixed by taking into account both the likely decline in exports and the likely increase in internal demand. A balancing of

22. 'Prospects of Post-war Trade in U.S.A.' *Indian Trade Journal*, Vol. 158, p. 456.

these considerations would indicate some reduction in the total production of jute from the pre-war average. The high priority that shall have to be given to food crops will, from another side, also lead to the same conclusion. During the war acreage under jute has been controlled and the Government of Bengal will have to continue this control during the post-war period.[23] The decline in exports will also necessitate qualitative adjustments. As noted previously before World War II the exports largely consisted of *tossa* and *Daisee* jute and that these type were only sparingly used by Indian mills. The internal demand for *tossa,* was however, on the upgrade. Land under *Daisee* will have to be diverted, it appears, to suit the needs of the Indian jute mills in the post-war period.

3. Wool

The world wool situation at the end of the war was one of an enormous accumulation of stocks of raw wool. The total surplus accumulated amounted roughly to 4,000 million pounds, or roughly more than two years' pre-1939 exportable surplus of 1,830 million pounds. Of this surplus about 3,245 million lbs. were held by the British Empire, mainly the U.K., Australia, New Zealand and South Africa. This enormous surplus arose partly because of the difficulties of transport during the war period and partly because of increased production during war years. The latter was especially true of the three British Dominions (which are also the three largest wool producers of the world). Because the U.K. had contracted to buy all current production of wool during the war period production was stimulated. It increased from 1,514 million pounds between 1934-8 to 1,668 million pounds between

23. Dr. Burns observes in the case of jute 'The aim should be an overall yield of 20 maunds per acre with quality as follows: Root cuttings less than 15 per cent. good lustre, colour and strength; freedom from faults; fibres not less than 6 ft. With the above acre-yield, it would require only 2,250,000 acres to obtain the last year's yield of 9,000,000 bales as against the actual acreage required which was 3,300,000 acres. Such a condition of things would set free still more land for good crops'. *op. cit.,* p. 94.

1939-44.[24] In contrast with this the production of wool in the U.S.A. declined from 459 million pounds (greasy) in 1942 to 389 million pounds (greasy) in 1945. But the consumption of wool in the U.S.A. more than doubled in the war period and about 80 per cent. of the total wool consumed was imported from abroad as contrasted with only 20 per cent. before the World War II. This led to the accumulation of stocks of domestic wool which was of a rougher quality. The stocks amounted to about two years' supply.[25]

The world stocks that had accumulated were of different qualities and varieties. Because of the absence of Continental buyers, Continental types of wool accumulated. Shipping difficulties led to accumulation of wool which was high in grease. The rest of the wool stocks were of the 'burry' types, but most of it was otherwise of a high quality. Roughly, a little less than two-thirds of the Australian and over a half of the South African stocks were of merino quality. The stock of New Zealand crossbred wool consisted mainly of 50's and below.[26]

It was felt shortly after the termination of the war that the surplus wool stocks might prove burdensome. Calculations showed that even if the consumption of raw wool increased by 12 per cent. over the pre-war average the surplus would take about 20 years to be absorbed.[27] To avoid any great fluctuations in wool prices Great Britain, Australia, New Zealand and South Africa jointly agreed in 1945 to set up a Joint Organization to buy, hold and sell wool as agent for the four governments. It was incorporated as a private registered company having 3 subsidiaries in each of the Dominions. The new wool clips were not to be acquired by the Joint Organization but these and existing surplus wool was to be auctioned, subject to a system of reserve or minimum prices. Reserve prices were to be fixed at the opening of each wool season

24. 'Empire Partnership in Wool', *The Economist*, 8 September, 1945, p. 343.
25. *The Economist*, 22 June 1946, p. 1022.
26. *The Economist*, 10 August 1946, p. 227.
27. *The Economist*, 8 September 1945, p. 343.

or at other times, if necessary, by the representatives of the four governments and only minor changes could be made by the Joint Organization.

The expectations regarding the using up of the surplus wool stocks, however, proved wholly wide of the mark. According to the latest information available the Joint Organization had been able to dispose of 2,520 million lbs., during eleven months, by the end of June 1946.[28] Most of this record selling was in response to the pent-up demand in Europe as well as to demand from UNRRA, the U.S.A. and the U.K. This need not, however, give rise to complacency as obviously this rate of absorption was bound to decrease sharply once the pent-up of demand was satisfied.

With this international background what is likely to be the future of Indian wool ? There is every likelihood of a further expansion of woollen industry in India in the post-war period. The Report of the Panel on Woollen Textiles puts the expected increase in the consumption of woollen textiles at 60 per cent. above the pre-war consumption.[29] Internal demand might thus be expected to be brisk. The production target of raw wool shall have to be fixed in view of this fact. Dr. Burns has stated that a reasonable target in the case of white wool would be 72 million pounds, or roughly twice the estimated annual production before World War II.[30] Such an increase could meet the growing demand of the considerably expanded Indian woollen industry which otherwise would have to be met by imports from overseas.

In the overseas markets, as remarked already, Indian wool occupies a special position. *The Handbook on Wool* has produced evidence to show that Indian wools do not all belong to the 'carpet' variety and that finer types of wool are also produced in India. It is reasonable to assume, however, that such finer varieties will be absorbed by the domestic industry.

28. *The Economist*, 10 August 1946, p. 226.
29. *Report of the Advisory Planning Board*, 1946, p. 139.
30. Burns, *op. cit.*, p. 110.

The bulk of exports of wool from India will, most likely, continue to be of the 'carpet' variety.

The principal markets for Indian wool before the war were those of the U.K. and the U.S.A. Whether the U.K. will continue to be the largest purchaser of Indian wool even in the post-war period will largely depend upon the state of the British woollen textile industry and the purchases made outside the Joint Organization's operations.

Before World War II the British woollen industry produced mostly high quality goods and held its own in export markets because of the excellent quality of its products. During the war the industry had to give closer attention to standardized utility cloth. The 'question before the industry was whether to return to quality production or to adopt the new utility production as its staple. *The Working Party Report on Wool* has recommended a return to quality production'.[31] The British woollen industry might be, therefore, expected to consume, as formerly, finer types of wool. The demand for Indian carpet wool might not expand but might remain at the pre-World War II level.

The wool market in the U.S.A. promises to be bright in the post-war period. The use of merino wool has been recently increasing relatively to crossbred wool in the United States as also in the U.K. As a result the United States, has changed from meeting 80 per cent. of her apparel wool requirements from domestic resources, to importing 80 per cent.[32] The demand for carpet wool is also expected to be bright. The Indian Trade Commissioner at Washington reported that keen and pent-up large-scale demand for Indian carpet wools was likely to continue for several years.[33]

On the other hand the supply position of Indian wool is also likely to be favourable. Carpet wool is produced in India,

31. *Board of Trade Working Party Reports,* Wool, H.M.S.O. 1947.
32. *Ibid.*
33. 'Report on the Prospects of Post-war Trade' by the Indian Trade Commissioner at Washington, *Indian Trade Journal,* Vol. 158, p. 456-7.

China, Asia Minor, Persia and Argentina. All the other countries except [illegible] comparatively smaller exporters of carpet wool. Moreover, in most of them except perhaps Argentina, due to actual ravages of war or its repercussions, production has gone down and for some years to come they are not likely to export on any significant scale. Another advantage is that Indian carpet wool is qualitatively superior. It is 'preferred by carpet manufacturers because, as compared with similar wool from China, Argentina, Asia Minor and Iran, it shrinks less and is fairly long staple'.[34] In the post-war period Indian wool is likely, therefore, to continue to retain its former position in the world market and is likely to be in brisk demand.

4. Groundnut

The groundnut crop in India initially developed mainly in response to the demand from foreign countries and primarily to serve the export market. Gradually, however, with the development of oil crushing industry in the country, internal demand expanded. As a result a continuously increasing proportion of the total groundnut crop came to be processed at home. The exports of groundnut oil and cake increased. During the quinquennium 1928-9 to 1932-3 exports of groundnut oil and cake averaged 1,774 tons and 1,34,000 tons respectively and the average for the next quinquennium increased to 3,745 tons and 2,19,000 tons respectively. During the war the oil crushing industry in India has expanded further. As already noted its crushing capacity had increased by about 30 per cent. up to 1942-3 since the beginning of World War II. The export of groundnut oil also increased during the war and in 1940-1 the quantity exported was double that of the preceding year. The manufacture of *Vanaspati* had expanded considerably and the processing of oil for the manufacture of soaps, cosmetics, etc., had also increased. The exports of groundnut cake declined considerably and a larger proportion of the total cake produced in India was being used locally.

34. 'Report of the Indian Trade Commissioner, New York, 1939-40', *Indian Trade Journal*, Vol. 141, p. 595.

The groundnut crop is a particularly useful crop for India. It is a hardy crop and grows on soils that are unsuitable for other crops. It is a very valuable rotation crop and increases the nitrogen content of the soil.[35] Groundnut is an important source of fats and proteins in South Indian diets. The *per capita* consumption of 1-1/5 lbs. in India before World War II is capable of being considerably increased.

The oil crushing industry in India has expanded. Its joint products, oil and cake, are likely to encounter increasing demand in the post-war period. Groundnut cake as a valuable feed for cattle has rapidly gained in popularity during the war and will be undoubtedly used in increasing quantities both as a cattle feed and as manure. Groundnut oil lends itself to multiple uses and the oil processing industry in India may be expected to absorb increasing amounts of oil in the post-war period. The exports of groundnut oil are also capable of further expansion and the U.S.A. and Canada can provide large markets for Indian groundnut oil provided of course that it is unadulterated.

Groundnut oil can be used in diesel engines.[36] If it is remembered that India is deficient of mineral oil resources as well as short in power resources, this new discovery assumes a different and crucial importance for the Indian economy, especially from the point of view of defence. Technological advances have also opened up the possibility of using groundnut for the manufacture of Ardil or artificial wool.

The production plan for groundnuts in India shall have to be drawn up with reference to all the considerations adduced above.[37]

35. This is particularly important for the agricultural economy of peninsular India where the soils are specially deficient in nitrogen. It should be noted, however, that the groundnut crop renders the soil more liable to erosion.

36. *Report on the Marketing of Groundnuts in India*, 1941, p. 310.

37. Dr. Burns states that the yield of groundnut per acre can be pushed up to 1,000 lbs. and the oil content can be increased by 1 per cent. This can give a crop of 3,12,000 tons on 7 million acres. Dr. Burns opines that the Red Natal variety should be discouraged. *op. cit.*

In the post-war period, therefore, exports of groundnuts from India are likely to decline very considerably. India will probably cease to be the largest exporter of groundnuts in the world. The demand from the U.S.A. and Canada for the specially hand-picked varieties for edible use might continue and even increase during the post-war period. At least there is no reason why India should not be able to annex this specialized market permanently. Such demand is of course bound to be considerably small as compared with the pre-war export demand. The decline in India's groundnut exports will be partly replaced by increased exports of groundnut oil.

5. Linseed

Exports of linseed from India have been subject to wide fluctuations, the main factor influencing these being the linseed crop in Argentina. The internal consumption of linseed had been growing but slowly before the World War II.[38] Internal demand for linseed was mainly dependent upon the demand for linseed oil and the latter was mainly used for adulteration of mustard oil in competition with groundnut oil. The internal demand for linseed oil, therefore, was largely dependent on its relative cheapness or dearness in comparison with groundnut oil. *The Report on the Marketing of Linseed in India* observed in this connexion :

> Although the practice of adulteration is in itself reprehensible, it should be recognized that the elasticity which it gives to internal demand provides a buffer in the event of any sudden contraction in the export trade, and conversely enables India readily to meet any increased export demand which may arise.[39]

This is really trying to make the best of a bad situation. Both the evils associated with linseed in India, namely large fluctuations in exports and the use of linseed oil as an adulterant, need to be eliminated by careful planning.

During the war a larger proportion of the Indian linseed crop has been used by the domestic crushing industry. The internal demand for linseed oil for industrial purposes expanded

38. *Report on the Marketing of Linseed in India*, 1938, p. 57.
39. p. 61.

very remarkably during the war in response to the industrial expansion. Judging from the draft Reports of the Industrial Panels on Oils and Soaps and on Paints and Varnishes, a considerable expansion of these industries has been recommended.[40] There is every possibility of these targets being accepted by the government. With the growth of Indian industries in the post-war period demand for linseed oil is bound to increase still further. The consumption of linseed cake in India has been also growing during the war and is likely to keep up after the war. Linseed straw is not being used at all at present. But the research subsidized by the Imperial Council of Agricultural Research in the C.P. into the production of fibre from the stems of the linseed plant has produced material which is considered promising both for use as a fibre and for cottonization (i.e., treatment by chemicals to make it spin in the same way as cotton). Even though the latter might be an uneconomical proposition, for the time being at least, the untreated fibre would be a useful source of twine and light cardage. Much progress has been made in the evolution of dual purpose strains.[41] There is every prospect, therefore, of an increased consumption of linseed at home.

Argentina is the world's largest producer of linseed as well as the largest exporter and the prospects of linseed exports from India have always depended upon the conditions of linseed production in Argentina. It is, therefore, necessary to form some idea about the latter's prospects during the post-war period. According to the scanty information available, the upward trend of production in Argentina has been maintained during the war period and in 1946 the total production of linseed was reported to be 1·4 million tons.[42] There has been a very rapid growth of oil crushing industry in Argentina during the war and the crushing capacity is reported to be about one million tons annually. Argentina has been also exporting linseed oil on a large scale during recent years.[43]

40. *Report of the Advisory Planning Board*, 1946, pp. 134-9.
41. W. Burns, *op. cit.*, pp. 71-2.
42 *The Economist*, 21 December 1946, p. 1013.
43. *Ibid.*

It appears likely, therefore, that Argentina, instead of exporting linseed as formerly, might develop her crushing industry still further and prefer to expand the exports of linseed oil. If she does that, her exports of linseed will be sharply reduced and Indian linseed will be apparently in greater demand.

But a further problem arises that needs consideration. With the prospect of Argentina exporting linseed oil in large quantities, will the oil crushing industries in the U.K. and in the Continental countries try to re-establish themselves at their former working levels ? On the Continent, because of the devastations of war, the oil crushing industries are not in good shape. Whether capital and resources will be again invested in an industry, which is likely to face severe competition from raw material producing countries, seems a doubtful proposition. The current level of activity in 1946 in the U.K. oil crushing industry was put at 20 per cent. of capacity owing to the shortage of linseed supplies.[44] Britain has been also purchasing large quantities of linseed oil from Argentina during recent years. Thus the trend would appear to be broadly towards importing oil rather than at re-establishing the oil crushing industry and restoring it to its former level.

In these circumstances, the overseas demand for Indian linseed, which largely came from the Continent and the U.K., is likely to be reduced a good deal. This prospect need not be taken as alarming. During World War II the exports of Indian linseed had very considerably gone down and yet no difficulty was felt, because of the rising consumption at home. This state of affairs is worth stabilizing. In the past the volume of the exports of linseed has violently fluctuated and has been a source of economic distress to the counrty. With industrialization the consumption at home is also likely to increase further. Indian linseed yields an oil which is reported to have better drying qualities than that yielded by *La Plata* linseed.[45] India will be able to compete effectively with

44. *Ibid.*
45. *Report on the Marketing of Linseed in India*, 1938, p. 46.

Argentina in the world market for linseed oil. The demand for linseed oil, in the post-war world promises to be quite brisk. Though substitutes for linseed oil in various uses have been evolved,[46] they have proved only partial substitutes. Linseed oil remains still indispensable in many cases. India can fruitfully decrease her exports of linseed and replace them by linseed oil exports.

6. Castor seed

Dr. Burns has observed: 'The place (part ?) that castor is to play in post-war Indian agriculture depends on (1) what part castor oil is to play in the post-war world, and, (2) whether there is going to be further extensions of castor cultivation in certain other countries which have taken up cultivation, e.g., Brazil, U.S.S.R., Manchuria and the Argentine.'[47]

As the source of a valuable industrial oil and manure castor seed is likely to be in good demand during the post-war period. With industrialization the demand for castor oil in India can be expected to be on the upgrade. So also perhaps the exports of castor oil from India might increase as was the trend in the quinquennium preceding the outbreak of World War II.

Exports of castor seed were on the decline during the decade preceding 1939, mainly because of the competition from Brazil. The competition will most probably continue unabated during the post-war period.

The Brazilian castor beans, as noted previously, have a higher oil content than the Indian variety. Dr. Burns remarks: 'By the use of improved varieties the average acre yields could be raised by 10 per cent. and the oil content by 3 per cent'.[48] If this comes to pass, Indian castor seed will be in a better position to compete with the Brazilian variety in the international market.

46. *cf. The Economist*, 8 February 1947, p. 257.
47. *op. cit.*, p. 77.
48. *op. cit.*, p. 78.

7. Tea

In the post-war world India promises to remain the largest exporter of tea. On the eve of World War I India's position as the leading exporter was unassailed. The development of tea plantations in the Netherlands East Indies altered this position at least qualitatively in the inter-war period. Indian teas were qualitatively superior to Java tea but the latter were cheaper. In all the price markets India's position was seriously affected by competition of Java teas.[49]

The prospects of Indian tea in the post-war world will depend, largely, upon the conditions of tea production and export in her competitor countries. The demand for tea is inelastic and the consumption of tea, on the whole, increases slowly. The domestic demand for tea has expanded in India during the war period but this will not cut into India's tea exports to any very appreciable extent. The potential home market is, however, very large.

For about a decade in the post-war period, it appears from the information available, the production of tea in the Netherlands East Indies will not attain its pre-war level. Tea gardens there have suffered substantial war damage.[50] The competition of Java tea therefore cannot be expected to be keen before about a decade elapses.[51] But as against this there is the possibility of China once again entering the tea market of the world. China's tea production is very large (about 50 per cent. of the total world production) and the Chinese Government

49. The Report of the Indian Trade Commissioner at Alexandra for April-September 1939 noted that 10 years previously India was a good second in the Egyptian importers of tea but she has steadily lost the position to Netherland East Indies and Ceylon. 'The high quality of Indian tea is well recognized but importers have not usually found the prices at which it is offered, sufficiently competitive compared with those from elsewhere'. *cf. Indian Trade Journal,* Vol. 136, 1939, p. 563.

50. *The Economist,* 11 May 1946, p. 769.

51. About 3-4 years are required to bring a tea garden to maturity and to this must be added the period necessary for adjustment and other circumstances such as internal peace, political set-up, etc. A decade would be a very fair estimate in the circumstances.

have drawn up a plan, it is reported, for increasing production by modern methods, so that overseas markets could be developed.[52] This will also take several years to become fully effective. So far as the early post-war period is concerned, therefore, India will have an open field in the world tea market. She will get enough breathing space to consolidate her position in the world market before her rivals take up with her again.

The demand for Indian tea is reported to be growing in all the South American countries and according to the Indian Trade Commissioner in South America, there are very great prospects of increased sales in all the South American countries.[53] Brazil teas are not finding much favour with the people and the demand is for heavy liquored teas, such as those produced by Ceylon and India.[54]

Indian teas will also find a ready market in Australia at least in the early post-war period. But when Netherland East Indies come into their own again, India is expected to lose her position in that market.[55] Tea has lost ground in Canada due to wartime rationing but the demand for black

52. *Ibid.*

53. 'In spite of lack of supplies in many countries owing to shipping shortage, malfunctioning in many instances of the Quota Control and the competition of substitutes, it is remarkable how the taste for Indian tea, which includes Ceylon has been maintained, even at exhorbitant prices....Tea appears to be gaining in popularity as a beverage, even in coffee producing and coffee drinking countries like Brazil and Columbia, among the upper classes and particularly among the ladies, and the "5 o'clock" habit is growing; while among the lower orders Indian tea appears to be taken as a medicine, as a "febrifuge", and is being sold, particularly in gramme packets in chemists' shops'. 'Report on the Prospects of Post-war Trade between India and the South American countries. *Indian Trade Journal,* 8 November 1946, p. 232.

54. *Ibid.*

55. 'It will be safe to presume that the Netherland East Indies will re-enter the market after the war and the off-take from India and Ceylon will, in consequence, be greatly reduced'. Indian Trade Commissioner in Australia, Report on the Prospects of Post-war Trade between India and Australia. *Indian Trade Journal,* Vol. 158, pp. 166-8.

tea is likely to be permanently augmented because the French-Canadians have taken to black tea instead of green during the war period. Much will have of course to be done in the post-war years to regain the uptrend tea was enjoying in Canada before the war.

On a reasonable calculation and estimate there are good prospects for Indian tea in the post-war period. Production of tea in India will of course suffer from the after-effects of over-plucking and shortage of fertilizers during the war period. But these cannot be expected materially to affect the prospects of Indian tea.

8. Coffee

The Indian coffee industry has experienced considerable prosperity during the war period and the control of the industry has been so successful that the planters themselves have been asking for its continuation during the post-war period. The internal consumption of coffee has increased during the war period and exports have dwindled down.

In assessing the prospects of coffee during the post-war years, it is necessary to note a few peculiarities of coffee production and consumption the world over. With regard to production Mr. Wickizer observes :

> The first and the oldest problem of the coffee industry is not man-made but arises from the nature of the coffee plant. The coffee tree itself has its own yield cycle ; it bears less in the years immediately following a large output. Weather conditions also profoundly affect the yields obtained. When, by chance, the trees are rested and weather is favourable the crop will be unusually large ; when the trees have yielded heavily the previous season and are thereby exhausted, and the rainfall is well below normal, an unusually small output will result. Characteristic variations in yield are such that the output of a particular plantation may at its high be ten times the production at its low. Furthermore, output cannot be adjusted from one year to another.[56]

On the side of consumption Mr. Wickizer notes that ' the consumption of coffee is inelastic over shorter periods. Growth of population and changes in consumer habits accompanying

56. Wickizer, *World Coffee Economy*, 1943, p. 4.

persistently high or low prices to consumers, largely account for discernible changes in the volume of coffee consumption.' [57] Consumer demand for coffee can be divided into 3 classes. To the 1st class belong people with whom coffee drinking is a firmly established habit and whose demand is consequently fairly inelastic. The 2nd class of consumers regard coffee more as luxury than a necessity, using coffee for social and other reasons, and whose demand is considerably elastic. But it is a one-way elasticity in the sense that material lowering of the price or rise in living levels, does not increase consumption beyond the customary levels. The 3rd broad class of consumers is of people who aspire to be habitual coffee drinkers but are prevented from doing so by economic reasons. Their consumption varies with both a rise and fall in coffee costs.[58]

All these considerations apply to the Indian coffee industry also. Potentialities of expanding coffee production in India are considerable as shown by the extensive uncultivated areas in plantations. The output cannot of course increase until after a period. During the war period acreage under *robusta* Coffee has increased. It gives a higher yield but is coarse in quality. *Robusta* coffee, as already remarked, is mostly consumed in India.[59]

Much will depend upon the demand, both external and internal, for Indian coffee in the post-war period. As is obvious from the observations regarding consumer demand noted above, demand from non-habitual consumers is largely dependent upon the price factors. In India the price factor is of still more significance. Any expansion of coffee consumption or even the maintenance of the level of consumption attained during the war will very largely depend upon whether the retail coffee prices are within the reach of the average consumer in India. The considerations of price also influence

57. *Ibid*, p. 5.

58. Wickizer, *op. cit.*, pp. 53-4.

59. Wilson Mayne, 'Plantation Industry in South India', Secretary, U.P.A.S.I., *Commerce* Annual Review Number, 1945, p. 978.

the export market. This is illustrated by the case of Canada. The Indian Trade Commissioner in Canada observed in his *Report on the Post-war Prospects of Indian Trade in Canada* that the flavour and quality of Indian coffee is not unsuitable to Canadian consumers but its price is relatively high. 'Despite the British preferential rate of import duty enjoyed by Indian coffee its landed price is invariably 4 to 5 cents more than the British East African or the best South and Central American Coffees'.[60] The Indian Coffee Board will have to fix and maintain coffee prices with reference to all these considerations.

Before the outbreak of World War II only about 36 per cent. of the total coffee produced in India was being exported. With the increase in internal consumption exports will decline further unless of course there is a large expansion in output. The export market for Indian coffees is mostly a quality market and provided reasonable prices are quoted, India will be able to sell abroad almost all the surplus left over after meeting internal demand.

Upto now coffee was only being used as a beverage and the demand for non-beverage purposes was insignificant. There is, however, a prospect of the latter type of demand increasing very rapidly, though nothing definite can be said about it yet. The possibility now in sight for other than beverage uses is that raw coffee may be found suitable for the manufacture of plastics[61] (known as 'cafelite'). With the development of 'cafelite' the whole aspect of the coffee indus-

60. *Indian Trade Journal,* Vol. 159, p. 7.

61. 'To prove the commercial possibility of a process developed by a New York inventor for converting green coffee beans to moulding powder for a new thermosetting plastic, a pilot plant, financed by the Brazilian Government was constructed in Sao Paulo in 1941. With this process, one 60-kilogram bag of coffee is said to produce 40 square feet of plastics ½ inch thick, one pound of caffeine, and 1¼ gallons of coffee oil....Two large plants, capable of utilizing as much as 5 million bags of coffee....were scheduled for completion in 1942. However, early in 1943, the one pilot plant in Sao Paulo,....was not yet in regular, operation. Difficulties have been encountered in the mechanical adaptation of the process'. Wickizer, *op. cit.,* p. 7.

try all over the world might be changed. It will introduce many complexities into the problem and at this early stage it is difficult to say as to how it will affect the Indian coffee industry.

9. Tobacco

The trend of tobacco consumption in India during the decade preceding the outbreak of World War II was definitely upwards, more particularly so in regard to cigarettes. Consumption has in all probability increased further during the war period and may be expected to continue at that level, if not actually expand, during the post-war period. The demand which shows the most dynamic growth is that for cigarettes and the virginial flue-cured tobacco necessary for cigarettes. The demand for other types of tobacco is, broadly speaking, on the downgrade. The increase in the exports of unmanufactuerd tobacco, witnessed since 1934-5, was almost wholly due to the increased off-take of flue-cured Virginia tobacco. During the same period the imports of cigarettes declined while those of unmanufactured tobacco increased. The former has been partly attributed to the revision of duty on imported cigarettes in 1934-5.[62]

The trends indicate that the demand for flue-cured Virginia tobacco is likely to be bright and also rising in the post-war period. In this respect, therefore, the first objective during the post-war period will have to be obviously the increasing of the production of this type of tobacco, so as to meet the growing internal demand. Before World War II only about 10 per cent. of the total tobacco produced in India was of this type.

After weighing evidence on all sides Dr. Burns observes:

> There will, doubtless, also be a steady limited market for tobacco for cheroot and cigars made in India and for pipe tobacco for export. The demand for tobacco for the *hooka,* chewing and snuff will probably continue much as it is, but it is likely that the demand for *bidi* tobacco will be affected by the growing habit of smoking cigarettes....The main developmental problem is how to increase the amount of first-

62. *Report on the Marketing of Tobacco in India,* 1939 pp. 47-8.

class cigarette leaf in this country both for internal consumption and for export.[63]

Dr. Burns indicating the technological possibilities of the tobacco crop writes: 'Given these conditions, we may look forward to a total acreage under cigarette tobacco of 2,00,000 acres which should give us annually 15,00,00,000 lbs. of good flue-cured tobacco. As regards tobacco for other purposes, I suggest that, for the moment they be left alone, and when the cigarette tobacco business is on a sound footing we may turn our attention to them.'[64]

Whether, India should grow tobacco for export, as Dr. Burns thinks, is a moot point. The obvious need initially would be to do away with imports of unmanufactured tobacco and to increase the consumption of the home-grown Virginia variety. For the latter such measures as the compulsory use of Indian tobacco up to a cetrain percentage in cigarettes manufactured in this country would be necessary. If such steps are taken the whole of the exports of flue-cured Virginia tobacco will be most likely absorbed in the country. The demand for other types of tobacco is steadily shrinking being displaced by the growing consumption and demand for cigarettes. Indian tobaccos largely consist of these varieties and consequently the prospects for these varieties of Indian tobacco exports during the post-war period appear to be gloomy. If Indian production of flue-cured Virginia outstrips internal requirements India might be in a position to export that type of tobacco. But India will be only an insignificant supplier in the world market, at least in the foreseeable future and will not be able to make much headway unless she has something very special as regards quality to offer.

10. Hides and Skins

As noted previously the information regarding the supply position of hides and skins in India during the war period is very scanty. It is generally known that the rate of slaughter was appreciably high during the period and that the livestock

63. W. Burns, *op. cit.*, p. 97.
64. W. Burns, *op. cit.*, p. 100.

population in India was consequently reduced. It might be expected that the supplies of hides and skins in India in the post-war period would continue to be at reduced levels than before World War II for at least some years to come. The growth of the livestock population is dependent on such factors as rain and the fodder supplies, epidemics, etc., and it is not possible to forecast as to when the pre-World-War II position would be regained.

During the decades preceding World War II the tanning and leather manufacturing industries in India were expanding. The proportion of tanned and dressed hides and skins in the total leather exports from India was continuously increasing while that of raw hides and skins was declining. The proportion of the former had increased to about 50 per cent. on the eve of World War II. During the war the tanning and leather manufacturing industries expanded remarkably under the stimulus of huge war orders. The proportion of raw hides and skins processed and consumed at home, in the total domestic production, increased considerably.

In the post-war period this trend is likely to continue. The *Report of the Panel on Leather and Leather Goods* has recommended the following targets for the tanning industry in India.[65]

(FIGURES IN LAKH PIECES)

Vegetable or Bark Tanning	*Pre-war Production*	*Post-war Targets*
(1) Bag-tanned leather ..	91	95·5
(2) Half-tanned leather hides Goat and Sheep skins ..	86	86
(3) Pitt-tanned heavy leathers (i.e., sole harness and belting) Chrome Tanning..	190 6	272 42
(4) Box and Willow sides ..	73 million sq. ft.	140 million sq. ft.
(5) Glace Kid leather ..	Not given	30 lakh pieces above current production

65. *Report of the Advisory Planning Board*, 1946, pp. 154-5.

The demand from the tanning industry is, therefore, likely to be very brisk and might be expected to absorb a much larger proportion of the domestic production than formerly. So also the demand from the footwear and leather goods industries can be expected to be bright. The Report of the Panel on these industries has recommended the following post-war targets of production :[66]

		Increase over pre-war production
Leather Footwear	—Indigenous types	— more than 100 per cent.
	Western types	— 50 per cent.
Leather goods	—Sports goods	— 100 per cent. over present production
Miscellaneous leather goods		— 100 per cent. over peak production during war
Civilian goods		— 200 per cent. over present production
Industrial goods		— Eliminate import of pickers and 75 per cent. of the imports of belting

The report further recommends :

> India's resources of raw hides and skins are abundant and before the war large quantities used to be exported. With the development of the tanning and leather goods industry India will be able to use all these resources herself. The Panel have shown that it is uneconomic to export them in their raw state and has recommended that export of raw hides and sheep skins should be banned completely and that export of raw goat skins should be restricted to 30% of the pre-war figure.[67]

The Government has not accepted the Report yet.

Judging from the information recorded so far, it might be expected that the exports of raw hides and skins from India might decrease very materially if not altogether. On the other hand the exports of tanned hides and skins and leather foot-

66. *Ibid*, pp. 156-7.
67. *Ibid*, p. 153.

wear goods might be expected to increase.[68] If internal demand for tanned leather also increases considerably as it seems most likely to do, even the exports of tanned hides and skins might be expected to shrink somewhat, as domestic production of raw hides is bound to expand at a slower rate.

Prospects for the export of Indian tanned and dressed hides and skins overseas appear to be somewhat uncertain. Most of the Continental countries, importing from India, are at present lying prostrate and Germany, one of India's main customers, is under military occupation. Economic recovery on the European Continent might be expected to take several years and promises to be a longdrawn out process. Demand from the U.K. is, however, likely to be bright.

In the U.S.A., the most important customer of Indian goat skins, the demand for hides and skins promises to be very brisk, at least, in the immediate post-war period. It has been estimated that during the five years after VE-Day, U.S.A. will require annually 4 million calf and small kips and 37 million goat and kid skins. The demand for lamb and sheep skins is expected to be at a much higher level than before World War II.[69] On the other hand demand for hides from the U.S.A. is likely to decline because her domestic herds have increased during 1940 and 1946 from 68 million to 80 million and these might be expected to meet in part a demand that was met by imports from overseas.[70]

Strangely enough the demand for Indian hides and skins of special types is expected to be quite brisk in South America. 'It might be of interest to note' writes the Indian Trade Com-

68. Note the following in this connexion: 'Certain countries with newly mechanized shoe industries will be in a position to export boots and shoes to Great Britain. Japan reached this position in rubber footwear in 1930, and it is possible that Asiatic countries, in particular India, may be in the same position for mainly leather footwear in a few years' time'. *Working Party Reports, Boots and Shoes,* submitted to the President of the Board of Trade, H.M.S.O., 1946, p. 39.

69. Prospects of Post-war Trade in the U.S.A., Special Report of the Indian Trade Commissioner at Washington, *Indian Trade Journal,* Vol. 158, pp. 456-7.

missioner in South America, 'that footwear made from Zebu hide leather, which appears to be made and imported at present from Brazil, fetches double the price of articles made from the local product (Zebu is the general South American word for Indian cattle) while Chile has expressed interest in dry and salted hides, and Colombia and Brazil would be importers of goat skins'.[71]

11. Lac

In the post-war period lac will continue to be, in all probability, a valuable article in India's export trades. So far the consumption of lac in India has been very small and it is likely to increase in the post-war period with increasing industrialization. It is, however, not possible to visualize any very sudden expansion of demand from that direction. The larger portion of the total production of lac in India will continue to be exported abroad during the post-war period.

The position of lac in the export markets in the post-war period will depend largely upon the competition it is likely to meet from synthetic substitutes. How far the large amount of progress that has been achieved in the field of plastics during the war will affect the position of lac cannot be said. As to the choice between synthetic resins and lac the position from the consumers' point of view has been very well put by Dr. D. B. Meek, Indian Trade Commissioner in U.K. in his Report for 1934-5:

> The consumer wants lac products at reasonable prices and of guaranteed purity and quality. That is what the synthetic resin or 'shellac substitute' manufacturers can give him; and the Indian producer or manufacturer has either to accept this position of affairs or to face the gradual shrinkage of the trade in a valuable Indian commodity, a commodity which has undoubted technical advantages over its rivals, but is confronted with difficulties only capable of solution at the production end.[72]

71. Report on the Prospects of Post-war Trade between India and the South American Countries, *Indian Trade Journal*, 8 November 1945, p. 233.

72. *Report on the work of the Indian Trade Commissioner* during 1934-5, p. 39.

The Government of India will have to take steps to remedy this situation. They have made a beginning in that direction by making applicable to lac the Agricultural Produce (Grading and Marking) Act 1937 by a notification dated 10 October 1939. Also by the Lac Export Control Order 1944 of 30 September 1944 the standard grades for exports have also been fixed. These and other measures will have to be adopted for keeping up the quality of exported lac and to enable it to stand competition from synthetic substitutes.

12. Mica

In gauging the post-war prospects of Indian mica it is necessary to start with an appraisal of the prospective supply position. In 1928 an apprehension was expressed in the U.S.A. that the supply of Indian mica might fail, firstly because that the Indian mica deposits might pinch out at shallow depths and secondly because the conditions in the Indian mica industry were such that the bigger and more efficient producers might be forced out of it.[73] In this connexion, The *Report of the Mica Enquiry Committee* observes:

> The Geologists we have examined have been emphatic that there is no geological reason for any apprehension on the first ground. The mica bearing pegmatites were formed long ago at great depth in the earth's crust. At these depths the conditions necessary for the formation of pegmatites must have existed over a range of at least few thousand feet of depth, and the existing mines, very few of which extend below five hundred feet in vertical depth cannot have affected materially India's natural reserves of mica.[74] The second ground on which the apprehension was based related to the existence of mica theft....The picture about theft seems to be overdrawn. Undoubtedly there is sufficient theft to call for action, but there is no reason to think that it threatens the existence of the big miners.[75]

73. G. Vernon Hobson. 'Note on the Marketing and Utilization of Mica'. *Bulletin No. 40 of Indian Industries and Labour*, 1928, p. 14. Quoted by the *Report of the Indian Mica Enquiry Committee* 1944-5, 196, p. 14.

74. p. 14.

75. *op. cit.*, p. 14.

There is, therefore, no reason to be alarmed about the supplies of mica in the post-war period. Provided there is sufficient demand and also that the mining industry remains as it is to-day, production of Indian mica can be expected to take care of itself. Measures regarding the employment of proper mining methods and the reduction of mica theft will be, it might be hoped, adopted by the government as proposed by the Mica Enquiry Committee.

The consumption of mica in India, as noted earlier, is at present very small. The Mica Enquiry Committee conducted an extensive inquiry into the various uses to which mica was put in the various Indian industries and came to the conclusion that there is great scope for increasing the consumption of block mica in the electrical industry, of micanite in railways and electrical industry, of pulverized mica in motor tyre manufacturing industry, in railways, etc., and of waste mica in several industries.[76]

India can easily dispense with the imports of micanite and pulverized mica if both the industries are organized on more efficient lines and are developed and also if enough propaganda is made to make the Indian products known to the Indian industries concerned. The large-scale development of electrical and other industries during the post-war period that is foreshadowed to-day in both official and non-official plans of development indicate bright prospect for the increasing use of mica in India. Internal consumption and demand are likely to be very favourable in the post-war period for the mica industry in India.

India will, however, continue to be an important world exporter of mica. It seems, however, doubtful whether she will be able to maintain her pre-eminent position as the world supplier of mica in the post-war period. This is not because of a declining world demand for mica in general or because of the successful manufacturing of mica substitutes. World demand for mica can be expected to be bright in the post-war

76. *Report of the Mica Enquiry Committee 1944-5*, 1946, Chapter IX.

period and no effective substitute for mica has been yet found.[77]

The danger to India's pre-eminence in this field arises from the development of alternative sources of supply. Firstly, there is the possibility of the substitution of lower grade block mica, available in various countries, for the high grade mica imported from India and secondly, the possibility of the substitution of Indian high grade block mica by high grade block mica from the growing mica industry of Brazil. In addition there arises also the possibility of mica splittings being supplied by other mica producing countries.

As regards the first, the following from the remarks of an official of the U.S. War Production Board is highly relevant: 'The opinion most generally held in this country is that the best substitute for high grade mica, that is, mica of good stained quality or better, is the next lower quality of mica stained quality....Considerable experimental work has been proceeding to determine to what extent lower quality mica can be used in capacitors. This work has not yet concluded,

77. *op. cit.*, pp. 98-100.

This contention might have to be modified in the light of the most recent developments in the field. 'It is reported that synthetic mica can be produced in the laboratory and that the Germans had worked out the most successful process of making artificial mica only two months before their surrender. The German process starts with the melting of sand cryolite, and other raw materials in a graphite crucible to obtain a complex mixture containing five chemical compounds with various combinations of oxygen, fluorine, aluminium, magnesium, sodium, potassium, iron, zinc, and other elements. As the mixture, on cooling, passes from 1270°C to 1230°C, it is treated with a magnetic field which causes the material to show the type of cleavage when it becomes cold that natural mica does. When this process is in production, say U.S. investigators, blocks of mica twelve inches on the side and even larger can be turned out.' Eugene W. Nelson, 'Mica', *Science Digest*, February 1947, p. 74.

The Germans did not get enough time to try the process out and there are no data regarding costs of manufacture, etc., to go upon to determine how far mica so produced will be able to compete with the natural product. The prospects are thus uncertain and beyond noting this development nothing definite in that regard can be said at present.

but the partial results obtained to date are quite encouraging. It now appears very likely that lower quality mica will be declared suitable for at least the lower grade capacitors, that is, those for which performance specifications are not the most exacting'.[78] This technical advance might bring about a larger reliance on the lower grade domestic mica deposits in different countries and might conceivably lead to a lowering of foreign demand for Indian mica.

During World War II the mica industry in Brazil has made considerable progress with the help of U.S. technicians, capital and machinery and during the post-war period she threatens to become a serious rival of India as an exporter of muscovite block. During World War II Brazil's exports of block mica to the United States more than doubled. The quality of Brazilian mica also compares favourably with the Indian. 'The prevailing colour of Brazilian mica is ruby; there is also a type of brown mica considered to be as good as ruby. It is said that the Brazilian mica can be utilized for almost all the purposes for which Indian mica is used'.[79] After comparing the quality and price schedules of Indian and Brazilian mica the Mica Enquiry Committee came to the conclusion that

> without selling her splitting quality mica, Brazil could produce and export mica at prices which on the whole do not compare very unfavourably with Indian prices. This, however, was at a time when she was receiving help in engineering skill, machinery and capital from the United States, who under pressure of war needs was prepared to take all the strategic mica produced, and it is not possible to say with any certainty, whether with the close of war, Brazil will be able to continue producing mica under conditions competitive with India.[80]

Little comfort, however, can be derived from the latter observation because Brazil is geographically more suitably situated to supply both the U.S.A. and the U.K. So also there is every likelihood of the U.S. help continuing even in the post-war period, because the U.S.A. is interested in the deve-

78. Quoted by *Report of the Mica Enquiry Committee 1944-45*, 1946, pp. 97-8.

79. *Ibid*, p. 96.

80. *Ibid*, p. 97.

lopment of South American countries and also because Brazil has accumulated substantial dollar balances during World War II. Keener competition from Brazil might be expected in the post-war period. It is also likely, though not certain, that the U.S.S.R. might emerge as an exporter of mica. But nothing definite can be said about it as present.[81]

Indian exports of mica largely consist of splittings and India is the largest world supplier of splittings.

The only other country exporting splittings to a comparable extent is Madagascar, but these splittings are made of phlogopite mica. The secret of India's pre-eminence in this branch of industry is its cheap labour, which, by years of experience, has acquired superior efficiency. Muscovite mica does not lend itself to mechanical splittings; Canadian phlogopite does, and, in 1941, special equipment was installed in the United States for this purpose. Canadian exports to the United States for mechanical splittings are estimated to have been about 8,00,000 lbs. in 1943. Dr. H. S. Spence noted, however, that such splittings are rougher and heavier than those made by hand, and we think it unlikely that this development presents a real threat to Indian muscovite splittings. But this is no reason for complacency, for attempts are being made to get the mica of the United States and Brazil split in Mexico, where wages are low and where the labour is said to have shown more aptitude for this work than the labour in Brazil. Whether the experiment will succeed, we cannot say, but this threat of foreign competition will have to be remembered by the Mica Marketing Control Board, and the price of mica splittings should not be forced so high that it will pay a country which has cheap labour to import mica for splitting and re-export.[82]

81. Deposits of muscovite mica were also discovered in Canada shortly before the World War II and production amounted to 606,837 lbs. in 1942. But the deposits are not very large. 'The opinion in Canadian mica mining circles confirms the view that the output of domestic mica is never likely to be sufficiently large to seriously affect the Indian trade. It is believed that high-class mica as used for precision punched condenser films, etc., may perhaps be produced locally in increasing quantities, but the trimmings and splittings which form the bulk requirements of trade will continue to be imported from India'. Report of the Indian High Commissioner 'Prospects of Post-war Trade in Canada', *Indian Trade Journal*, Vol. 159, p. 10.

82. *Report of the Mica Enquiry Committee 1944-5*, 1946, p. 94.

13. MANGANESE

Indian manganese deposits are rich and are capable of yielding much larger output every year than at present.

There seems, at present, no reason why the Indian manganese industry should not rise to new peaks of production. Perhaps the greatest possibilities lie in a large increase in production of ferro-manganese, which India should thrive as much as possible to export in lieu of ore. With low manganese-ore production costs and low fuel charges, India should be well able to compete in the ferro-manganese trade. On the past average rate of production, the minimum reserves of the best deposits in the Central Provinces, will last over 20 years. Geophysical methods of prospecting will bring to light new deposits in the future, and, with deep mining, the manganese industry in India is assured of many years of life.[83]

The line of development indicated above seems to be the most profitable for India to follow. During the war the Indian iron and steel industry has developed considerably and during the post-war period it can be expected to consume ever-growing quantities of manganese and ferro-manganese. India will, however, continue to export a large proportion of her total production of manganese ore.

Overseas demand for Indian manganese is likely to be fairly keen. Substantial demand from the U.S.A. can be expected.[84] Canada used to import manganese ore before World War II mainly from the Gold Coast Colony but during the war the Indian variety was imported and was found satisfactory. Indian manganese ore, therefore, can be expected to command a fairly bright demand in the Canadian market though it will have to face competition from Brazil which has also been increasing her exports of manganese ore to Canada during the war.[85]

83. J. A. Dann, *Manganese Ore*, p. 46, quoted by The Report on An Inquiry into Conditions of Labour in the Manganese Mining Industry in India, Labour Investigation Committee, D. V. Rege, 1945, p. 3.

84. *cf.* 'Prospects of Post-war Trade with U.S.A.', Special Report of the Indian Trade Commissioner at Washington, *Indian Trade Journal*, Vol. 158, pp. 456-7.

85. *cf.* 'Special Report on the Prospects of Post-war Trade with Canada', by the Indian Trade Commissioner at Toronto, *Indian Trade Journal*, Vol. 159, pp. 6-12.

CHAPTER V

INTERNATIONAL POSITION OF INDIA'S RAW MATERIALS

The products of a country have to compete in the domestic market with imports from abroad and in the external market with exports from other countries. The latter might be further subdivided into competition encountered by the exports of a country in the market of another country which also produces the same or similar products and the competition encountered in third country markets by the exports of a country from exports from other countries. It will be obvious that the first type of competition in this subdivision is merely the reverse of the competition in the domestic market referred to at the beginning and though it is a logical category it is not significant enough to yield any valuable or important results. In the following the external market is treated as one whole.

Only three of the Indian raw materials discussed in these pages faced competition from imports in the domestic market. They were cotton, wool and tobacco. In all the three cases the imports from abroad were qualitatively different from the bulk of domestic production. The bulk of cotton imported into India consisted of Egyptians and East Africans, long staple cottons the domestic production of which was insufficient to meet the needs of the Indian textile industry. Of late years the production of long and medium staple cottons was steadily increasing in India and this change in the character of the Indian cotton crop was accelerated considerably during World War II. India now grows proportionately a larger quantity of long staple cottons and these have to compete in the domestic market, with the imports of comparable Egyptian and East African varieties. Since the imposition of the import duty on foreign cotton in 1931 the Indian long staple cottons have had a protected domestic market and the foreign competition encountered was much tempered. The recent clamour for

the continuance of this duty shows that the Indian producer of long staples is not even to-day in a position to withstand foreign competition.

Indian cotton of medium and short staple varieties was occasionally subjected to intense competition from the imports of American Middling. This happened when the U.S.A. harvested an enormous cotton crop, as a result of which the cotton parity went against Indian cotton. It was then cheaper to import American Middling than to buy in the domestic market. This was, however, an occasional phenomenon and usually Indian cotton prices ruled well below the American parity.

Imports of raw wool into India from overseas largely consisted of fine type merino and crossbred wools.[1] The wool produced in India was mostly of the coarse carpet type and did not enter into competition with the imported varieties. As remarked earlier, however, examination has shown that some types of Indian wools, those produced specially in the north-west, could compare favourably with imported fine type wools. If these types are encouraged and their production increased a competition between domestic and imported raw wool will emerge. At present such a competition is almost non-existent as there is considerable qualitative difference between domestic and imported wools.

In the case of tobacco only a small percentage of the domestic production was of the flue-cured cigarette type and imports mostly consisted of this type of tobacco. They mainly came from the U.S.A. India did not produce high-class cigarette leaf. The quality of the comparable domestic variety was different from that of the bulk of imports and competition between them could not be said to subsist. When India begins to grow high-class cigarette leaf such a competition would emerge.

1. The large bulk of the wool imports through land frontier routes into India consisted of the carpet type of wool and most of it was re-exported.

Of the three products discussed above only one, cotton, meets with competition from imports in the domestic market and in the case of the other two such a competition may be said to be in the offing. In all the three cases the bulk of the domestic production differed qualitatively from imports. But the situation was changing and the qualitative difference between the two was either being eliminated or there was the prospect of such an elimination because of the change, actual or potential, in the character of domestic production.

The implications of such developments from the point of view of foreign trade might be indicated by a reference to cotton. Formerly the bulk of the Indian cotton crop was of the short staple variety and India was the principal world supplier of that type of cotton. She enjoyed an almost semi-monopolistic position in that line and Indian cottons, being qualitatively different from other cottons entering world trade, had to face almost no competition in the world market, of course in their own limited sphere. As, however, the character of Indian cotton production changes, Indian cottons come to qualitatively resemble more and more the other internationally traded cottons. There is, therefore, a prospect of an intensification of competition. On the other hand, the changing character of the Indian cotton crop has made Indian cotton much more broad-based and variegated. As a result it has become more stable than when the bulk of it consisted of the short staple variety, a variety the internal as well as the external demand for which was continuously declining. These two are conflicting developments and may ordinarily be expected to nullify one another. But in this particular case they happen not to be producing conflicting results. The changing character of Indian cotton is not undermining India's semi-monopolistic status in the international market of short staples because there is no other producer of short staple cotton in the world. If China emerges as a rival to her in later years, the position might change radically. There is no such prospect at least in the near future. The position of Indian cotton has become stronger than before as a result of these developments. It must be remembered, however, that this is by no means a typical case. Each case will have to

be judged in its own setting and the balance of conflicting forces might tilt either way.

In the external market exports of all the Indian raw materials under discussion here, except jute, have to compete with exports from other countries. Jute is of course India's monopoly. In all the other cases the competition encountered by each product differs in character and degree of intensity. In examining these the demand and supply position of the commodities under discussion is essential. This, together with an historical study of how the position has come to be evolved during the inter-war period in respect of each of them, would indicate broadly the international position of India's raw materials as it has been in the past and as it is likely to be in the future.

In considering external demand we have to consider the alternative sources of supply, the existence of substitutes and the elasticity of their supplies, the position of India as a supplier in the world market and the dispersion of the external market. In the following each is discussed in the above order.

Alternative sources of supply are not available to foreign countries in respect of jute and lac. In all others they exist, but the supplies available in them are not sizable in the case of hides and skins, mica and carpet wool. In cotton, oil seeds, tea, coffee, manganese and tobacco the elasticity of supplies from other sources is considerably large, though varying in each case. Substitutes of jute and lac are available but they do not, at present at least, prejudice the position of these products. Mica was so far in the same category. Its chances of remaining so in the future are somewhat uncertain.[2] In respect of oil seeds the substitutability is of course the largest as oil seeds are inter-substitutable to a very large degree.

If a country is the dominant exporter of a commodity in the world, the external demand for her exports of that commodity tends to be comparatively stable and as also keener, and the country dominates the international market in that

2. cf. p. 298 ff. infra.

commodity. It calls the tune in that market.[3] Similarly a country may not be the largest producer or exporter of a commodity but if it is the largest exporter of a special variety of that commodity it commands a dominating position in that part of the international market of that commodity. The dominant position of a country is threatened by the expansion of production of those commodities in other producing countries or by the development of substitutes which other countries are in a better position to produce and export. The position of India as an exporter of raw materials and how that position has changed, if at all, during the inter-war period must be examined in this light.

In the world market India enjoyed a dominant position in respect of jute, lac, mica, hides and skins, manganese and tea, before World War I. It was not impaired during the inter-war period. After World War II India's dominant position in regard to mica may be expected to come increasingly under challenge from other mica producing countries, particularly Brazil. The development of substitutes would also work in the same direction. If again India considerably reduces her exports of raw hides and skins and increases those of tanned varieties, her dominant position in the raw hides and skins market might disappear and it might be replaced by a similar one in respect of tanned leather. The U.S.S.R. displaced India as the largest world producer of manganese ore in 1929. But India, on an average, still remains the largest world exporter of it. Indian manganese ore again has the highest percentage of manganese in the world and as such her position in international trade in manganese might be still said to be unimpaired. Though India retained her dominating position in regard to tea during the inter-war period, Indian tea began to encounter intense competition from the cheap teas of Java and Sumatra during this period. In the post-war period India's position might become stronger, at least

3. The relationship between the small and large suppliers in international trade is described thus by the *Review of World Trade* (1938) of the League of Nations: 'While the quantity exported by the principal producer determines the world market price, that exported by the small producing countries is determined by the price', p. 47.

for a decade to come, because of the devastation of tea estates in Java and Sumatra during World War II.

India became dominant in the world trade of groundnuts during the inter-war period. In the post-war period this state of affairs seems unlikely to continue for two reasons. Firstly, as remarked earlier, groundnut might acquire considerable significance in the future Indian economy and its exports might be severely restricted. Exports might also decrease because of increasing consumption at home. Secondly, vegetable oils are substitutable to such a large extent that a country producing the bulk of the world crop of a single oil seed can be said to maintain only a precarious dominance over the international oil seeds market at any time.

India was never dominant in the world cotton market and her position has remained almost unchanged during the inter-war period. The changing situation in that regard has been touched upon earlier. India's position definitely worsened during the inter-war period in regard to linseed and castor seed. Her position was under challenge in respect of the former since the turn of the century but the challenge became much more menacing after World War I. Indian linseed production never attained the peak of 6 million tons reached in 1911, during the inter-war period. Argentina completely dominated the international linseed market. It is to be seen whether in the post-war world both India and Argentina emerge as exporters of linseed oil and continue to compete with each other on a higher level. In respect of castor seed India's position was usurped by Brazil in the early thirties and there appears no prospect of recovering it again.

Thus India's dominant position in world market in respect of some raw materials discussed here has come under increasing challenge and the same trend might be expected to continue in the future. In two cases she has lost it irretrievably. As a consequence of these developments external demand for those raw materials might be expected to become rather unstable.

If the exports of a country are concentrated in single markets the demand for them tends to be rather non-expanding or

rigid. For analyzing Indian raw material exports from this point of view it would be necessary to study the main markets to which Indian raw materials were exported and how they have changed, if at all, during the inter-war period.

Before World War I, the U.K. was the principal customer of Indian jute, linseed, castor seed, tea, tobacco, mica and manganese. In the quinquennium preceding the outbreak of World War II the off-take of the U.K. was still the largest in respect of castor seed, linseed, tea, and mica. Her share in the total exports of linseed and tobacco from India had considerably increased, especially after 1932, mainly because of the Ottawa Preferences. Her share in the manganese exports had declined during the inter-war period but she still remained its largest buyer. Though the U.K.'s share remained the largest in jute exports it had shrunk markedly from 30 per cent. before World War I to 22 per cent. during 1934-9. Her share in the exports of groundnut increased but it declined in respect of lac exports. The increase in the U.K.'s share in the exports of linseed, tobacco and groundnut was mostly to be attributed to the Ottawa Preferences.

Before World War I the U.S.A. took the largest share of the exports of skins and castor seeds from India. During the inter-war period she disappeared as a buyer of castor seed from the Indian market. Her off-take of skins still remains the largest. The percentage of the total exports of lac going to the U.S.A. from India increased from 26 before World War I to 40 before World War II. The U.S.A. thus became the largest buyer of lac from India. Her share in mica exports increased from 15 per cent. before World War I to 30 per cent. before World War II.

Japan maintained her position as the largest customer of India's raw cotton throughout the inter-war period. She took on an average about 50 per cent. of the exports of raw cotton from India. She also became an important buyer of manganese, her share in those exports increasing from almost nil before World War I to about 21 per cent. in the quinquennium preceding 1939.

A tendency towards a more even distribution of exports among different countries could be noted in the case of jute hides, particularly kips, and groundnut. The dependence of exports on single markets increased in the case of linseed, and tobacco largely because of the Ottawa Preferences. The position remained more or less unchanged in regard to tea, lac, mica, cotton and skins. In the case of tea the position would have changed but for the Ottawa Preferences. In the case of lac and mica, though the situation from the Indian side remained comparatively unchanged, there was a large shift of markets; because in both cases the U.S.A. became the largest importer in place of the U.K. In the post-war world exports of jute, hides and groundnuts are likely to continue to be increasingly more evenly distributed among importing countries. In others also, on a consideration of the overall position, there is every likelihood of a similar trend appearing in the post-war world because of the changing character of domestic production or the likely absence of trade preferences, etc. As a result, external demand for Indian raw materials as a whole might be expected to be more elastic and consequently rather unstable.

In examining the prospects of the exports of India's raw materials during the post-war period from the supply side, it would be necessary in the first instance to discuss the production potential of the country and then to indicate the prospective export surplus that might be available with reference to the state of domestic demand.

In the case of non-agricultural raw materials and plantation crops discussed here, namely mica, manganese, tea, and coffee, the possibilities of increasing production are considerable. The deposits of both mica and manganese are enormous and are capable of being worked more thoroughly. Tea and coffee plantations are capable of further extensive as well as intensive exploitation.

In the case of agricultural raw materials it would be useful to begin with the actual trends of production during the inter-war period. The production of cotton, jute, groundnut and tobacco recorded increases during that period while that of

castor seed and linseed showed a tendency to decline. The latter, in some areas, was displaced by groundnut. The production of wool, hides and skins depends mainly on the movement of livestock population and the latter is estimated to have recorded an increase of between 15 to 20 per cent. during the inter-war period. The production of lac recorded an increase of 60 per cent. during the same period.

The problem is to estimate the extent to which agricultural production in India can be increased. Agricultural production can be increased by the extension of cultivation and/or by intensive farming. Extension of cultivation is a very slow process and depends upon the availability of cultivable but uncultivated land. In British India, for example, the net area sown increased by slightly less than 7 per cent. during 1911-2 to 1940-1. During the last 2 or 3 decades under the pressure of growing numbers the limit of the extension of cultivation has been reached in many a region in India. Possibilities of the extension of cultivation are therefore very limited. There is, however, considerable scope for the development of intensive farming. Yields are everywhere very low in India.

> Indian soils are at a stage in which, on the whole, there is neither increased or diminished production. Judging from the results of over 5,000 manurial experiments in India and the variability in the yields of no-manure plots it is probable that in most parts of India, soil fertility is stabilized at a comparatively low level. There are, however, indications that improved varieties with a higher uptake of nutrients may depress this level still further. This being so, it is not difficult to ensure increased yield by manuring and especially by manuring with nitrogen, for which the land has the greatest hunger.[4]

Dr. Burns has indicated the technological possibilities of increasing yields in respect of many agricultural crops in India. Broadly speaking, they would indicate an overall increase of 25 to 30 per cent. in agricultural production in India. These are, however, only possibilities and are capable of being realized only if they are vigorously pursued and worked up by the central and provincial governments in India in the post-

4. Burns, *op. cit.*, p. 121.

war period. Assuming that the latter have the wish and also the finances to do so, the potential increase in agricultural production may be put at 25 to 30 per cent. over the present level.

It would be, however, wrong to assume that the production of all the agricultural raw materials under discussion here will increase to that extent, because even though yields increase the area devoted to their production might be smaller than at present due to priorities that are likely to be fixed by the planning authorities and governments in India in the post-war period. From present indications it seems almost certain that food and fodder crops will receive the highest priority in post-war India. Even though the possibilities of intensive farming are considerable for attaining self-sufficiency in food supplies for feeding her growing numbers and for fighting malnutrition, India will have in future to divert much more land to food and fodder crops than at present. As the scope for the extension of cultivation is very limited, the land available for other crops will be naturally much less than at present. Agricultural production is as a whole inelastic to a very great extent in backward and poor countries and an increase or decrease in the production of a particular crop means a proportionate decrease or increase in the production of some other. Thus during the inter-war period the acreage planted to linseed decreased and was replaced by groundnut. During the war area under cotton was diverted to food crops. Taking all these facts into consideration we can broadly speaking expect an overall increase of 10 to 15 per cent. in the production of agricultural raw materials in the post-war period. Livestock population will have favourable environment for rapid multiplication in the post-war period and an appreciable increases in the supplies of wool, hides and skins might be expected.

This together with the estimates regarding the probable shape of internal demand in the post-war period would indicate the possible extent of exportable surpluses in that period. Before proceeding to this task, the implications of an increase or decrease in internal demand for raw materials might be probed a little further. It would be enough for our purposes

to indicate the implications of an increase in internal demand. The same with appropriate changes might apply to a decrease. An increase in the internal demand for raw materials can be the result of two sets of conditions and might be productive of different and even opposite effects. Internal demand might increase, because of an increase in the total amount of consumption in the land due to the growth of population unaccompanied by a growth of *per capita* consumption or it might increase as a consequence of the growth and development of industries using these raw materials. The first type may be exemplified by the growing food requirements of the Indian population and the second by the increased demand for raw cotton from the Indian textile industry. In both cases if internal production of raw materials does not rise proportionately, the exportable surplus is reduced, but with almost opposite effects and implications. In the first case the decline in exports is a net deduction from the exports of that country. It indicates that the growing population is pressing on the erstwhile surpluses of the country and poverty is increasing. In the second case, the decline in the exports of one or more raw materials is not a net deduction. It is compensated for, and sometimes more than compensated for, by an increase in the exports of manufactured or processed articles and/or a reduction in the imports of manufactured or processed goods. It might imply either one or many of the following: growing industrialization, growing self-sufficiency, increasing incomes, rising employment, etc. It would, in short, denote the increasing economic well-being of a country. The past and future developments in India in this respect must be studied in this light.

It would be convenient to begin with a study of the trends during the inter-war period. The proportion of exports of raw cotton to total production in India declined from 59 per cent. in 1922-7 to 44 per cent. in 1937-9. The growth in the internal demand largely resulted because of the expansion of the Indian cotton textile industry. In jute the proportion of exports to total production remained practically steady around 40 per cent. during 1929-30 and 1938-9.

The proportion of exports to total production of groundnuts in India declined from 50 per cent. in 1918-9 to 1922-3 to 39 per cent. in 1934-5 to 1938-9. The bulk of the internal demand had come from the groundnut crushing industry. During this period exports of groundnut oil from India increased to some extent and there was also a decline in the imports of vegetable ghee because of the development of *Vanaspati* manufacturing industry at home. In regard to linseed the proportion of exports to total production increased from 54·5 per cent. in 1925-6 to 1929-30 to 57·4 per cent. in 1930-1 to 1934-5 but dropped again to the former level in subsequent years. Internal demand and exports fluctuated violently and there could be marked no trends either way in either of them. Exports of linseed oil from India steadily expanded since 1932 and its imports declined. In the case of linseed we can, therefore, only state that during the inter-war period the position did not change much but showed a slight improvement. In castor seeds the proportion of exports to total production was 43 per cent. in 1931-3. It declined to 40 per cent. in 1934-9. This was in spite of a decline in the total production of castor seed in India during this period. Exports of castor oil from India increased during the inter-war period.

In the case of tea the proportion of exports to production declined from 91 per cent. in 1918-9 to 1922-3 to 78 per cent. in 1934-5 to 1938-9. The proportion of exports to total production of coffee declined from 90 per cent. in 1909-10 to 1913-4 to 61 per cent. during 1930-8. In both cases the increase in internal demand was due partly to an increase in the number of tea and coffee drinkers and partly to an increase in *per capita* consumption. The proportion of tobacco exports to tobacco production remained around 2 per cent. during the period from 1925-37. During the latter part of this period the imports of cigarettes showed a continuous decline though cigarette consumption in India was increasing. There was also an increase in the imports of unmanufactured cigarette tobacco.

In regard to hides the available data show that during the inter-war period the tanning industry in India expanded considerably and an increasing proportion of the domestic production was tanned by it. The exports of raw hides

showed a declining tendency during the period. In the total exports of tanned and untanned hides from India the proportion of raw hides declined from about 64 per cent. in the quinquennium ending 1923-4 to about 49 per cent. in the quinquennium ending 1938-9 while that of tanned hides increased from about 34 per cent. to 43 per cent. during the same period. The bulk of skin exports continued to be of the raw variety during the inter-war period. Data are not available to indicate the trend of internal demand during that period. There was only a slight increase in internal demand for lac, mica, and manganese during the inter-war period.

Internal demand increased in the case of cotton, groundnut, castor seed, tea, coffee, tobacco and hides, between the two world wars. In the case of jute it languished only slightly. Broadly speaking, increase of demand was of the second kind described earlier in the case of cotton, groundnut, castor, hides, and tobacco and possibly linseed. It was of the first kind in the case of tea and coffee. The cases of wool and skins are doubtful and uncertain because of the lack of necessary data.

In the war period there was considerable increase in industrial activity in India and internal demand for cotton, jute, wool, groundnut, linseed, castor-seed, hides, skins, tobacco, lac, mica and manganese increased to a very large extent. Domestic consumption of tea and coffee also increased because of an increase both in *per capita* consumption and in the number of tea and coffee drinkers.

In the post-war period industriailzation is likely to be vigorously pursued and internal demand for the raw materials discussed here may be expected to increase rapidly. Unless, therefore, their production increases rapidly during that period, the exportable surpluses in those lines might be expected to be reduced considerably. The latter might be compensated for by a decline of imports of manufactured goods and/or an increase in the exports of manufactured goods. India is not likely to develop such very highly specialized industries as would absorb the whole or at least the bulk of the domestic production of lac, mica and manganese. These will most probably

continue to be exported on the former scale in the post-war period.

In summary, the foregoing discussion leads to the conclusion that the external demand for India's raw materials has tended to become increasingly elastic and unstable and India has lost her dominant position in world trade in quite a few lines. These trends are likely to continue during the post-war period, perhaps at a more rapid pace. On the supply side, there is a likely prospect of considerable increase in domestic demand and only a small increase in production in the case of such major export items as cotton, jute, oil seeds etc.

The overall picture of the prospects of raw material exports of India would, therefore, appear to be of a decline. In many lines such as cotton, hides, etc., India might very likely cease to be an important world exporter. In fact India might cease to be an important world exporter of raw materials in the post-war period. From that point of view the international position of India's raw materials is likely to be much less strong than before World War II.

How far is this a desirable development ? As remarked earlier a decline in the exports of raw materials from a country might indicate either an improvement or a worsening of the economic conditions in it and the character of these consequences would indicate the desirability or otherwise of the decline in raw material exports. In the case of India the general nature of the consequences of declining exports of raw materials can be broadly indicated. As indicated earlier this will largely depend upon the likely nature of internal demand, and this in its turn will depend upon whether internal demand will rise largely because of an increasing population or an increase in *per capita* incomes in the country resulting from industrial and other development. Considering all the factors operating on the situation both scales seem equally weighed and whether the balance will tilt one way or another is difficult to determine. Indian population is 'young' and because of the declining mortality, it is likely to increase much faster than before. India's resources in relation to her popu-

lation are not plentiful or even adequate. The extent of capital formation is very small because of the crushing poverty of the masses. The supply of capital in the country is chronically short for a proper development and exploitation of the existing resources. No doubt, during the post-war period determined efforts will be made to develop the country economically. This might tend to increase the standard of living of the people to some extent, if all other things remained the same. And there precisely is the rub. Because all other things and particularly population, cannot be expected to remain unchanged.[5] In the circumstances not a very substantial increase in *per capita* incomes of the Indian people can be confidently expected. A large part of the internal demand for food, oil seeds, etc., might be expected to flow from growing numbers rather than from an increase in *per capita* standards of living. How these conflicting tendencies will balance one another and whether the decline in the exports of raw material from India will reflect her growing poverty or its opposite, is, as remarked earlier, very difficult to determine. A wise planning of wealth and numbers would change the complexion of things radically. Indeed the prospects will very largely depend upon the economic and social policies that would be adopted and pursued by the Indian Governments of the future. The political significance of the fact can hardly be overstressed.[6]

5. *cf.* in this connexion N. V. Sovani, 'Population Planning in India', *Indian Journal of Economics*. January 1947.

6. See for a discussion of the problems involved: 'Transition Towards National Economies and Prospective Policies during Transition', Section IV, *Transition from Colonial to National Economy*, Research Staff of the Gokhale Institute of Politics and Economics, 1947. (Being a paper prepared under the direction of N. V. Sovani, for the Asian Relations Conference, March-April 1947].

APPENDIX I: CASTOR SEED

[The following information is summarised from the *Report on the Marketing of Castor seed in India* (1947) which was recently published to supplement the information contained in the text.]

The official estimates of production contained in the *Estimates of Area and Yield of Principal Crops in India* are considerably inaccurate (p. 3, 4, 5). To ascertain the correct position special inquiries were made by the Agricultural Marketing Department and Table A sets out the data so gathered and those embodied in official crop estimates.

TABLE A

Production of Castorseed in India

(Source:—*Report on the Marketing of Castor seed in India*, 1947, p. 6)

(Thousand Tons)

	Average 1939-40 to 1941-42 according to official estimates	Average annual production (1939-40 to 1941-42) based on data collected during the survey
Bihar ..	4·3	35·0
Bombay ..	5·0	10·0
Central Provinces ..	4·8	5·0
Madras ..	25·3	25·0
Orissa ..	2·0	2·0
United Provinces ..	3·3	27·0
Baroda ..	5·0	15·0
Bombay States ..	7·0	18·0
Hyderabad ..	33·0	67·0
Mysore ..	8·0	8·0
Estimated production in areas not included in crop forecasts ..	—	3·0
Total India ..	97·7	215·0

Eight distinct types of castor seed are recognized by the trade viz. (1) Chitto (small seeded), (2) Kathiawar, (3) Madras, (4) Hyderabad, (5) Gujarat, (6) Calcutta, (7) Salem and (8) Cawnpore. The "Hyderabad" seeds, which in size are bigger than "Chittoo" and "Kathiawar" are very similar to "Madras", but smaller than others, and generally have the highest oil content. The very small size seeds known as "Chittoo" have the lowest oil content. "Pares" (fruit of perennial types) have the lowest proportion of husk". Table B gives the areas of production of these types and the share of each in the total production.

TABLE B

Varieties of Castorseed and the respective share of each in the Total Production

(Source: *Report on the Marketing of Castorseeds in India*, 1947, p. 12, 13)

Trade Description	Where grown	Share to the total production of Castorseed in India per cent
Chittoo ..	Warangal (Hyderabad) Parts of Madras and C.P.	8
Kathiawar ..	Kathiawar and Baroda States.	6
Madras ..	Madras and Adjoining areas of Mysore.	10
Hyderabad ..	Hyderabad State and adjoining areas of C.P.	25
Gujarat ..	Gujarat area of Bombay and Baroda State.	12
Calcutta ..	Bihar.	15
Salem ..	Madras and parts of Mysore State.	7
Cawnpore ..	U.P. and Parts of Bombay.	14
Pares ..	Hyderabad, Madras, Bombay.	3*

*Including other trade descriptions of minor importance.

Inquiries conducted by the Marketing Department furnished the following information regarding the supplies and utilization of castor seed in India.

TABLE C

Production and Utilization of Castor seed in India.

(Source:—*Report on the Marketing of Castorseeds in India*, 1947, p. 19)

Tons

Supplies	(Average 1939-40 to 1941-42)	Utilization	(Average (1939-40 to 1941-42)
Estimated Production	2,15,000	Used as seed for sowing	8,500
Exports	45,000	As clarifying agent in the preparation of Gur	1,000
Net available supplies	1,70,000	For Medicinal uses	500
		For crushing	1,60,000
			1,70,000

TABLE D

Estimated quantities of Castor seed crushed and oil and cake obtained in different Provinces and States

(Source :—*Report on the Marketing of Castor seed in India*, 1947, p. 28)

(Average 1939-40 to 1941-42)

(Thousand Tons)

	Quantities handled by			Total Quantities of castor-seed crushed	Quantities of oil obtained	Quantities of oil cake obtained
	Power Mills	Screw Press	Chekkus and Boiling Process			
Bengal ..	2·0	1·0	—	3·0	1·2	1·8
Bihar ..	2·0	20·0	2·0	24·0	9·3	14·5
Bombay and Baroda ..	45·0	—	3·0	48·0	19·4	28·1
Madras ..	5·0	12·0	2·0	19·0	7·4	11·4
U.P. ..	8·0	12·0	2·0	22·0	8·6	13·2
Hyderabad ..	2·0	29·0	1·0	32·0	12·5	19·2
Mysore ..	4·6	2·0	—	6·0	2·4	3·6
Others ..	2·0	2·0	2·0	6·0	2·2	3·7
Total ..	70·0	78·0	12·0	160·0	63·0	95·5

TABLE E

Utilization of Castor Oil in India

(Source :—*Report on the Marketing of Castor seed in India*, 1947, p. 34)

(Average 1939-40 to 1941-42)

Purpose for which used	Estimated quantity (Tons)	Percentage of the total used quantity
Lubrication of		
(i) Machines, bearing, etc., singly or blended with mineral oils.	24,000	41·3
(ii) Bullock carts, cane crushers, etc.	9,000	15·5
Lighting .	9,000	15·5
Preparation of Turkey Red Oil.	5,000	8·6
Soap Manufacture.	3,000	5·2
Hair Oils.	2,000	3·5
Leather and Tanning Industries.	2,000	3·5
Preparation of Liquid disinfectants.	1,000	1·7
Medicinal use.	2,000	3·5
Miscellaneous uses.	1,000	1·7
	58,000	100·0

In the international market 'Indian castor seed invariably fetched a higher price than Brazilian castor seed. The premium of the Indian castor seed—it varied from a minimum of 1 sh. per ton in April and May 1937 to a maximum of 39 sh. per ton in January 1939—is partly accounted for by the fact that on account of its uniformity Indian castor seed is often considered better than Brazilian castor seed by crushers in the United Kingdom despite the fact that the Brazilian seed generally has a somewhat higher oil content and lower free fatty acids. The variations in export demand and the relative supplies and exportable surplus available from the two countries of course, had a bearing on the premium obtainable for Indian castor seed from time to time.' (p. 40).

Competition from Brazil would be keener in the post-war period. India can, however, usefully increase her exports of

castor oil which is not exported by Brazil. There would be heavy export demand for it. Internal demand is also likely to increase with industrialization. 'Castor oil is a lubricant par excellence and castor cake is a valuable fertilizer. The importance of this oilseed in India's agricultural economy is all the more because the country's natural resources lack in mineral lubricating oil.' (pp. 9, 10).

APPENDIX II: EFFECTS OF PARTITION ON THE INDIAN RAW MATERIAL POSITION

It is the purpose of this brief note to indicate the effects of the partition of India into two political units in the context of the problem discussed in the main body of this essay. The data for attempting this task are yet very inadequate and what follows is based on such data as are at hand. It is merely a rough sketch of the contours of the problem.

The variations in surpluses and deficits in respect of every commodity in the Indian Union and Pakistan respectively will be chiefly determined by the division of natural resources, capital equipment, and population of pre-partition India between them. These will be reflected in the trade between the two separating units. If the seceding unit is deficient in some commodities which it formerly got from the parent-unit, it will have to import it after secession. What was internal demand formerly now becomes external demand. Imports of food grains from Pakistan into the Indian Union and the import of coal into Pakistan from the latter are instances in point. But there is a difference between the old and the new set up because what was formerly almost a protected and assured internal market now becomes a foreign and competitive market. Indian Cotton textiles will have, though not now sometime in future, to compete in Pakistan with textiles produced there as well as textiles from other producing countries.

In the following I shall try to indicate the effects of partition on the production and consumption of the raw materials discussed in this essay and to indicate some of its implications wherever possible. Tables F and G respectively give the

TABLE F

Acreage under various crops in the Indian Union and Pakistan during 1936-46

(Source : *Estimates of Area and Yield of Principal Crops in India* 1936-46, Ministry of Agriculture, Govt. of India, 1948)

[Thousand Acres]

		1936-7 to 1938-9 (average)	1939-40	1940-1	1941-2	1942-3	1943-4	1944-5	1945-6
Cotton									
	I ..	20,972	18,216	19,745	20,468	16,090	17,427	11,413	11,349
	P ..	3,693	3,364	3,566	3,683	3,113	3,659	3,430	3,319
Jute									
	I ..	865	794	1,143	778	852	701	581	580
	P ..	2,115	2,367	4,526	1,382	2,481	1,939	1,523	1,842
Groundnut									
	I ..	8,022	8,437	8,807	7,070	7,697	9,808	10,574	10,273
	P ..	(b)	1	(a)	(a)	(a)	(a)	(a)	(a)
Linseed									
	I ..	3,734	3,632	3,535	3,263	3,320	3,446	3,386	3,260
	P ..	78	83	84	85	86	87	82	74
Castorseed									
	I ..	1,248	1,003	1,019	955	1,360	1,541	1,466	1,426
	P ..	4	2	2	3	4	2	2	5
Tea									
	I ..	726	725	726	727	731	730	730	730
	P ..	108	108	108	108	108	108	108	109
Coffee									
	I ..	185	183	181	180	194	198	201	212
	P ..	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
Tobacco									
	I ..	903	947	907	983	845	713	867	1,022
	P ..	351	363	351	348	338	306	198	198

I: Indian Union (including Hyderabad). P: Pakistan. a: Below 500 acres. b: Not available.

TABLE G

Total Yield of different crops in the Indian Union and Pakistan during 1936-46

(Source : *Estimates of Area and Yield of Principal Crops in India* 1936-46, Ministry of Agriculture, Govt. of India, 1948)

		1936-7 to 1938-(average)	1939-40	1940-1	1941-2	1942-3	1943-4	1944-5	1945-6
Cotton (000 bales of 400 lbs.)									
	I ..	4,059	3,630	4,357	4,424	3,086	3,626	2,173	2,119
	P ..	1,594	1,279	1,723	1,799	1,616	1,633	1,407	1,411
Jute („)									
	I ..	2,002	1,988	2,646	1,647	1,746	1,541	1,236	1,556
	P ..	6,360	7,750	10,526	3,813	7,301	5,449	4,953	6,235
Groundnut (000 tons)									
	I ..	3,145	3,165	3,702	2,586	2,858	3,823	3,856	3,466
	P ..	(b)	(b)	(b)	(b)	(a)	(a)	(a)	(a)
Linseed („)									
	I ..	426	451	422	345	393	366	380	352
	P ..	15	15	12	16	17	15	12	11
Castorseed („)									
	I ..	114	107	105	91	146	140	131	123
	P ..	(a)	(a)	(a)	(a)	1	(a)	(a)	(a)
Tea (000 lbs.)									
	I ..	3,69,456	3,87,291	4,00,862	4,39,646	4,90,021	4,97,003	4,47,904	5,01,661(c)
	P ..	56,342	55,305	63,019	61,441	73,846	76,771	63,485	73,330
Coffee („)									
	I ..	16,023	15,546	14,226	17,886	16,257	17,240	17,300	25,200
	P ..	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.	Nil.
Tobacco („)									
	I ..	340	340	355	351	293	255	317	331
	P ..	149	136	113	140	138	121	88	93

I: Indian Union (including Hyderabad). P: Pakistan. a: Below 500. b: Not available.

acreage and yield of some of the agricultural crops in the two dominions during the last ten years.

Cotton: The raw cotton position of the Indian Union has been adversely affected by partition. The share of Pakistan in the total cotton production in India was about one-third; it was as high as about 60 per cent. in the production of long and medium staple varieties. (*Indian Trade Bulletin,* 1947 Annual Review Number, Ministry of Commerce, p. 51).

Almost the whole of the cotton textile industry is located in the Indian Union and during 1945-46 it consumed 3·1 million bales of cotton. Of these 2·1 million bales were of long and medium staple varieties. During the same year the total raw cotton production in the Indian Union amounted, according to trade estimates, to 2·47 million bales, of which 1·3 million bales were of long and medium staple cotton.

It is obvious that as a result of the partition the Indian Union has become a net importer of raw cotton. The average annual raw cotton requirements of the Indian Union can be reasonably put at about 3·5 million bales even if the total capacity of the Indian textile industry remains the same. Indian Union will have to import cotton from Pakistan or abroad and most of it will have to be of medium and long staple varieties. At the 56th meeting of the I. C. C. it was suggested that the Indian Union could become self-sufficient in regard to raw cotton. But there are great difficulties in the way. It is, for instance, imprudent and uneconomic to extend the area under cotton in the Indian Union materially in the face of the increased deficit in food supplies resulting from partition. The only hope lies in increasing per acre yields by intentive agriculture. The latter will depend on the effectiveness of State planning in that regard.

The present exportable surplus of raw cotton of the Indian Union has been estimated at between 100,000 and 200,000 bales of short staple cotton by the Indian delegation to the International Cotton Advisory Committee. (*Times of India,* 17 May 1948) Even if raw cotton production in the Indian Union increases by 50 per cent. over the present level,

the Indian Union will not be in a position to export more than 2 to 3 lakh bales.

The development of the cotton textile industry in Pakistan is only a matter of time and when developed it will be a formidable rival to the Indian textile industry. The latter will have to justify its existence by displaying more productive efficiency than it is wont to do at present.

Jute : The jute situation of the Indian Union has also been very adversely affected by the partition. On an average 75 per cent. of the total jute produced in India, is grown in the Pakistan areas. If only the export varieties are considered Pakistan's share comes to 50 per cent. (*Indian Trade Bulletin,* op. cit.). The *Tossa* and *Daisee* varieties of jute grown in the Indian Union, are largely exported.

The jute manufacturing industry is located almost wholly in the Indian Union. The annual consumption of raw jute during the last ten years has been never less than 5·5 million bales while during the same period the average production of raw jute in the Indian Union was around 1·8 million bales. The Indian Union will have to be a net importer of raw jute on a considerable scale even if production of raw jute is pushed to the farthest point of expansion.

As in the case of the cotton textile industry, the development of the jute manufacturing industry in Pakistan is only a matter of time and there can be no doubt that the jute manufacturing industry in the Indian Union will have to pay second fiddle to it. The Indian jute manufacturing industry will have to increase its productive efficiency considerably. This will also help the utilization of those varieties of raw jute which it has been reluctant to use so far.

Wool : Information regarding wool is almost completely absent. From the figures of production of wool in different parts of India supplied by the *Report on the Marketing of Wool and Hair in India* (1947) the share of Pakistan in the total production of wool in India can be roughly estimated at 30 per cent. or 240 lakh lbs. It should also be noted that the finer types of wools are almost wholly produced in the Pakistan

areas. Imports of raw wool from Iraq and Iran coming over land frontier routes will now go to Pakistan.

Most of the woolen textile mills are in the Indian Union and they consume most of the overseas imports of fine types of wool. The possibility of reducing these imports by using the finer types of indigenous varieties has now receded in the back ground as the finer types of wool are to be mainly found in the Pakistan areas.

From the estimates of utilization of wool in the different areas of India supplied by the same report the total consumption of raw wool in Pakistan can be roughly put at 21 per cent. of total consumption in India i.e. 88 lakh lbs.

Oilseeds (groundnut, linseed, castor) : The total production of these in Pakistan is negligible. Pakistan also consumes little quantities of groundnuts, linseed and castor. It, however, consumes groundnut oil in the form of Vanaspati to a quite considerable extent. She will have to import it from the Indian Union. In regard to these oilseeds the position of the Indian Union has not been affected ; if any thing it has improved in the sense that its exportable surplus is now larger than before the partition.

Tea : The position of the Indian Union in respect of tea is not affected by partition, except to a small extent. Pakistan's share in the total Indian tea production comes to about one-eighth. Calculating on the basis of the relative populations of the two dominions the consumption of tea in Pakistan can be estimated at about 20 million lbs. (average 1936-7—1938-9) the production of tea during the same period amounting to 56 million lbs. Pakistan will be a net exporter of tea. Indian Union's position as the leading world producer and exporter of tea remains unimpaired.

Coffee : Only negligible quantities of coffee are grown in Pakistan. From the figures of *per capita* consumption of coffee in different areas of India supplied by the *Report on the Marketing of Coffee in India and Burma* the total coffee consumed in Pakistan can be put at roughly 180,000 lbs. Pakistan will be a net importer of coffee.

Tobacco: The share of Pakistan in the total production of tobacco in India can be roughly put at between 25 to 30 per cent. Most of the tobacco in Pakistan is produced in East Bengal and is of the hookah, chilim and snuff types. From the figures of *per capita* consumption of tobacco in different parts of India supplied by the *Report on the Marketing of Tobacco in India and Burma,* the total consumption of tobacco in Pakistan can be roughly estimated at 100,000 tons, including 2,200 tons of cigarette tobacco. Pakistan produces no cigarette leaf.

Hides and Skins: No data are available in regard to these and it is impossible to indicate the effects of partition on them.

Lac: Pakistan produced only negligible quantities of lac. The position of the Indian Union remains unimpaired.

Mica and Managanese: Pakistan's share in the production of these is negligible, nor does it consume them in any significant quantities. The position of the Indian Union remains unchanged.

Generally speaking, the picture of declining raw material exports with which I concluded the main essay, has been scored deeper in the case of the Indian Union by the partition. The two major items of raw material exports, cotton and jute, have been affected the most. The surpluses in these lines have been displaced by considerable deficits and the future of the cotton textile and jute manufacturing industries in the Indian Union is seriously threatened.

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(*Compiled by* MR. D. V. DEODHAR)

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