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FURTHER UPWARD IN RURAL INDIA

By the same author

UP FROM POVERTY IN RURAL INDIA. With a Foreword by the Marquis of Willingdon. *Third edition*

Plate I, frontispiece: KEEPING YOUNG, SHOULDERING RESPONSIBILITIES AT MARTANDAM (see pp. 60-61)

FURTHER UPWARD
IN RURAL INDIA

By

D. SPENCER HATCH
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Directing Rural Reconstruction, Travancore and Cochin States
Author of 'Up from Poverty in Rural India'

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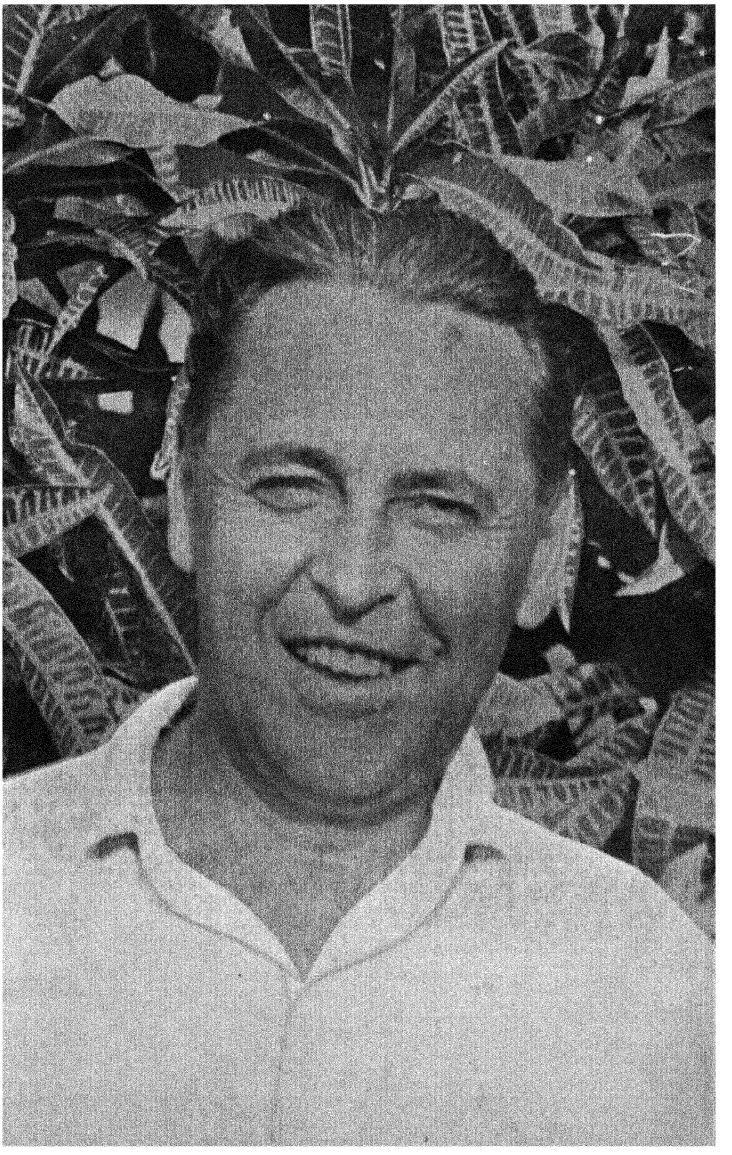
TO
EMILY, NANCY, AND SUSAN



PREFACE

THE theme of all great romances is the quest. The knights in the days of chivalry sought the Holy Grail, a lost lady-love, or mother, or father, or may be forgiveness, or sometimes adventure for its own sake; the scientists and leaders of today seek in fresh fields of romances, new principles, new methods. There is always the quest.

I am one who loves to tread strange, new paths, down which no one has gone before. I have delighted in walking day after day, on and on, through Indian primeval jungle armed with only a pocket camera, a New Testament, and an inquiring mind, and accompanied by my wife who was the first woman of her race to walk that trail, where the paths are made by the wild animals—elephant, bison, bear, tiger, leopard, and wild boar. Having a natural disdain for the beaten path, it has been to my liking these last twenty-one years to be engaged in a pioneering quest to help find ways for the poorest and lowliest of India's rural millions to lift themselves upward from a many-sided poverty toward a more abundant life.

There is romance in developing a newly-found or an impoverished country to make it fruitful; in finding and adopting principles, methods, and projects; in so teaching these to underprivileged people that they in turn can make them their own. My book *Up from Poverty in Rural India*[1] deals with the former part of the story; this one, *Further Upward,* recounts progress toward fuller fruitfulness. *Up from Poverty* deals more

[1] Oxford University Press, 3rd ed., 1936

with planting, *Further Upward* with growth and some full corn in the ear.

So many of our paths of experimentation are far from being fully cleared; some present thorny problems in spite of our daily study and our own relentless criticism. They are a severe test to enthusiasm—an attribute so necessary—but I am still an enthusiast because I do see results. I see Indian village families with their bare feet firmly planted on smoother and happier paths which I know will never be abandoned: these paths will lead these families and their children's children ever further upward.

D. S. H.

Martandam
February 1938

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CHAPTER I

IT CAN BE DONE

'SIR, will you please look at this?'

I turned from my desk to find M. Dason, honorary, unpaid secretary of the Paraniyam YMCA holding a building fund appeal toward me. Imagine my surprise at finding this young man who had barely recovered from a severe attack of smallpox, standing there before me seventeen barefooted miles from home. He had come for help and advice regarding the completion of their new building. The spirit of service and love for his work had almost literally driven Dason from his bed.

That was five years ago.

Dason is a modest, unassuming young man who speaks very little English. He and his wife are able to live and demonstrate there in this isolated village, the teachings of the Master Teacher. He is a quiet sort—very little talk or preaching is necessary for those who demonstrate by living and doing—but he is possessed of a dogged determination which nothing can move. And he is a leader. I should say he is a leader of leaders, for Paraniyam has more than its share of capable young men who give their time to the welfare of their little village. Many of them have taken training at Martandam and all of them at odd times visit the centre to learn from what goes on there. With Dason as their chief, they divide the work of the YMCA between them. They decide what needs to be done and then set about to do it. Once they start, they are irrepressible.

Their YMCA building is a case in point. I advised them to put up a small building which would cost about Rs. 500. Not a bit of it. They politely looked through me—and changed the subject. Not long afterward we attended the opening of the Paraniyam YMCA, a well-planned, good-sized building which cost Rs. 1500 and was all paid for except Rs. 75. Incredible, but true.

Three years ago they began to talk of having a Paraniyam YMCA Rural Reconstruction Centre. I took a deep breath.

'Think', I said, 'of all the cost of such a centre. Think how much money it will take to make poultry yards, and stables, to get all the fowls and cattle you will need, and then of all it will cost to feed them. And who can give all his time to taking care of them? Instead of trying to have all the activities of a comprehensive programme, you had better have a few reconstruction projects.'

I might have saved my breath. They wanted a Rural Reconstruction Centre and that meant they would have one. They had no money, no material possessions to help, but they wanted a centre because such a centre would mean help to them and their poor neighbours. After three years persistence Paraniyam has a full-fledged centre which is the envy of all the villages and one of the most inspiring, I could even say thrilling, places I know.

How they have done this I hardly know. The fact is, they have. Every time I visit them I see some new development under way. I bear in mind that they are building on Martandam's tried methods and have not had to go through the expensive experimentation stages; that we give them a great deal of help and advice. I bear in mind their wealth of somewhat educated unemployed young men who need these industries to help

them live: the honorary secretary for bee-keeping not only helps the bee-keepers of the area but keeps bees himself; the honorary secretary for poultry- and turkey-keeping does the same. The village is a member of the Martandam cock circuit, and their breeding bull and goat belong to the Martandam breeding circuit. An interested friend gave them a packet of tomato seeds and a new industry sprang up with the plants; wherever they are placed in the State, Paraniyam tomatoes sell at once. Another friend gave them a couple of looms; a weaving factory literally hums with activity.

All this takes money and Paraniyam has none. Perhaps such work does not take as much money as we are prone to think. Certainly Paraniyam uses a minimum. They have developed their marketing wisely. Simultaneously with the improvement of poultry they began to market eggs. They find their customers, with and without our help, and have marketed up to 4,488 large-sized eggs a month, guaranteed on the Martandam method. Honey properly bottled and labelled with their own label, towels of various sizes and cloth of different qualities, arrowroot flour, all sell well in the Trivandrum Sales Depot and in other places.

Actual cash is very scarce in Paraniyam and yet there is a local market. Poultry-keepers who bring in eggs take part payment in cloth woven in the weaving factory, and the weavers eat some eggs. As a result of this barter system the villagers are gradually becoming better dressed and better fed. Just now they have appointed their own honorary marketing secretary who will earn his expenses from the increased sales: the experiment has yet to be proved, but it marks a development in the right direction.

Their projects succeed because there is never any half-way business about them. It has always been our policy to deal only with a superior quality of products.

One day Paraniyam got a big standing order from a bakery which wanted fresh, cheap, eggs but cared little for size. They decided as a special case to sell ordinary size country eggs to this bakery and accepted the order. After a search in their area they had to write, 'We are sorry but small eggs are not to be found here now, as we have all improved our poultry and they lay bigger eggs.'

Paraniyam is thrifty. One day when I took our National General Secretary to visit them, he was impressed with their need of a marketing fund for their so-called weaving factory and offered to loan them a hundred rupees without interest. Where in the world would any one find it difficult to give a loan without interest? Paraniyam. They talked the matter over together and then said, 'Thank you, but we will not take the loan. We have learned from the co-operative society how difficult it is to pay back loans. We might not be able to pay on time.' They have kept on with their weaving factory of six looms and twelve weavers, villagers who were formerly unemployed. They sent one man to the Government school to learn the best technique. The equipment was too expensive for them to buy, so they have built their own. Bleaching and dyeing are now done in the factory. Yarn is supplied to weavers who have looms at home. All the product is sold through the Centre. Why should we smile when they call a tiny thatched shed a factory? To a growing number of people, it means food and health.

The Rural Centre at Paraniyam is not all work. In spite of their poverty and needs, they live a reasonably balanced life. A number of the leaders are teachers who teach in the vernacular school across the road or in near by schools. These teachers conduct night schools for adults and children. The YMCA building houses a library where a thousand books circulate so constantly

they have to be bound and re-bound; a well attended reading room; headquarters for the village co-operative society; a meeting-place for literary meetings and religious study-groups. The two playgrounds, one for young men and one for boys, are full practically every evening. The winner of the hop-step-and-jump item in the State Meet was a Paraniyam boy. One as yet unsatisfied desire is to own their own playgrounds as land is easy to buy but difficult to rent.

Dr Kumaran Nair, in charge of the Neyyattinkara Government Health Unit has opened a clinic just across from the Centre. 'I have opened this clinic here', said Dr Nair, 'because I can get the same splendid co-operation from local leaders that you get. Without such co-operation Government work cannot succeed.'

On Sundays twenty-five young men go out to teach Sunday School classes in eleven villages around—villages to which no other teachers go.

What Paraniyam has done, any village can do. Paraniyam started with almost nothing; very little has been given to them. They have accomplished much because of two invaluable assets—an ideal of service and a love for their work.

CHAPTER II

FURTHER MULTIPLYING

THE story of Paraniyam has been told to show one of the ways in which a teaching and demonstration centre like Martandam is multiplying itself. What Paraniyam is doing any Indian village can do to a greater or lesser degree according to the number and quality of its leaders. Following a policy adopted some years ago, the reason we are now working or helping in the places we are is because of the leaders who show themselves alert in these villages.

We do not believe in the Model Village idea, when that means artificially remodelling a village. It is also unprofitable to try to improve at once every village in an area. One by one the dead and uninterested villages catch the gleam from the progress brought about by training and helping in a neighbouring village.

One of Dr Kenyon L. Butterfield's questions when he surveyed in India was : ' Will these Rural Reconstruction Centres breed ? ' Would they propagate themselves and multiply ? Obviously two or three centres in a country like India were not enough. Mr H. L. Puxley has recently written : ' Though Rural Uplift is now a fashionable craze in India and the atmosphere hums with the phrase, it still remains a hum only.' I agree that one does not necessarily get an answer to Dr Butterfield's question from the great number of rural reconstruction headings in the newspapers. It is true that the formation of committees is replacing the inspirational addresses. One hears of many strange things. Last week an influential, able and talented group of city

men went out into a village and told the people how they should improve their ways of living. The demonstration method I have advocated might be too tedious for these well-intentioned gentlemen. Another group had a meeting and decided that the first thing to do was to build a hall so the village people would have a meeting-place in which to hear lectures on how to better themselves. In spite of such, however, much useful Rural Reconstruction is being done in India.

I too feel a sense of disappointment in the number of really valuable developments in Rural Reconstruction in the last five years. While some of the useful mission projects continue, and become more useful, I think the number of new ones hardly comes up to the expectation we had. Perhaps the progress among Governments has been greater, but they face the greater difficulty of getting the people to shoulder the work and make it their own. The bulk of the large amounts of money generously appropriated by the Central Government of India for 'Rural Uplift', has been spent usefully by the Provincial Governments on the old-line responsibilities, such as roads and wells, which we do not consider a comprehensive programme of Rural Reconstruction. They have not used experienced non-official agencies to help them make this money most useful as they might have done. However, these grants have done much good. I can best contribute to the answer of Dr Butterfield's important question by telling of further ways in which the teachings of the Martandam Centre are multiplying.

The influence of Martandam is making the work of existing philanthropic organizations more practical. This, I believe, is a great need. As an illustration, the growth evidenced in the 113 rural YMCAs in our Travancore and Cochin District may be cited.

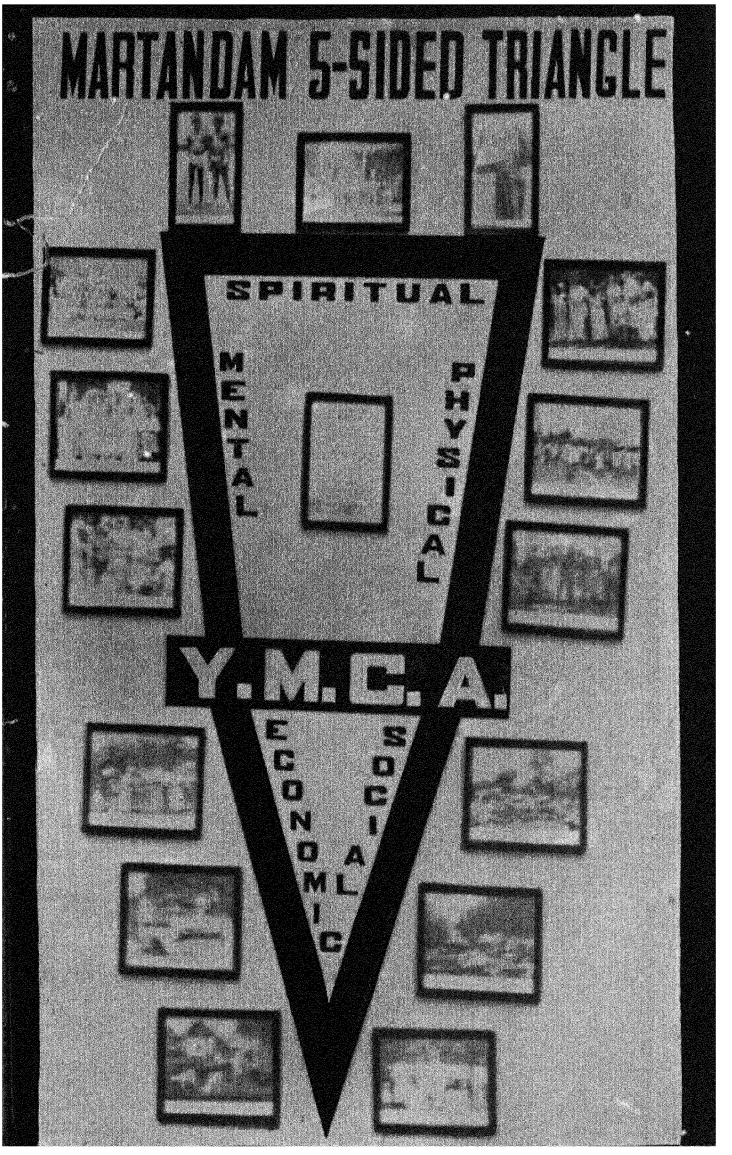
These associations are run entirely by unpaid leaders—an inspiring example of voluntary service. In my early connexion with them I was distressed with their lack of the practical. This amounted to a lack of service. They followed the three divisions of work illustrated by the YMCA triangle emblem with the three sides—spirit, mind, and body—signifying that through these the Association served the whole man. But in many of our small associations the activities included only spiritual meetings for the *members themselves* or regular lectures for the *members themselves* or some games for the *members themselves.*

They lacked any idea of serving others and any practical programme for doing so. Into these associations came the Martandam influence which broadened their outlook and gave them the new emblem—THE FIVE-SIDED TRIANGLE.

Finding that the needs of the rural people were naturally divided into five classes, and our programme to answer the needs could best be administered in five departments, we have added two extra sides, social and economic, to the old YMCA triangle. We have found that without these two new departments our service is incomplete, that only with them all can we serve the whole man. With the addition of the social side, self-centredness, narrowness of vision, and the resulting common internal splits and strifes which stagnate all usefulness, are banished. Our socialization programme means a programme *of the whole people, by the whole people, for the whole people*: all castes and creeds, ages, sexes, and conditions of people participating in the programme, all helping with it, and all being helped by it.

With the addition of the economic side, the whole range of agricultural improvement and all the much-needed cottage industries provide profitable work for

Plate II: THE MARTANDAM FIVE-SIDED TRIANGLE


MARTANDAM 5-SIDED TRIANGLE
SPIRITUAL
MENTAL
PHYSICAL
Y.M.C.A.
ECONOMIC
SOCIAL

the pitifully poor to do in their otherwise wasted spare time.

The reorientation of all the 113 rural associations in our district spells a measureless advance toward usefulness. As far as possible this five-department programme has been put into active service. Many of the honorary secretaries and other members have trained at Martandam. I believe that the usefulness of the spiritual, mental, and physical practices of the missions in India would be greatly enhanced by the fuller inclusion of the social and the economic services.

We have transferred our most experienced rural worker, Mr S. Manuel, to Chengannoor, a village in Central Travancore, ninety-six miles from Martandam. Seventy village YMCAs are in the area surrounding this village where a small building has been erected as headquarters. It is not necessary for Mr Manuel to build up another Demonstration Centre within ninety-six miles of the parent centre: his work is largely extension work. His policy is to help any village which has sufficient wideawake leaders, a definite plan, and some local support to assure his help being fruitful. It was in this great church area that several years ago the three prominent denominations, Jacobite, Mar Thoma, and Church of England, formed a union committee to establish a joint Rural Reconstruction Centre. Our secretary will always be eager to help with such developments.

Several of our Hindu friends and several Hindu organizations have started ventures similar to some of our rural reconstruction projects, and have invited me either into membership or to an advisory relationship. One such venture, which interests me because I know how much the rural reconstruction movement needs women leaders, is the development of the women's Hindu Mahila Mandiram to include a Rural Reconstruction

Centre. The addition of the rural programme to this orphanage is due to the influence of Miss G. R. Thankamma, who studied at the Martandam Practical Training School in Rural Reconstruction.

Another way in which the Martandam Centre is multiplying is in response to requests for visits. My services and those of the Martandam staff are asked for to help initiate and guide work in other parts of Travancore, and India, Burma and Ceylon. We answer as many such requests as we can. Probably we should have considered Japan, with her advanced agriculture and progressive ways, the country least likely to need a programme like ours, but last month Mr Saito came from Tokyo. He studied the Martandam and Paraniyam village areas very seriously and then urged me to come to Japan to help them, saying that the whole north-west of Japan was in great need of a programme like this and that other parts of the country also could be benefited. Mr Naguib Kelada and Mr Assad Mutagalli of Egypt who came to the World's Rural Conference want our help for what they express as a crying need for such work in Egypt. Max Yergan after several years work in South Africa sent an appeal urging that Rural Reconstruction must be the next great structure upon the educational foundation that has been laid among the students of South Africa, and this appeal has recently been personally renewed by Mr and Mrs William McEwan of Johannesburg. The beginning of a great drive for general improvement has started in Siam and is being strongly supported by the Queen Mother. We are invited to help with a rural reconstruction movement there.

We have been encouraged and pleased that visitors from many countries have found the principles and methods of our work useful to them. Many who have adopted them at home have written back to us for

further help. Correspondence on Rural Reconstruction has become a heavy task. It involves answering all sorts of questions which come from various parts of Persia, England, Switzerland, Canada, China, Palestine, South Africa, Egypt, the Philippine Islands, Australia, Turkey, Korea, Siam, Austria, Japan, France, and South America.

Still another way of multiplying. The underlying principles and methods developed and followed as published in *Up From Poverty* are used as a text in some High Schools, Colleges, and Seminaries. The book has been published in Gujarati by the Baroda Government, in Malayalam by arrangement with the Travancore and Cochin Governments, and translated into Chinese.

A further way is through perhaps our most valuable service, the training, since 1926, of 900 leaders in the Practical Training School in Rural Reconstruction. These were picked leaders, nearly every one sent by some institution or department because they believed him or her able to come back and put into practice what had been learned. In answer to the honest question: 'Do any ever do any of these things after going back?' we can show our *Accomplishment Bulletin* which goes out to our Old Boys and Girls. In it are the stories of actual accomplishments as reported in their letters to us.

Of how these teachings are multiplying toward a reorientation of education better to fit and satisfy rural people, and how they are being sought to assist governments, I tell in two later chapters.

BIBLIOGRAPHY

1. Beguin, Charles, 'The Rural Conference in Southern India'. *World's Youth*, Geneva, April 1937.

2. Brunner, Edmund de S., *Rural Korea: A Preliminary Survey of Economic, Social and Religious Conditions.* International Missionary Council, 1928.

3. Butterfield, Kenyon L., *The Christian Missions in Rural India.* International Missionary Council, 1930.

4. Hatch, D. Spencer, *Up From Poverty in Rural India,* with a Foreword by the Earl of Willingdon. Oxford University Press, 3rd. Ed., 1936.

5. Mathews, Basil, *Flaming Milestone.* (An Interpretation of the *Report* of the twenty-first World's Conference of YMCAs, Geneva, 1937.)

6. Shih, Hu, 'Reconstruction of China'. *Asia,* November 1936.

CHAPTER III

BUILDING PILLARS OF POLICY

No chapter in the story of the climb to happier living in rural India will be more interesting than this which tells of the gradual, day-by-day finding out and building up of the best ways to make progress. This is the story of a real struggle. I have been criticized that in speaking and writing my enthusiasm makes development of the Indian village sound too easy. It is not easy; struggle is the right word for it. Through this struggle we arrive, one by one, at tried methods and principles so definitely that we can state them and use them. Such arrival is immensely satisfying after the uncertain stages.

The Purpose of Rural Reconstruction. For the findings of the World's Rural Conference which included leaders from different nations who recently visited, in peripatetic fashion, the villages of our Martandam Extension Area, we contributed this concise statement of the purpose of Rural Reconstruction. 'The purpose of Rural Reconstruction under our Association is to bring about a complete upward development towards a more abundant life for rural people—spiritual, mental, physical, social, and economic.'

In another World's Conference, an Indian leader made the statement: 'Rural Reconstruction is after all only tampering with the problem; we want a completely new order.' The speaker and others like him simply do not understand what I mean by, and what we practise as, Rural Reconstruction. They have never taken the time to study a comprehensive work like ours. They

Plate III: D. SPENCER HATCH IN THE VILLAGES

WELCOME

are thinking of those who, under the name of Rural Reconstruction, or 'uplift' (a word which I never use as people naturally do not quite like the idea of being uplifted by someone) have some poultry-keeping or bee-keeping or other cottage industry, a breeding bull, or who organize a few stray lectures. This is not Rural Reconstruction, however useful these few things be; and I agree that they constitute only tampering with the problem. My definition here describes a complete development—a wholly new and happier order.

The Spiritual Basis. Along with my constantly repeated statement: 'The spiritual side is the foundation for all we do on the other sides', it is necessary for me to make a further explanation so that all may know that I really mean it. I have written that, although spirituality seems not to be included as an attribute of leadership by the psychologists, sociologists, philosophers, and educationists, I emphatically include it as an attribute for leading in India. Likewise I doubt whether programmes not including or not based on things spiritual are fundamental enough to be deep-reaching, or capable of results lasting enough to be worth the doing. I certainly would not spend my years out here in simple social service just doing some good things without the spiritual basis because I believe that only as man realizes his place and work in God's created world, is he the power he can be. I am not in agreement with those who say that because they are working in a Hindu or a Mohammedan State or country they must say nothing about Christianity nor put forward the fact that they are endeavouring to exemplify and demonstrate the abundant way of life taught by Christ Jesus. I think men deceive themselves when they believe that non-Christians will appreciate them more if they pretend to have no interest in their own religion. What will members of the most

spiritually-minded race in the world think of a representative of the Young Men's Christian Association, for instance, if he never appears to care anything for or about his religion? Will they not consider him either a spiritual weakling or a mild deceiver, probably not quite straightforward?

No, we have repeated evidence that even one like myself who so emphasizes socialization—working with all—is not required to hide his religion. A man is weak who is ashamed of his religious beliefs. I urge every one of my Hindu colleagues to live daily the very best he finds in Hinduism. I ask my Mohammedan fellow-workers to do the same; and when I am among Buddhists, as in Ceylon, I tell them, 'Live and practise the best you find in Buddhism.' And I, because I am a Christian, working along with these friends, will increasingly try to exemplify Christ's teachings better and better through daily growth. I am happy when non-Christian friends have been motivated by the life and teachings of Christ Jesus, revealed to them through exemplification while participating in service with the people of their own villages, as I am happy when the motivation comes from a deeper understanding and study of their own religions. If it happens that some find in my life and practice and teaching, and in the lives of my Christian colleagues, something useful to them as they work out their lives, I shall be glad. And if this sometimes, as at Paraniyam, leads some to become followers of Christ Jesus, no one can object, for I believe religion cannot be given, it can only be taken. Whatever makes a man a better, stronger citizen of his country, and enables him to live in greater accord and understanding with his brother, is worthy. I urge all men to study their religions and grow in them or seek wherever they will. I believe in God and His teachings as given to us by Christ Jesus, and that the

spiritual basis of life is the only foundation on which greatness rests; that only as men find their places in the world as ordered by God is their work everlasting.

I am sometimes asked if our programme of exemplification, a maximum of living and doing with a minimum of verbal preaching, ever makes any follow Christ Jesus. The answer is: 'It does.' About a mile from Paraniyam we can show you where one Sunday School grew into a church with a membership of thirty families, who are just now finishing their small church building. If exemplification of how Jesus, moved with true compassion, healed and cheered and comforted and fed and helped and guided people upwards from all their troubles, makes Christians, our non-Christian friends will not object. They object to other methods; they do not object to teaching people a *really* better, happier, and more abundant life. They are not against the reformation of individuals or against the spread of the spirit of Christ. Our Brahmin and other Hindu students in the Rural Reconstruction Training School, many of them Government teachers, are most attentive in our morning prayers. Some of them take notes during prayers, as they do for other subjects, wishing to preserve the messages. I believe they would be the first to vote against starting the day without this brief, quiet, communion, all of us together with God.

His Highness the Gaekwar of Baroda wished me to conduct a training class, similar to ours at Martandam, at the Baroda State Rural Centre which we helped to start, and which we still staff and advise. His Highness saw to it that the best young officers were picked from five departments of Government to go with me into the villages and study with the people how they in those departments could work together, not separately as is customary, for the reconstruction of the villages. They were all non-Christians. One or two had returned

from study abroad. It was an intensive course and we could not rest on Sundays. Welcoming this opportunity to try what some had claimed could not be done in an area where there were few Christians, I took for the Sunday programme the same subject I often do in areas mostly Christian: 'How can we quicken the spiritual life of these villages?' I have never found a group who discussed the subject more reverently, or more earnestly seeking truth. They all expressed their appreciation of the fact that without a sound spiritual basis all these other helps we were learning would not successfully regenerate the villages. They said the present forms of Hinduism and Mohammedanism in these villages were not providing a sufficient spiritual foundation and they considered how to find such a foundation from the teachings of those religions. They wanted also to consider the teachings of Christianity as a possible basis. This is just another example of how unnecessary it is to stifle the spiritual side of Rural Reconstruction in India.

One can fully co-operate with another only on a spiritual basis—all other forms of co-operation are merely surface matters. I can work with a spiritually-minded man of another faith better than with one who has let his spiritual light grow dim. There is strong backing from Indian thinkers for this basis. These words from Sir S. Radhakrishnan typify their thought:

'The unity of the modern world demands a new cultural basis; and the real issue is whether it is to be guided by the economic and the pragmatistic mind, which is the more dominant at the moment, or by the spiritual. A mechanical world in which humanity is welded into a machine of soulless efficiency is not the proper goal for human endeavour. We need a spiritual outlook which will include in its intention not only the vast surging life of economics and politics

but the profound needs of the soul. The real character of a civilization is to be gathered not so much from its forms and institutions as from the values of the spirit, the furniture of the mind. Religion is the inside of a civilization, the soul, as it were, of the body of its social organization. Scientific applications, economic alliances, political institutions may bring the world together outwardly; but for a strong and stable unity the invisible but deeper bonds of ideas and ideals require to be strengthened. In the work of rebuilding the human household, the role of religion is no less important than that of science.'

/ *Socialization.* Because socialization is one of the outstanding needs of India, we continue to put emphasis on bringing all the people of the villages to unite in the rural reconstruction programme. Because we represent no particular denomination, we can approach all people without suspicion. We therefore have a special opportunity which becomes a special responsibility. Socialization means a programme, *of all the people, by all the people, for all the people,* every one in the programme, every one helping with it, and every one being benefited by it, poorest to richest, all castes and creeds, old and young, men and women, boys and girls: no project for or by any one class of people. Such a programme is not easy but it is absolutely possible, if enough energy and tact is put into it to see it through.

Many philanthropists do not want socialization. Many groups of social and religious workers consciously or unconsciously do not want socialization; they are too well satisfied with having the benefits of their work or association for themselves. This narrowness of interest and vision is responsible for internal splits and dissensions, so destructive and so disgraceful. Many sincere individual workers do not want socialization

enough to accomplish it. When it is attained then and then only can the Indian village become able. Divided as the villagers are, they can do no more than poor, individual families can do; they cannot dig a good well; they certainly cannot build a road: together they can accomplish all that expert counsel can bring into their vision.

Socialization is the greatest power toward the eradication of inequalities. Well ordered communities cannot exist where there are too great inequalities. Extreme poverty generates fear and blighting social conditions: extreme wealth leads to selfish indulgence and domination. When these same wealthy men of the village are touched by the spirit of service, are brought into the rural reconstruction socialization programme, they experience the joy of using their powers not merely for their own advantage but also for the good of others. Inequalities are no longer so apparent. The handing out of mere charity and the pernicious custom of courting merit by an occasional feeding of the poor, is replaced by wisely organized, unselfish philanthropy which may cost no more than the former patronizing charity. His Highness the Maharaja of Travancore's Proclamation this year abolishing untouchability is a great help in our work of uniting the people to work for the good of all.

The Comprehensive Programme. A study of results of programmes which have dealt with only one side of village life, shows that although they accomplish some good things they are not as fully effective as they could be were they linked to helps in other directions going on at the same time. We believe that Rural Reconstruction can accomplish a reconstruction in village life only when it attacks all sides of a villager's life simultaneously. This attack we call our comprehensive programme. As is evident in all these chapters, this idea enters into

Plate IV: THE VILLAGE UNITES IN PUTTING UP ITS HEADQUARTERS

everything we do : whenever we work out a new activity we make certain that it belongs in our programme and that it helps the balance of a full five-sided work.

To us it seems that this idea of the comprehensive programme should have been as unnecessary of discovery as the recent discovery that India is a rural country, and yet the last home mail has just brought me a letter from the Head of the Agricultural Missions Foundation who writes : 'The idea of the comprehensive programme seems to be in many ways the most important principle that has found its way into the missionary enterprise in this century.'

Self-Help with Intimate, Expert Counsel. This is the way to make the comprehensive programme fruitful. This formula is standing the test of years. Intimate counsel means brotherly, sympathetic counsel, not official or austere. Dr J. Russell Andrus in his recent book, *Rural Reconstruction in Burma,* referring to the word 'expert' in my formula, points out that the expert in India is so scarce. He suggests a division of the field, that the numerous volunteer workers take time to become able for work with their respective villagers and their needs, and that they then invite experts to pay occasional visits. He would not often expect expertness in voluntary workers.

I never refer to myself or any of my Indian colleagues as an 'expert'. I do, however, expect every worker —myself and every colleague—to keep on studying and practising until he can do very well indeed the particular items of programme for which he has accepted responsibility and until he is thoroughly competent to give expert counsel in these specific practices. There is no excuse for allowing workers to stop short of ability in their special responsibilities. Young workers especially respond to this plan and are proud when they acquire real ability. For the more technical subjects

we are generally fortunate enough to be able to draw on government officers or others, and we make full use of these men in our scheme of uniting all the talent of the area in the Rural Reconstruction Unit.

Reaching Down to the Very Poorest. Most philanthropy stops before it reaches the very poorest. This is true even though workers are especially interested in those who need help most—the hungry, the depressed, the outcast, 'the poorest, the lowliest and the lost' as Tagore terms them. Rural workers may be surprised but will realize this is usually true, if they will take an honest survey of their work. It is easier to hand out charity to the very poorest, but we believe in philanthropy, not charity.

Honest students of the co-operative movement in India, such as Jack, Slater, Mann and Darling, had to report that it would take centuries for the co-operative movement to reach the bulk of the peasantry. Even today the stereotyped co-operative societies do not reach or help the poorest people of India. These poorest people cannot afford to be members of the regular co-operative societies in the ordinary way nor do they understand them. They are brought in only when character is made the basis for membership and participation, and where there is the all-the-way, intimate, brotherly supervision. As we go ahead with the introduction and establishment of comprehensive Rural Reconstruction our programme will stop just short of reaching down to the very poorest unless we are constantly especially mindful of them. It will be taken up, practised, and its benefits will be appropriated by those just above and those well above them: those who have a bit more means to meet the small initial outlay, who have a bit more background and education to understand the new way or project, who have less

of hopelessness and more of vision and belief that better things are possible.

We keep ever before us the principle, *no man or woman, boy or girl shall ever be deprived of any of these benefits by reason of poverty*. This is perfectly possible if the worker cares enough about it. For every project we work out a method or scheme of participation for those who have no money at all. I shall cite two of our methods as illustrations.

We sell the eggs from our heavy laying, recently imported, Hancock strain of White Leghorns for Rs. 9 per dozen to those who can afford them. To villagers in our area who can pay something we sell these same eggs for two annas each, Re. 1-2 for a setting of nine. But these same eggs must be available to the villager who has no money at all, so we give him the eggs. We do not pauperize him; we charge him in our books Re. 1-2, and tell him that exactly six months later we shall settle with him. From the time he sets the eggs our Extension Department gives him as much teaching and help as possible to ensure his success with his chickens, and six months later a young worker goes to him for the settlement. He may find, let us say, five birds nearing maturity. He buys one of these for Rs. 3, crosses off the debt in the book and hands the poultryman Re. 1-14 in cash. The other birds are worth at least Rs. 12 and from them the villager will soon bring in eggs to sell at the co-operative market, or will sell eggs to others for hatching. One man who took two settings of eggs on this basis was so pleased with his results that, when his sixteen fine, yellow-legged Leghorns from eighteen eggs were three months old, he brought them to the Martandam Centre to show me. He was extraordinarily lucky for all but two were pullets. He had quite a gold mine, worth between Rs. 100 and Rs. 200 according to the buyer he might

find, although he incurred not a single pie of expenditure originally. This is philanthropy, not charity—our Centre got two annas for each egg.

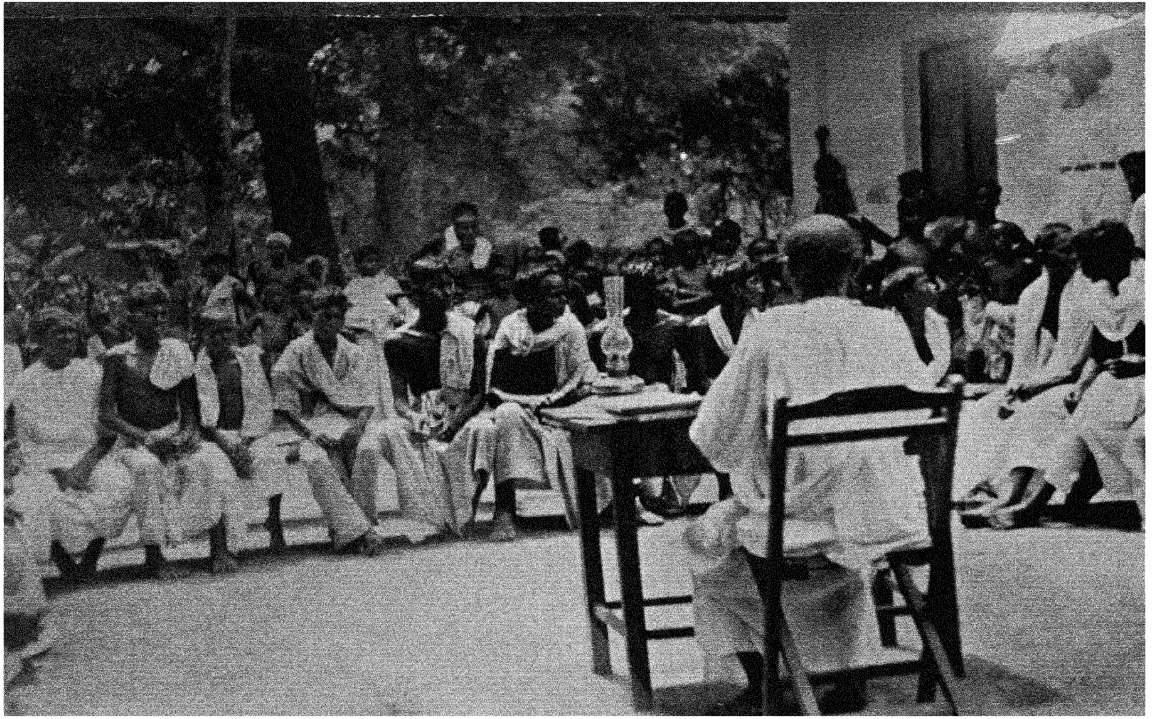
Such methods must not be confined to the cottage industries—they must go with all items of programme—spiritual, mental, physical, social, as well as economic. The second illustration comes from the health and sanitation programme. We loan the latrine borers on the understanding that the villagers bore the holes, and that they put on the top of each hole a proper stone slab which we supply and which costs from As. 12 to Re. 1. The family can do the labour of boring; if they have no money or produce of value with which to pay for the top stone it is charged in the book. The valuable fertilizer made in the bore-hole latrine can be sold in course of time and the cost of the stone top-slab realized.

Rolling Stones and Emergency Kits. Are we to carry on a quality demonstration or to jump about the country acting the part of an emergency kit? My observation is that the persons who have made a real contribution to India are those comparatively few who have been stubborn enough to resist the demands of men 'at the top' who are always running too big a machine with too few personnel, and who would jump workers here and there just to keep the too big machine moving.

We in Rural Reconstruction are pioneering. Our programme is comprehensive, yet I have critics who say of me: 'He has been for some years in Travancore; he should long ago have left that area to carry on by itself, and should have gone somewhere else.' Such critics unfortunately never find time really to study what we are doing. My Indian colleagues have so often complained to me with real feeling: 'We were disappointed that Mr So-and-So spent only ten minutes at the

Centre, and saw nothing whatever of our real work in the villages.' Ten minutes is enough however to make critics talk from experience. They do not see how we had to start at the very bottom to work our way up or how we faced an absolute lack of method or experience in our staff to say nothing of our villages. They do not see that in all of the comprehensive programme, we are travelling uphill over absolutely unknown ground; that all projects must be tried for years and finally made the people's own before we have accomplished anything permanent; that each small item of improvement needs so much experimentation and attention before it can be at its best; that there are always myriads of other needy projects we should like to give attention to; that a practical training centre for leaders from all over India, Burma and Ceylon and even beyond, must not only have a complete Rural Reconstruction Unit in action in many villages, but all of the work must be of the highest quality to be a lighthouse demonstration, teaching the best possible methods.

It has been somewhat of a struggle to remain with the home team and not to be made a 'rolling stone'. I maintain that unless I am a member of a real working team, unless I have a real rural reconstruction job of my own, unless I am actually in close contact with the village people, I am incompetent to help others. I desire to remain a part of a real team, and I believe this principle is essential for any one who would be of any use in Rural Reconstruction. With our own centre as the base, I have promised our National General Secretary that I will somehow find time to go and help from my experience, not those who simply sit and ask 'Why doesn't he work here?', but wherever Government, YMCA, mission, or private individual has made adequate plans and found some funds for carrying on Rural



Recons ruction. A counsellor in Rural Reconstruction and a lighthouse demonstration area to learn from, ought to be helpful to those who are getting started. We ought to be able to save others the expensive necessity of going the whole long way of experimentation that we have gone.

Rural Background. A great new rural movement needed workers who had grown up with a rural background. K. T. Paul, although he had become an international leader, had still his home acres near Salem, and he went back to them and worked on them as often as he could. Generally speaking our best rural workers will have been born and bred on the land. It has been my own good fortune to have a generous school and college education in things pertaining to rural development, but more than all that training I value growing up on a farm among the green hills of New York State. It was a poor farm. My brother and I began when we were very small to learn by doing. We became resourceful in studying out ways to make the things we needed, thus making a small amount go far and making the difficulties of a poor farm really stepping stones. The other day the head of a mission farm, speaking of the importance of the right personnel and the difficulty of getting it, said to me : ' The only persons who have been successful in my service are those whom I have found on the farms near by and who have grown up with me here step by step in the work.'

I mention all this because some who are starting out to do Rural Reconstruction today seem not to realize the importance of a rural background in their workers and are making the sad mistake of appointing city men. It is a short-sighted policy to relieve unemployment in the cities by taking men from the city to do rural work. If such men are to be employed at all they will need long and serious training.

Centres and Extension. About the time that I came to Rural India, the first YMCA Rural Centre was established. The centre was to be a place for showing things and methods to people who could come to see and a place for experimenting. When I was looking about for the best place for our Centre in Travancore, K. T. Paul said to me, 'Do not do as Governments sometimes do; do not choose a very fertile place where results can be shown with great ease. On the other hand do not make things too hard for yourself by choosing too poor a place.' My thought was, if we are going to help people we want to help those who need it most. I recalled the experience of Denmark where the first co-operative societies bore the name 'The Poor Man's Co-operative', and where because these co-operatives did help the poor farmers, they very soon attracted the more well-to-do farmers who asked permission to join.

We chose Martandam where obviously the people on that poor rocky soil were much poorer than those in some parts of Travancore State where soil was better and rainfall greater. I felt that if we could make a success of helping people to help themselves under most adverse circumstances, other people could certainly copy. We settled as far from any large city as possible, about midway between Nagercoil and Trivandrum. A mistake was made in locating one of our South Indian Centres only two miles from a city. It was not really rural and although it had a more accessible market, its location was not suitable for rural demonstration.

We established the first centres about the time the Linlithgow Royal Commission on Agriculture had declared against the establishment of any more Government Farms. Perhaps some in our Association thought our centres would be in closer contact with the people than Government farms and that therefore their influence

would spread better. But any one who had studied the progress of farms and centres in other countries would know that centres do not spread of themselves. A mere centre or Government farm will never succeed in getting the people of the countryside to adopt the improved methods practised there. They never have in any country, and the Commission did well to pronounce against them as they were conducted. Why then did we establish the Martandam Centre? Because with the Centre we established the Extension Department. *It is the addition of an extension department which turns the impotent centre into a widespread success.*

I came to India after my first post-college job which was with the Extension Department of the New York State Department of Agriculture. This Department works out from the College of Agriculture at Cornell University. I was thoroughly imbued with the necessity of carrying the message and the knowledge of the college to the farmer. As soon as the Martandam Centre was opened, I established the Martandam Extension Department; took our senior and most experienced colleague away from the Centre; told him that he was not to be there except on occasions expressly needing his help; that he was in charge of the Extension Department, the work of which was to get family after family in village after village to take up the helps taught and illustrated at the Centre. If a family gets some benefits, the neighbours are sure to copy the successful practices. The Centre is an essential part of rural reconstruction methodology, but the Extension Department is by far the more important feature.

Rural-City Co-operation. One of the most significant advances in India, Burma, and Ceylon during the past year has been the definite step towards the co-operation of people in the cities with people in the rural areas.

The city YMCAs have taken a lead in this. In June I introduced the idea at the All-India, Burma, and Ceylon Secretaries' Conference and was surprised with the ready reception it received. It seems probable that every city YMCA within the not distant future will have a rural centre or at least some rural projects.

This is healthy co-operation. The city has numbers of able, talented, well educated, often well-to-do persons, many of whom come from the rural areas which have been depleted of their best leaders by opportunities offered in the cities. Many still have their roots in the country. They have cars and other transportation facilities for going out to the rural projects and for connecting the village people with those in the cities who can teach, guide and encourage. These friends will not take the place of or act as substitutes for the trained rural worker who should be rural-born, rural-bred, and rural-trained, but they will be a great encouragement and help to him. In return a city association will experience new life and new vision from this helpful and popular service.

Trichinopoly YMCA already has had a man trained at Martandam and has established him in a rural centre, the cost of which is partially met by the District Board of the area. Rangoon City Association has had a staff member trained at Martandam. Central Travancore YMCA's Boys Work Department is having a young secretary and his able young wife trained at Martandam. Trivandrum Association Boys Work Secretary, who has had several years in the Martandam area, is extending his work among boys to the villages between Trivandrum and the Paraniyam Rural Centre. Colombo City YMCA has already budgetted for the full cost of a rural centre. They are to employ an experienced secretary from the Martandam centre while they are

having a Sinhalese secretary and his wife trained at Martandam.

In touring the rural areas around Colombo to find the best place for the rural centre, I sought to find the conditions which I am recommending for other centres under city auspices. They are the same as for any rural centre, except that we would place an independent centre still further from the city. The conditions to look for are that the location should be :

1. Sufficiently near for easy administrative visits.
2. Sufficiently far away to be truly rural and natural—not affected and made artificial by the town.
3. Amidst people of different castes and creeds who can join in a really socialized programme.
4. Inhabited by a goodly number of really poor and especially needy people who will take to the economic helps, including cottage industries, not as hobbies but as means to supply their felt needs.
5. On or near a good road, near a railway station or bus route, facilities which will be a great help when marketing begins.
6. In a village which is a natural centre for other villages.
7. Adjacent to a school which is the educational centre for children of the area. The children will become interested in the work at the centre and even sooner than their elders will begin to practise the improved ways demonstrated there. They will often teach their parents and bring them into the programme.

Freedom. The priceless privilege of freedom is nowhere more essential than in Rural Reconstruction. The rural reconstruction worker, first making himself

worthy of freedom, should guard against any loss or limitation of it. The mediocre worker does not want freedom: he likes to hide behind a committee of busy men who can meet only occasionally. When he ought to be out raising money for his work, he says, 'That all depends on the committee; I must wait until they meet and make plans.' When there is much work urgently waiting to be pushed forward he says, 'Some important members of the committee are on tour (practically always some are on tour) so we cannot have a meeting now, and this work unfortunately has to wait.'

No Rural Reconstruction Centre can afford to accept a government grant if the grant has strings on it which restrict the freedom of the workers. Sometimes such a grant immediately involves the Rural Centre and staff in jealousy from government officers who, striving against officialdom's disadvantage of poorer response from the people, are trying to do somewhat similar services in their own departments. These officers sometimes think it their province to criticize destructively the Centre staff and work, as though the staff of the non-official, private centre were under the government department. This situation can be made worse by the grant necessitating a committee made up mostly of city officials, not closely in touch with the work and not experienced in Rural Reconstruction, but glad to exercise restrictions and authority. I have seen such a situation break the heart of a first class, devoted, experienced, hard worker.

I often commend the attitude of His Highness the Maharaja of Travancore whose only question is: 'Is this work helping all sections of our State?' There is absolutely no restriction or curtailment of freedom to work as we feel we should. The policies and methodology built up through years of devoted work

and experimentation must not be interfered with even for the sake of financial support.

Simplicity. 'Only he is poor whose wants are many', said Leonardo da Vinci. I must go further than when I wrote of simplicity as an attribute for the leader who teaches by the self-help method: 'The gentleman who has risen to such a high state in life that he cannot bend to take a hand with the villager in a common task; that he cannot associate intimately with boys; that villagers have, in a measure, to stand when he sits, bend when he stands, and take care that their breath does not pollute him; can hand out charity to them, but he cannot lead them in self-help.' Increasingly it has been borne in upon us during these working years that unless the whole rural reconstruction movement remains simple it will cost too much and will stop short of the millions of needy because enough money will not be available. Unless we workers remain simple, our own personal budgets will absorb so much of funds that there will not be much left for our philanthropy. Rural projects in India are already faced with the necessity of employing younger men who have not yet acquired expensive ways of living. Only by employing such men can they afford to have the necessary number of men to do the work. For Rural Reconstruction in India we want workers who are *rich in the things they can do without.* Martandam has demonstrated the possibility of a big widespread work without owning or constructing a single central building of any size.

This simplicity needs to be kept in every way in order that expenses for each project will be so low that there will be money enough to help many projects and to bring the helps within reach of the multitudes. When a rural worker gets to the place where he thinks up excuses for hiring a car to go where his cycle or the buses go, I count it the beginning of a decline in

his value as a worker. It is easy for him who controls my travel budget to say to me, 'You ought not to travel third class on the railway', forgetting that I have just told him that in spite of travelling so, I used up all my travel budget for the year in seven months. I simply cannot follow out my promise to help all those places which are making a creditable effort to get started in Rural Reconstruction, if I always travel upper class.

So much money is spent on benches in India. I can never be fully happy in seeing a rural reconstruction class sitting on benches. Simple square mats placed on the floor solve the problem of how to get money for seating. They cost so little and are so convenient when the room has to be cleared for dining or for some other purpose. Even I, who grew up used to benches, can take notes just as well sitting on a mat as on a bench.

One other illustration of the many phases of simplicity. On the first morning of our Practical Training School in Rural Reconstruction every year, I find the class, including representatives from all over India, Burma and Ceylon, sitting up straight in hot coats. Our School is held in the hottest season of the torrid year. I appreciate this mark of respect, or effort to do the right thing, but I secretly rejoice that most of these coats will be gone next morning and for the rest of the course. I do not say much about it, only indicate that coats are certainly not required, and personally set the example of a clean shirt open at the neck, clean shorts, and ankle socks, and suggest that it would be wrong to sap health and vitality by uncomfortable surplus of clothing when it is so hot.

The Gandhi movement has had the good effect of getting the coats off of thousands of Indian people. Many of these coats were poor, shabby, dirty or

unattractive. A university man in a city, who always looks neat, clean and comfortable tells me that he can dress well and cleanly in the *khaddar* fashion the whole year for Rs. 18. For dress occasions, he just adds a simple scarf or *angavastram*. Paraniyam produces a ten-anna shirt nicely tailored from their durable hand-woven twill. My colleagues and I wear them. Clean and sufficient clothing need not be expensive.

But at Martandam some leaders persist in wearing their coats at their work in the hottest weather. No one can work his best with his coat on. Sir William Wright says that three things are necessary for one who wishes to be successful in industry: a sound general education, a thorough technical education, and practical training with his coat off.[1] I asked a young rural leader, 'Why do some of you wear your coats almost all the time in this heat? Is it because of the influence of some missionaries and high government officials, that you feel properly dressed and dignified only with your coats on?'

'No, it is not that', he said. 'The *dhobi* problem is rather serious; that is, it costs much to have shirts washed. By wearing a coat the shirt can be worn longer without washing.' I appreciate such a frank statement.

Here is just another need to be dealt with in the process of village reconstruction. The remedy is so easy. Every man can wash his own shirt. We have added a course in washing and ironing to the curriculum of our Practical Training School in Rural Reconstruction. A professor in the chemistry department of the Science College, Trivandrum, teaches us how to make safe, inexpensive, washing soap in the home. This cost of *dhobi*-ing, the cost of coats, and dirty clothes are

[1] *The Madras Mail*, 18 March 1937.

eliminated; another step toward self-ability and simplicity. The Extension Secretary gives demonstrations in soap making, washing and ironing in every village he visits. Many articles of clothing do not require ironing; those that do, can be ironed with a simple charcoal iron.

These twelve principles are truly pillars of policy. They are pillars on which we are building.

BIBLIOGRAPHY

1. Barnett, Lionel D., *Bhagavat Gita or The Lord's Song.* Dent, 2nd ed., 1920.
2. Bell, Adrian, *By-Road.* Cobden-Sanderson, 1937.
3. Chewings, Charles, *Back in the Stone Age: The Native of Central Australia.* Angus & Robertson, 1936.
4. Cole, G. D. H., *Social Theory.* Frederic Stokes, 1920.
5. de Mello, F. M., *Problems of Rural Reconstruction in India.* Oxford University Press, 1934.
6. Darling, M. L., *The Punjab Peasant in Prosperity and Debt.* Oxford University Press, 3rd ed., 1932.
7. ———, *Rusticus Loquitur.* Oxford University Press, 1930.
8. Grayson, David, *Great Possessions: A New Series of Adventures.* Grosset & Dunlap, 1934.
9. Gribble, E. R. B., *The Problem of the Australian Aboriginal.* Angus & Robertson, 1932.
10. Hays, Ernest H., *Williamu: Mariner-Missionary, The Story of John Williams.* The Livingstone Press, 3rd ed., 1930.
11. Heiser, Victor, *A Doctor's Odyssey. Adventures in Forty-five Countries.* Cape, 1936.
12. Higginbottom, Sam, *The Gospel and the Plow.* Macmillan, 1921.
13. Jack, J. C., *The Economic Life of a Bengal District.* Oxford University Press, 1927.
14. Lawrence, T. E., *Seven Pillars of Wisdom.* Cape, 1935.
15. Maciver, Robert M., *Community.* Macmillan, 1920.
16. Morton, H. V., *In the Steps of the Master.* Rich & Cowan, 1934.
17. Moton, Robert, *Finding a Way Out.* Doubleday Page, 1921.
18. Nordoff, Charles and Hall, James Norman, *Pitcairn's Island.* Little Brown, 1935.
19. Royal Commission on Agriculture in India, *Report,*

Volume I (Evidence), Part I. Government of India Central Publications Branch, 1928.

20. Superintendent, Government Printing, *Experimental Farms in Bihar and Orissa, Annual Report,* 1934-35.

21. Slater, Gilbert, *Some South Indian Villages.* Oxford University Press, 1918.

22. Wilcox, O. W., *Reshaping Agriculture.* Norton, 1934.

23. Wright, Louis B. and Fry, Mary Isabel, *Puritans in the South Seas.* Henry Holt, 1936.

CHAPTER IV

DEVELOPMENTS OUT IN THE EXTENSION AREA

A JOURNEY through the Extension Area with Dasiah, the young man once an apprentice but now heading up the Extension Department, will show us some of the later developments in our climb further upward with the villagers. Rural Reconstruction takes different forms in different villages, depending on the special needs of the villages, and on the interests, the abilities, and the energies of the local leaders.

Waiting Philanthropy. To make the crooked path straight, the narrow path wide; to make a highway: that is the inevitable desire of villagers who live in roadless villages. The quickening of this desire follows closely after the first self-help victory. Edaikode—called 'Jackal Village'—was roadless: away back there in the rocky foothills amidst the malaria, practically beyond the reach of missionaries who dared not stay there nights; there where in spite of the jackals running about in the daytime these poorest of poor people have made a success of poultry-keeping. Edaikode's desire for a road can be taken as typical of the desire of every roadless village out of which all the produce has had to come through the centuries, carried on the heads of the people.

Several years ago when Mr Harper Sibley, now President of the United States Chamber of Commerce, and Mrs Sibley, both members of the Layman's Commission, visited Edaikode, they walked in as all others before them had done, but because I was then a

victim of a motor accident and unable to walk, the villagers smoothed a way over the fields and rocks so that my bullock cart could be hauled. Smoothed is a flattering term, but the idea for the road was born. A few months ago Edaikode, a bit more prosperous because of further participation in the rural reconstruction programme and eager to show their progress, invited the world's Rural Conference to visit them. But alas, the smoothed trace was almost lost. Self-help teaching was put into practice: over two hundred men, women, boys and girls turned out with *mamatees* and picks to change the trace into a road. When the day of the visit came all the cars but one—the new Ford unfortunately is just an inch or two too wide—drove straight through to the village. Landowners have given the right of way through their lands, villagers have contributed their labour; the Government, as it has done in many instances, can be expected to take over the road, widen it, put in concrete culverts and proper drains: a new highway to efficiency and better living will be mapped.

I am giving this as an example of what happens when people make such initial effort for roads, community wells, or other needed village amenities. I believe firmly that where the people of a village can be brought to make this initial effort, some power—it may be Government, it may be some unofficial philanthropy—someone will give the necessary help to complete the project.

Kurumathur, a tiny village of backward-class people who go out daily to work on the land of others, is built on rocks and could not boast even a footpath. These villagers have responded enthusiastically and practically to our comprehensive programme. Their efforts to help themselves attracted the interest of the Government Public Works officers who, this past year, helped to

make a path six feet wide from the main road down the rocky way to the village. This path makes travel to and from the village much easier. It is the beginning of the road which will one day lift Kurumathur out of the class of roadless villages.

I carry about with me a list of villages which have no decent wells. These villages are in special danger when cholera comes because the people get their scanty supply of muddy water from holes dug in the lower corners of rice fields. This water is never good, is easily infected, and impossible to protect. Several departments of the Government and certain institutions have money, not enough to meet the whole cost of such needed wells, but enough to make wells possible for those villagers who have first learned to co-operate and raise their share of the cost. One by one such villages, formerly divided against themselves, are being brought to co-operate and finally to claim the philanthropy which waits to crown their own initial efforts.

Cholera and Malaria Relief. The story of the terrible malaria epidemic which ravaged South Travancore last year, is a plea for more and better food; the story of the cholera epidemic which followed closely in its wake, is a plea for wells and cleaner living; the story of both these epidemics is a plea for Rural Reconstruction in its comprehensive programme. One needs no greater argument.

There is always malaria in the foothills on the mountainward side of Martandam, including a strip of country parallel with the hills. Dr Krishnan Tampi, trained by the Rockefeller Foundation and now in the Travancore Public Health Department, tells the students in our health course of the survey he made of the people living in these foothills. He noticed that there were surprisingly few children about. He found that

a man might have three wives but only one child. These people are nearly sterile owing to the ravages of malaria.

Fortunately Martandam and the area away from the hills is generally free from malaria, but early last year I received a letter from the honorary secretary of a little YMCA, well out in the non-malarial belt, saying that many people were suffering in his village. The Extension Secretary went at once to investigate and reported that there was much malaria. When we first reported conditions to the capital city we were accused of creating a scare: there was always malaria down that way. We took the students of our Practical Training School to make surveys in these villages and in every house we found people lying on the floors and verandas either burning with fever or shivering with chills. Dr Orr of the Neyyoor Hospital took the Agent to the Governor-General to one of these villages and showed him that every household was afflicted. The malaria covered a new belt ten to fifteen miles further away from the hills. The failure of the rains the two previous years had dried up rivers, leaving stagnant pools where the mosquitoes were rapidly breeding. The people were further weakened through increased scarcity of food.

Friends placed at the disposal of our workers money, food, clothing and equipment with which we were able to visit and help six hundred of the most needy sufferers. Our honorary workers following their self-help programme are ever looking for such chances of service and they are trained to do it well. When the Travancore Government realized how serious the epidemic was, it instituted relief measures on a generous scale.

The malaria was still bad when cholera, which had taken 19,000 lives in this area six years before, broke out in a virulent form among these malaria-weakened,

famished people. The cholera was aggravated by the scarcity of water. One day I stopped along the road near Edaikode where about two hundred famished-looking people were standing and lying about. All were suffering from malaria. Each one carried an empty bottle for quinine. They said they had been waiting there for two days as they had heard that a doctor would come. From where I stood with them, we saw across the field a group of the faithful burying one who had just died of cholera. What a chance for cholera to spread among these malaria sufferers! A doctor did come while I was there but he had no quinine; he was the cholera doctor. The only place the cholera people, the malaria people, any unattacked people, and the cholera doctors who had been sent to help, could get water to drink was a hole dug in the ground down in the corner of a paddy field!

The Health Department cholera staff, and doctors of the Salvation Army and London Mission did heroic service in effecting isolation and in carrying on inoculation. Isolation was not easy. Certain villages were found wholly deserted, where all the people had run away when the first case of cholera was discovered. They ran in all directions, potential spreaders of the feared disease. The people in the villages where the spirit of co-operation and confidence in the local leaders, as fostered by the rural reconstruction programme, had permeated, did not run away. They obeyed the discipline ordered by the doctors and helped to combat the disease. The honorary leaders stood loyally by the doctors and worked day and night to extend the doctors' time and strength. With their full knowledge of local conditions and people they were most helpful to the doctors in carrying relief to those who needed it most.

Government was disappointed in the results of its work and treatment in the emergency hospital sheds.

Plate V: A NIGHT SCHOOL

The diseases would not abate. The malaria would return and return. Then they added generous feeding to their medicines and immediately the results seemed miraculous. The Public Works Department co-operated, giving road work to old and young whom they fed with good, well-cooked food. 'When they were able to work, they worked, but anyway they were fed', said the chief engineer. This generally stopped new cases and recurrences.

Dr James Simpson, Durbar Physician, commenting on this experience, says: 'It is absolutely impossible to clear up malaria like we had in South Travancore without supplying food. I bought the rice and began feeding with perfectly miraculous results. Why, I am so keen about better feeding as a health measure that, with the collaboration of the Director of Public Instruction, I am doing my very best to move Government to let us institute the noon feeding of all school pupils in the primary grades in rural areas (not in the towns). These children leave home in the early morning, remain in the schools all day without any lunch, and walk the long way home arriving late in the evening. School feeding would improve the health of these children, make for longer life, and give them bodies fit to make use of their schooling.'

The terrible malaria epidemic in Ceylon about the same time was finally put under control when feeding was added to other relief measures. We have these two further proofs that better food for the people coupled with the other benefits of a comprehensive rural reconstruction programme will make possible the decrease of such epidemics.

Demand for Village Centres. It is natural that there comes a time when every progressive village wishes to have a rural centre 'like Martandam'. Not only villages but just now every kind of organization seems

to want to do Rural Reconstruction. I have been forced to say the past year that it looks as though the next serious epidemic is going to be the starting of Rural Reconstruction Centres!

I rejoice at every new move I hear of toward a new locality or a new organization joining hands with us in Rural Reconstruction; but I do not feel satisfied with mere startings which have no definite plans or means with which to carry on. It is a comparatively easy thing to open a rural Centre, to get some great personage to perform the opening, to get praise and acclaim in the newspapers for starting Rural Reconstruction. Too many times, and too soon after such a start, the leaders come to me with their problems. I often feel burdened with problems which belong to others and which might have been avoided had the proper preparations been made. But I must and do have sympathy.

We have met and overcome similar problems one by one. The difficulties seem almost hopeless in most of these cases because there is no one ready to put his very life into the work, because the promoters do not have sufficient knowledge, and because little or no funds are available. It has happened that the person who proposed a scheme and stirred up students or others to be interested, had not the thoroughness to go with these willing workers into a village for a single session of sustained work. Some organizations, enthused by the praise they received from the opening of the first centre, planned to open a second before they had accomplished anything at the first centre or assured its running creditably. Many persons have only the bare idea, when they write that they hope I can come soon and open a centre in their 'very advantageous place'. Every centre of rural work must have a definite and carefully formulated plan or it cannot succeed. There is so much at stake.

Another demand comes from villages where the honorary leaders, having done certain features of the reconstruction programme, wish to run centres. Two requests before us just now are typical. Both villages, within seven miles of the Martandam Centre, are pitifully poor. They both have little YMCAs run by unpaid workers in their spare time. These leaders come to the Martandam Centre to study whenever they can. Each village has a small YMCA building as a simple headquarters, the building standing on land that has been loaned by a kindly member. These associations have no money at all: there is no possibility of employing even a gardener or caretaker on Rs. 10 a month. They want to improve their buildings, have gardens, grasses, poultry, bees, seed bull and goat, weaving institution, library, to make a fitting demonstration to their village and to the villages around.

Such a centre would require constant care. Who could look after all these projects and so develop them to make a first-class demonstration, convincing enough to be copied? No possibility of employing a suitable person: no villager in his spare time could look after live stock, poultry and gardens adequately at even a short distance from his home. It seemed almost impossible. How to help these earnest leaders who have neither the time nor the money to run a centre and yet not discourage this priceless local initiative is a problem. We have worked out this solution which brings the families nearest the Association building into active participation.

All the families living near the little YMCA building which serves as the headquarters are encouraged to take up one or more of the activities which Martandam demonstrates: live stock, family cows, milch goats; poultry, chicken and turkey raising; bees; gardening; weaving; palmyra sugar and other products;

handicrafts. To these families we give all the guidance we can through the Extension Department. Financial assistance, which is much less for us than the cost of keeping the live stock at Martandam, is given to those who keep the seed bulls and goats. These families are so deeply interested in their cottage industries and count so much upon the returns they get, that they are really better demonstrators than we are at the Centre.

These activities in the homes are established as a definite part of the programme fostered by headquarters, the village Association, and as such are open at all times to visitors, local villagers and villagers from neighbouring places who may wish to learn from them.

The headquarters building is the centre for other features of the programme: night schools, library, public and committee meetings, lectures, exhibitions, games, boys clubs, dramas. It is a real community centre.

Such a centre with part of the activities being carried on in the homes nearby is a more effective demonstration than a centre where all the activities are located in one common place and which honorary workers would try to run. It is cheaper and easier for honorary leaders to help their community this way.

Concentration. Although our Extension Area is bound, not by a definite circle but by 'lines of strength of interest', we thoroughly believe in the principle of concentration. Two years ago we selected twelve villages within three miles of the Centre, naming them our Primary Extension Area Villages, and put special emphasis on work in them. The improvement pointed out in the Extension Secretary's report at the end of the first year offers a strong argument for concentration of effort.

Improvement is reported in practice of the cottage industries and in working such features as the cock

circuit and hatching plan, greater use of the breeding bulls and goats, in the improvement of varieties of plants and grasses, in sanitation and health, in a wider use of the circulating library books, in co-operative societies and in training of leaders. Our workers gave more attention to making better feeling where there were divisions and quarrels; they were able to bring about more local giving, including several building sites and playgrounds; they gave more attention to children, conducted more thorough surveys. The understanding of possibilities created a desire for village centres. The YMCAs in these villages were improved.

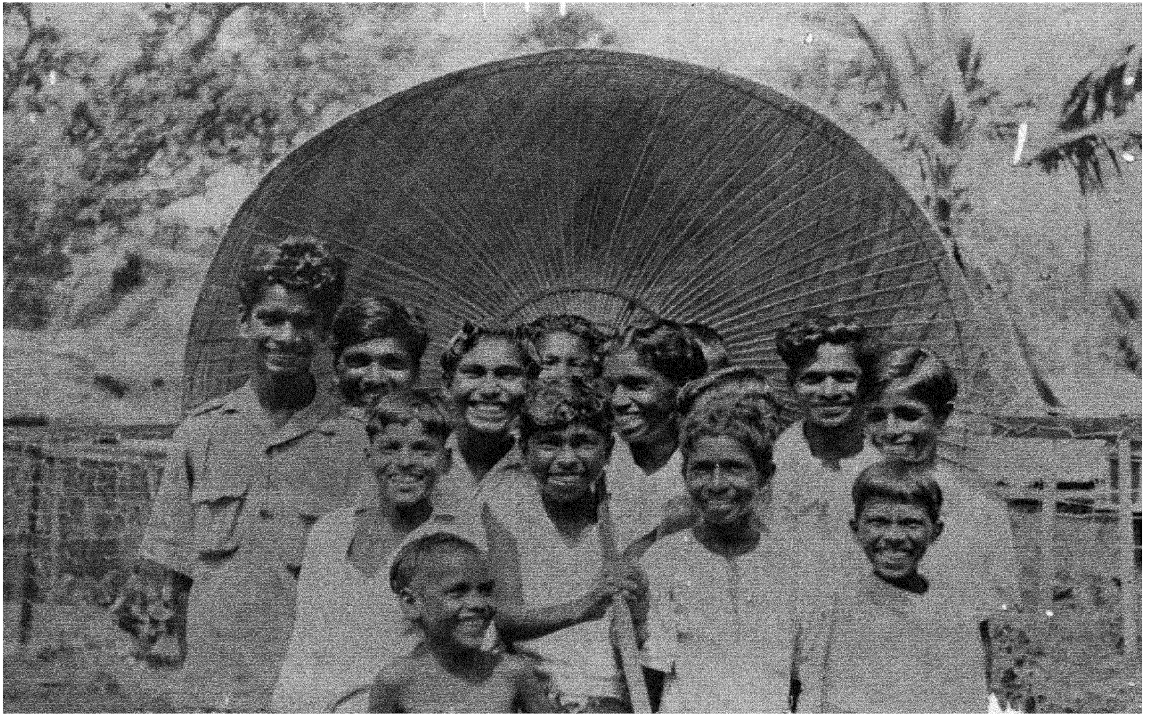
This same principle of concentration of effort is effective in the use and training of personnel. A young graduate who has successfully withstood the gauntlet of apprenticeship has joined our staff on probation. When he finished his first work—learning how to handle accounts efficiently and accurately—we assigned to him four contiguous villages about two miles from the Centre as his special responsibility. I have before me the report of his first month in these villages. It is a stimulating diary.

He got acquainted not only with the people but with conditions in these villages. He explained to them that he was going to spend much time among them: they told him all their troubles, and he promised to study with them and help them all he could. He connected them with the circulating library system and began distributing books. He played games with the children and won their confidence, he spoke in the churches and in all possible societies, explaining the purpose of his mission amongst them. A chief aim during this first month was to enlist the leaders through whom he would work. He listed some special needs and with the newfound leaders made plans for answering them.

Competing in Progress. To encourage the villagers to greater effort, we have instituted the 'Martandam YMCA Progressive Village Prizes'. Years ago in our exhibition we gave a prize to the most progressive poor villager. It is interesting to us that the villagers now have made so much progress, and each village has so many progressive villagers, that the prize can be shifted from an individual to the village. According to our new plan, a shield and prizes will be given to the villages which make the best progress in the year. A survey is made in each competing village to record conditions at the beginning of the year. Each village is instructed that notes will be taken on activities and progress during the coming year, and that judgement will be made on activities of the five-sided programme, spiritual, mental, physical, social and economic. A committee of judges checks progress periodically, and makes the awards at the end of the year.

Cattle and Goats. The use of pure-bred Sindhi bulls and Surti (milk variety) breeding goats to breed up the best of the local cows and goats has been a success. Our scheme of inducing the family owning the best cow (and who could and would feed best) in each village to breed their cows to our bulls, has resulted in some surprisingly fine progeny. The people think so much of this young stock that they will not sell to outsiders. When I received an order for ten cross-bred heifers I could not fill it because the owners wanted to keep their improved stock themselves. In this place where cows are so poor that the average price is Rs.25 to Rs.35, one Martandam man sold one of these cross-bred heifers to a neighbour for Rs.119. Later in Nagercoil, I met a doctor who had just paid Rs. 75 for a cross-bred heifer. He was very pleased with her milk yield.

Our contribution toward improvement of cattle



altogether is very small because it is so costly to feed the bulls that we cannot afford to keep many. We have only a few seed bulls, and only one of them draws an annual Government grant of Rs. 50 toward his maintenance. Recently in the Madras Presidency I saw ten splendid bulls belonging to a missionary and to all ten the Government there gives grants of Rs.100 each. It would be a sound policy if our Government would materially increase the number and amount of grants for breeding bulls throughout the State.

The Baroda Government is willing to supply bulls for all sections of that State but its problem is to find enough good bulls. His Excellency the Viceroy's creditable lead has stimulated the donations of breeding bulls. Should this movement keep up, donors will soon discover that the supply of sufficiently good bulls is deplorably limited.

These statements emphasize how big a task the improvement of cattle in India really is. Dr Henry C. Taylor, formerly of the United States of America Department of Agriculture, and the International Department of Agriculture at Rome, when studying in India with the Layman's Commission concluded that the improvement of cattle in India was such a Herculean and long-time task that even the Government would need to be subsidized by private capitalists. In his opinion non-official agencies could not accomplish much. I do not agree. Suppose in the United States all the farmers had calmly waited for the National Government to improve the cattle. One of the main reasons why the cattle in the United States are so good is because a large percentage of the farmers have been helping by careful breeding and selecting.

Our extra bulls and goats are loaned out either to village centres or to other interested villages. In the latter case we find an individual who will take good

care of the animal. We instruct him about the feeding and make a small financial contribution towards maintenance. We insist that a careful record of services be kept. The small service fees are given to the Martandam Centre.

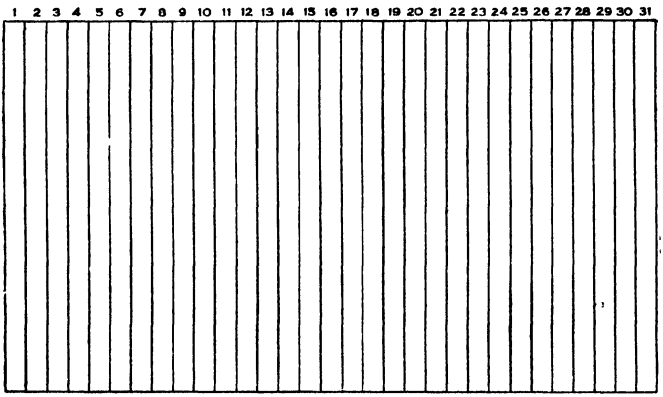
The Sindhi has proved a dual-purpose animal. The half-bred male makes a good working bullock. Although the ordinary cultivator admits this, he is often hesitant to own one because the cost of feeding this bigger animal is considerably higher as he naturally requires more food. The European planters do not mind this as they appreciate the greater strength. Could we afford it we would immediately own some of the purely working types of bulls, for, although the people ought to be interested in milk which is so badly needed, the fact is that milk is not in their ken or in the diet of their families. They are at present more interested in the working types.

India's Hungry Cattle need feeding. Fodder grasses are going to help much in the improvement of India's cattle. We now know four goods kinds. Napier and Guinea grass are well established. Soudan grass, which I recently imported, is being experimented with; its deep roots are supposed to make it especially resistive to drought. It grows from seed quicker than the other grasses. Guatemala, a broad-leafed grass, grows well in Ceylon and is proving a useful grass there. This will make us another fodder grass when we get it well established.

We are disappointed that most of the smallholders grow these grasses so feebly, having little of them when they might have much more. This is due to several reasons: lack of water, no fencing, the ingrained age-long custom of never sowing grass seed and being satisfied with only the weeds that happen to grow, and the general lack of enterprise. Those who do raise these

grasses show a lamentable lack of system in planting and in cutting. Grasses have possibilities which a few are realizing. One village teacher has done so well that he has a surplus which he sells in the grass market.

I give below the systematic plan of Father LeGoc, an enterprising priest whose farm I visited in Ceylon. We are recommending this plan to all our villagers who grow grass for stall feeding.



The whole grass plot is divided into thirty-one sections. On the first day of the month, the first section is cut and fed; on the last day the thirty-first section. On the first day of the next month, the first section is again ready for cutting.

Even if the grass is in different plots, the plan can just as well be used, assigning sections definitely for each day. If irrigation is possible, a ditch may be run along the higher side of the plot and the water be let into the different sections as required. Father LeGoc has a concrete water pit at the end of his cowshed. In the pit, manure and urine from the cows

is mixed with water, and the enriched water is run into the ditch at the top side of the grass.

Stall feeding is the solution of the cattle feeding problem in India. Sufficient pasturage simply is not possible.

Reading for All. The literate people of every village are keen to read, but they are not accustomed to having a single bit of reading matter in their homes or even available in their villages. This means that once out of school, books are outside their consciousness.

It is short-sighted for rural reconstruction workers to sit in their Centre circulating library among its hundreds of good books and expect the villagers to come in for them; but too often they do only sit. Our extension workers must be alive, they must put these books into the homes and into the hands of the people in the villages, until they become book-conscious. It is important that they do this without pauperizing the people: the people must pay a membership fee or a contribution to the circulating library. Because they are pitifully poor people, we had to work out a scheme whereby they could pay for the use of books, not in money, which they did not have, but in kind—in some product of the home which they did have. A whole village through its YMCA, or other organization or a leading citizen, can become a member of the Centre library and have the use of the books a whole year for one rupee. Even this amount is accepted in kind: each interested reader may contribute one fresh egg. Another scheme is offered for the villages which do not become members of the Centre library. The Extension Secretary loans ten books to a village at a meeting. The village through some responsible person is induced to keep these books one month for a fee of two annas. The enjoyment of having these

Plate VI: WOMEN STUDENTS TEACHING IN A MARKET PLACE

first ten books may stimulate the village Association to become yearly members at the cheaper rate. When books are thus put into the hands of villagers with some small effort of payment on their part the avidity with which they are valued and read is not exceeded, I think, in any country.

The energetic honorary librarian of one of our Rural Centres so effectively distributed the thousand books in his library that the binding was worn off the books and they had to rebind them several times. Another Centre not far away owned an even larger library with more modern books but lacked the energetic librarian, which resulted in a poor circulation and fewer books read. We have worked out an arrangement whereby the sluggish library loans twenty-five books at a time to the active one. The sluggish library is made to take the books regularly to and from the active one and to keep the proper records.

A childen's section in a rural library, if we select and put in the right books, discovers Indian children to be as 'book hungry' as children elsewhere.

In *Up From Poverty* I wrote about the children's section of the circulating library with not only children's books but *children's games.* But toys for children in rural homes is such a revolutionary idea that the hands of our Indian workers still go up in horror at the thought of loaning games to children. This may be one reason why they have been slow to develop this games loan system. 'Why, they will destroy them at once', they say.

They are fully conscious of the lack of discipline too often found in the homes. I agree that games must be very substantial and if possible washable. To meet these requirements we have brought from abroad, and have had made locally some fairly indestructible games. Games like *Peggotty,* and halma may be made of tin

instead of cardboard. Wooden games like dominoes are useful. Such games are loaned in the name of the child's father or mother who is made responsible. Games are drawn from the library just as books are.

Better Exhibiting. The idea of holding exhibitions is becoming more and more popular. So many exhibitions are being held that there is need of study and exercise of ingenuity and imagination to vary them. The demand upon the Martandam staff to co-operate with exhibitions run by others has become a serious matter, for, while we want to co-operate and help towards the success of these efforts, and while we believe in the inspirational and educational effects of exhibitions, they take such a lot of time, are upsetting to the regular programme, and are costly. These requests come from many places not only in Travancore but outside, as far away as North India. Generally the sponsors of the exhibitions are not able to pay the cost of transportation or for the new demonstration equipment required in each case, to say nothing of the salary and expenses of demonstrators who have to stay with the exhibitions throughout.

Exhibitions are generally unneccessarily long, being arranged by city people and those whose exhibits are not perishable as a part of ours are: chickens, cows, goats, bees, plants, and vegetables. We do not like our annual Rural Service Exhibition to last over two days. When co-operating in an exhibit like the Sri Chitra Birthday Exhibition in Trivandrum which lasts three weeks, we run relays of live poultry, taking one set of fine birds away just as they begin to droop from the confinement, and bringing another set. Our feeling is that even this exhibition could be shortened without any loss, and that all the people who see it could and would do so during fewer days if they had to. It is

very costly and wearying to continue first-class demonstrations so many days and nights.

I think we are improving in the matter of display, though the incredible lack of imagination in workers is nowhere more apparent than in the way they at first set up exhibitions. Lack of imagination is an ally of shiftlessness. And the latter sometimes prevents the preliminary preparations that are neccessary. How difficult it is to train a staff to set up an exhibit in such a way that it will attract the visitor and stimulate attentive observation. How difficult it is to teach the use of contrast and conspicuous placing: often articles are placed so far away or so close together that they cannot easily be seen. To guide observation and understanding by labels, placards, pointers, diagrams and charts seems to be too strange to learn. Descriptive placards when they are made are apt to be deficient in number, and either so small they cannot be read or so big they obscure the objects exhibited.

At most of these exhibitions it is desirous that products be sold to help defray the cost of exhibiting, to encourage the cottage industries and to enhance the income of the Rural Centre. If sales are desired, the arrangement of the exhibition, and labelling of all articles is absolutely essential. The exhibition at the Mysore YMCA World Conference is a case in point. Here was a rare opportunity for such sales, with buyers from many countries of the world not only financially able but interested in Indian wares, especially in the products of the rural Association Centres. These delegates later in a friendly way criticized the 'lack of imagination' of our exhibitors, in that they did not seem to realize that people would not buy things if there were no price tags on them or at least somebody in the vicinity who could state the price without hesitation. They said many people did not realize that

the things were for sale, but thought they were simply for showing what the Centres made. Further they said it was not made clear that these things were the products of the Rural Centres in which they were all interested, and not simply a collection of Indian products. The delegates complimented the exhibitors on an interesting exhibition but felt the sales were only a fraction of what they might have been.

Another mistake we are now correcting is that those who see the usual Rural Centre exhibition get the impression that cottage industries and their products are the whole of Rural Reconstruction. The many features of the comprehensive programme—the spiritual, mental, physical, social activities as well as the economic—should somehow be illustrated in the exhibition. To do this requires vision, ingenuity and energy on the part of the staff as they are difficult to exhibit. Some features can best be illustrated by good enlarged photographs with brief descriptive captions. To this end I have recently prepared and framed fifty-five such pictures, each illustrating one activity of our comprehensive programme. Forty of these are placed on a wall around the map of Martandam and its immediate Extension Area with tape lines running out from the maps to the pictures. The other fifteen pictures are exhibited around a 'five- sided triangle' and all placed on a board seven feet high (see Plate I). They illustrate how the needs of the villagers are met. Such pictures must be enlarged to be of any value.

The pictures are put up in the same way at the Centre when they are not out at exhibitions. They are very helpful in giving visitors, who come for a brief look at the Centre with no time to see the actual work in the villages, a better idea of what is going on. The permanent exhibit at the Centre also shows the

results of work in the villages and serves as a daily stimulus to visitors.

Sales Depots. The Government of Travancore did a very helpful thing when it established sales depots for the sale of local products not only in its capital city, Trivandrum, but in several other parts of India. This partially helped us over a real difficulty. Often we considered the need for having sales representatives in cities to sell the improved products we had been responsible for getting the people to raise. We were always forced to the conclusion that the cost of rentals and salesmen would absorb all the profit made from increased sales. We actually tried it out by putting a salesman in the city of Madura. The result was a financial loss. I proposed to the Marketing Department of the Government of India that they run a marketing stall for eggs only in Madras.

In our Government Sales Room in Trivandrum, in its strategic position in the centre of town, we can exhibit any or all of our Martandam improved products. Paraniyam Rural Centre also places its products there—honey, cloth, towels, arrowroot flour, and tomatoes. Private bee-keepers and others from the villages also place their products here and have an equal chance for sale. The Sales Depot takes ten per cent of the price of goods sold, and there is no charge for displaying goods not sold. We have received also some benefit from the similar Sales Depot for Travancore products in Bombay.

Our new sales scheme consists of placing neat, glass sales cases in YMCAs throughout Travancore and beyond, and with other sympathetic organizations. Our products are displayed in these cases. We offer a small percentage on sales to the secretary or other local person who will look after them, arrange the products inside attractively, keep everything neat, tidy, and clean, and

push the sales. He and the Centre Secretary are constantly in touch with each other to keep the supply always on hand. Not in all places can a man with the necessary business avidity be found, but where he can this is excellent co-operation between city and village.

Along with new sales developments the use of the *Auction Method* must be mentioned. People the world over like auctions. It is often said that the people of India like an auction so much that if one rupee is put up it will be sold for more than a rupee! Along our Travancore roads at night one may find a number of auctioneers entertaining the large crowds about them—and selling their goods to them.

So far as we have live salesmen in charge of selling our rural products it is possible to sell part of the superior products by auction. We have found the auction useful as a sure method of disposing of surplus stock at any time.

Trust Funds. Could we do any better thing than to set the example of proper accounting and auditing of all funds in any branch directly or indirectly under our direction? Many may be surprised to know that proper accounting and auditing is unusual. Large sums of money are raised for relief, or large sums are taken through gate money at an exhibition or at sports but seldom do we ever see the accounts or any audit of them. One pernicious practice in respect to relief funds, is to delay a vigorous application of the funds to the suffering and then when the acute need for relief is past, to appropriate (misappropriate) the remaining funds to some other purpose which may be a hobby of those who control the money.

In the many-sided work of our Association creditable pieces of service are run by unpaid workers who have to do them all in their spare time. We have to be

careful not to cause them unnecessary routine such as would be handled by paid clerks in other organizations. In villages it is not the custom to keep proper accounts. The accounts for our projects will not automatically be properly or completely kept even though the work is being guided by honest, self-sacrificing men. When a village does well, as at Paraniyam or Oollannore, the marketing, schools and other activities involve quite big business. The muddle the accounts are almost bound to get into are sure to be a worry to those honorary workers.

Our task is to make them see that a system of accounts with an annual audit is actually a help to them and that in insisting on such a system being established in every case, we are helping, not hindering. Fortunately some of the very best qualified accounts officers of the State are willing, as a piece of honorary service, to direct the establishment of a simple but effective system of accounts for every project and to supervise the audit of each account as well. They are sympathetic and friendly, yet meticulously exacting. This practice is very different from that of inviting as auditor some friend who knows little about account-keeping and is too much of a friend to discover and report discrepancies.

This strict method of keeping accounts gives a safe and happy feeling to all who are responsible for funds. We believe this service of establishing simple, correct systems of accounting and inventories, and demanding an exacting audit for all accounts such as Association district accounts, centres, co-operative societies, schools, relief funds, is not only our duty but one of our best training services, and a right example to many others who handle trust funds in the same areas.

Correct Weights and Measures. Weights and measures so vary from village to village in our parts that

it is impossible to convey a correct idea of quantities when speaking to people in one place about those used in another. The same terms in the vernaculars seem not to mean the same amount in two places, and within short distances there are different names for approximately the same amount. English terms of weight and measure are used by the local people, but no one knows the equivalent of these terms in the vernacular. When we get into the marketing of improved products this confusion of weights and measures is a serious difficulty which must be corrected.

For liquids we use mostly the English fluid ounce even if the quantity is several pints or quarts. There is need for accurate weighing equipment for very minute quantities and for large shipments. European style spring and balance scales are generally too complicated, too breakable, and far too expensive for the villagers, though a Rural Centre should possess a good set. For general village use we have found nothing better than the common bar balance with pans or platforms. Such balances can be made locally in small or large sizes so that they are very sensitive to minute changes of weight; but we always have to give careful attention to see that the metal weights are correct. The villagers need help towards a supply of accurate sets of weights graduated from a number of pounds to fractions of an ounce.

Collectors of Firewood. All through these years some of the saddest people we have known are the boys, girls and women who walk daily from near Martandam to the malarial foothills and return at night with head-loads of firewood. The foothills are eleven miles away. When they return they must go from house to house, trying to sell. They are hungry, having had only a poor meal of rice soup in the early morning, and perhaps a bit of jaggery sugar at noon. They must sell the wood they have gathered in order to buy the night

meal. The frugal housewife who thinks so much about low prices, consciously or unconsciously takes advantage of the fact that hunger makes it absolutely necessary for the wood gatherer to sell at once. She haggles the price of the wood down to a pittance. The tired hungry one goes away without money enough to buy a decent meal for herself and her dependents.

It was a wholly inadequate help for us to provide night schools, as we have, for those who had absolutely no chance of attending day school. The poor hungry people needed more than schools. Mrs Farr, a planter's wife who lived for a time near Martandam, was distressed by the plight of these wood gatherers. Through a gift from her we have been able to establish a wood depot at our Martandam Centre. To the simple yet sufficient little building the weary wood gatherers come direct when they return from the hills. A young paid attendant receives the wood, weighs it on a set of our accurate balances, and pays the gatherers at once according to the weight of the wood. They can then go to buy their food having received an honest price and being freed from hours of weary bargaining at doors.

The buyers come or send to the Centre Depot for wood which is sold to them by weight. This did not work perfectly at first, for some still tried somehow to get wood cheaper and even a few of the wood gatherers prefer to try their luck by the old method to which they were accustomed. In any such project much depends on the alertness and activity of the Centre staff member and his committee of interested local citizens: they must personally acquaint members of every house with the whole idea and purpose and benefits of the scheme, make them understand that they are being helped to a dependable supply of good wood at a uniform price; they must enlist all the wood

gatherers and make them understand that this philanthropic scheme is to help them, prove that it does, and that the depot is the wood gatherers' own.

Keeping Young.[1] We are a young men's association: how to make the young men's association younger has been a constant preoccupation with us in our district. I began in 1923 encouraging work with boys. In a country where there is little belief in the abilities of youth, it was not surprising that the places of management and responsibilities, even in a young men's association, were held by old men, mostly retired dignitaries. I have a deep appreciation for the service that these men have rendered and do still render, but my observations indicate that although experience is of priceless value, it is the younger men who can accomplish most for India.

I am a great believer in giving younger men and boys a chance. Employing younger men who have smaller financial needs, as a means of helping to solve the problem of support of the work, would perhaps not be justified if they did not accomplish more as well. Through using men and boys in places of responsibility, we are building for the future: they will be efficient workers while they are still young.

Travancore's athletes just now winning the Olympic meet in Madras is a splendid example of the wisdom of starting with the young. I look upon the raising of athletics from chaos to trained sportsmanship, through the development of the Travancore Athletic Association, as one of the most successful accomplishments with which I have been connected. For years we depended almost entirely on the college athletes, who had had no training during their earlier schooling and

[1] See frontispiece.

who would not train well then. Five years ago we extended the scope of our attention to all the high schools of the State, with training and competitions in each school and in sectional meets. These young boys responded wonderfully, and last year in the meet at Trivandrum we found the high school boys competing at the same time in the same field, though not against the college men, making better records than the college men. Some of these boys are in college now. It was a combined team of college and high school competitors who brought back the cup.

In such a rural area, if we do Rural Reconstruction well with emphasis on the young, we can almost let programmes for others look after themselves. We are employing two full-time and one part-time boys' secretaries. One spends part of his time with boys in the city of Trivandrum and the other part with boys in nearby rural villages—another example of co-operation between city and country. Two more secretaries are just now being trained for boys' work.

We have groups of boys at our Centres and Associations and in different parts of villages and cities, ten boys of near age in each. Rapid progress in placing responsibility on the boys themselves is noticeable. The boys plan their own programmes and carry them out with 'intimate expert council' from the boys' secretary. People of Central Travancore trembled when one of our boys' groups arranged a big meeting in the high school at Mallapally. Bishop Moore, Anglican Bishop for Travancore and Cochin, was to be the speaker under the presidency of one of the boys. Such a thing had never happened before in these parts. The boy presided well and the meeting was a great success, talked of for miles around.

The Rural Drama. The drama continues to be one of our best aids to entertainment, education, and

socialization. The largest gathering we have ever had at Martandam Centre was on the closing night of our last Rural Service Exhibition, when we staged four one-act dramas. The whole countryside seemed to be present, as many women as men this time. All of the fifty-three students of the Practical Training School, men and women, took part.

The plays *The Durbar of King Cereal* and *The Fountain which lived in a Pitcher* were in English; *The Phantom of Foods,* in Malayalam; and *David and The Good Health Elves,* in Tamil. Some of the audience did not understand English but the action was carefully worked out so they could partly follow the stories. The vernacular dramas were full of fun and laughter as well as instruction on what to eat. The huge audience was quiet and attentive, completely absorbed in the plays. The little library platform served as stage. The plain background of green ferns contrasted effectively with the gay costumes. To show the rural reconstruction leaders in training how the villagers use dramas, we visit at least one village where the boys enact a play such as *Out of the Pot into the World.* With their improvised make-ups, costuming, and staging, very simply and inexpensively done, the villagers are able to produce some splendid effects.

One of our most popular and useful new plays is *On the Road to Market* designed to teach kindness to animals. The cruelty practised all around us, seemingly without much thought, is horrifying. Talking and preaching does little good; the printed page is almost impotent; the drama is again our powerful means. This drama brings actual animals onto the stage showing the common cruelties familiar to all the audience though perhaps unrealized before. In the course of the play the balance of justice turns, the animals become masters and do unto man that which man has done

Plate VII: MOO-COW-MOO

unto them. A little boy carried by a monster chicken across the stage hanging by his feet with his head down is anything but comfortable and happy, as he lets the audience know in no uncertain terms. The situation is screamingly funny: but many chickens are carried to market after this play with heads up.

Closely allied to the drama are the *Folk Dances*. If we have helped to save these dances from passing into oblivion we have performed a service for the culture of the State. Fifteen years ago the only people who knew and loved these old folk-dances were very old men. Years before the Christians had bowed to a judgement which ruled out dances because they were danced to songs of Hindu lore. The Hindus began to think their dances were old-fashioned. When we first saw them danced by a few boys in a remote village, more because an old man bullied them into learning than because of appreciation, we were deeply impressed with their beauty and value. Beautiful figures danced in an intricate rhythm, valuable exercises for muscle co-ordination: we applauded and asked for more. Practically every village now has its dancing troupe. The old dancing-masters are recalling all they know and handing the picturesque descriptive dances on to the younger generation.

In this case, as in that of other dying arts such as the *Kathakali*, a little encouragement from one in whose opinions the young people had full confidence was all that was needed. These young people, both boys and girls, were immediately eager to learn. How happy were the old men that again they could teach, and what energy they put into it: dancing with boys until exhausted, then standing aside, directing and beating time with the cymbals, singing their throats hoarse.

This year at the annual Rural Service Exhibition

villages vied with one another in a folk-dance festival and exhibition. Every day the judges watched the different troupes. Hundreds of spectators watched with keen interest. As a drawing attraction for an exhibition, and as an entertainment dances never fail.

Folk School for all the People. Here is something new in folk schools. I am telling about it here rather than in the chapter on training leaders for it is education for the whole people.

For two years now we have held at Paramathanapuram, Agasteeswaram, a folk school which carries on for a week a valuable programme for old and young. The school is organized by an honorary secretary of the six little YMCAs of that area who has had training at Martandam. The people from all the villages around come to see, to enjoy, and to learn from the demonstrations, lectures, and other features of the programme. There is no regular registration as in our training school for leaders. Men, women, and children come to as many of the sessions as they can. The programme is made up in advance, printed in the vernacular and distributed in the surrounding villages. The Chief Secretary to Government issues orders to officers of all Departments in that area to accept all invitations to help with the school. Members of our Martandam staff help. All available talent is used.

This is an important development because such simple schools are possible for all parts of India, and cost almost nothing. The total budget for this Paramathanapuram school is less than Rs. 20.

The Rural Development Association is our nearest approach to an area membership. This Association grew out of our efforts to co-ordinate all rural activities and bring into one working group persons interested in rural work, whether or not they belonged to one of the village Associations, clubs, or co-operative societies.

When the organization was first created membership was confined to the immediate Martandam area but later its scope was enlarged to include all South Travancore. The name of the organization is changed to the South Travancore Rural Development Association.

All persons who underscore their interest by contributing four annas or more a year to the expenses of the Martandam Centre and Extension Programme automatically become members, and receive membership cards for the year. This method gives rural work a more representative membership than a city YMCA could probably hope to have, including the more wealthy and influential men and women, as well as the poorer labourers, from all communities. This Association at present has a non-Christian majority. Its committee is advisory in relationship to the Centre and Extension work, and the honorary secretary of the Development Association is a member of the Centre or Extension staff.

The Association does not depend upon bringing members and others into the Centre for its various meetings and functions. It holds meetings or other programmes under its auspices in any place in South Travancore. If a meeting is held in Nagercoil, for instance, the Nagercoil members take full responsibility and make all arrangements. Such functions bring the people of all sections to feel that even though they live at too great a distance to come often to the Centre, they are just as definitely a working part of our rural reconstruction programme.

BIBLIOGRAPHY

1. Adams, Robert M., 'Vegetable Gardening for Boys and Girls'. Junior Extension Bull, II, New York State College of Agriculture, Ithaca, April 1923.

2. Arvold, Alvin G., *The Little Country Theatre.* Macmillan, 1922.

3. Brayne, F. L., *Better Villages.* Oxford University Press, 1937.

4. ———, *Socrates in an Indian Village,* Third edition. Oxford University Press, 1937.

5. Bryce, Catherine T., Introduction by F. E. Spaulding, Illustrated by H. D. and H. P. Williams, *The Child-Lore Dramatic Reader.* Scribner, 1925.

6. Drummond, A. M., *The Country Theatre.* Cornell Country Life Series, Lesson 153. Ithaca, January, 1920.

7. Eaton, Jeannette, *Behind the Show Window.* Harcourt, Brace, 1935.

8. Gaheen, J. L., *Keeping Milk Goats in India.* Aryabhushan Press, Bhamburda, 1933.

9. Hatch, D. Spencer, 'The Cow'. *Young Men of India.* April 1930.

10. ———, *Rural Reconstruction in India—The Broader Basis for Health Improvement in Any Country* (Pamphlet for Inter-Governmental Rural Hygiene Conference in French and English.) League of Nations, Geneva, 1937.

11. Hatch, Emily Gilchriest, 'Drama for the Village Teacher'. *Teaching,* September 1931. Oxford University Press.

12. ———, *Little Plays*: The Buzz of the Bees, Cock-a-doodle-do, The Trial, Moo-cow-moo, The Durbar; and other plays suitable for Rural Reconstruction, schools, scouts, guides, etc. (in English, Tamil and Malayalam). Keston House, Trivandrum, Revised Edition 1937, and Christian Literature Society, Madras, 1935.

13. ———, *Kathakali. The Indigenous Drama of Malabar.* Cornell University, Ph. D. thesis, 1934.

14. ———, *On the Road to Market,* A kindness to animals play in two acts. Keston House, Trivandrum, 1937.

15. ———, *Out of the Pot into the World.* A temperance play. Keston House, Trivandrum. Translated and printed in several Indian vernaculars; see also *Young Men of India.* December 1925.

16. ———, *The Indian Theatre.* Cornell University thesis, 1928.

17. ———, 'What Constitutes a Good Play', *Theatre,* Bangalore, March 1931.

18. ———, *Travancore, A Guide Book for the Visitor.* Oxford University Press, Bombay, 1933. (New edition in preparation.)

19. ———. 'What of Co-operation'. *Travancore Co-operative Journal*, 1935.
20. Heiser, Victor, *The Doctor's Odyssey, Adventures in Forty-five Countries*. Cape, 1936.
21. Higginbottam, Sam, 'More and Better Milk'. *The Allahabad Farmer*, March 1937.
22. Mee, Arthur, *The Loveliest Stories in the World* (chosen from the Bible in its own words). Hodder and Stoughton.
23. Mitchel, Roy, *The School Theatre*. Brentano, 1925.
24. Moses, Montrose J., *A Treasure of Plays for Children*. Little Brown, 1928.
25. Pillai, K. Krishna, *Cow, The Wealth and Health of the Country*. Sri Rama Vilas Press, Quilon, 1937.
26. *School and Home Gardening*. Manila Bureau of Printing, 1926.
27. Shaw, Edward L., *Milch Goats*. U. S. Department of Agriculture, Farmers Bulletin 920. 1918. Revised, June 1926.

CHAPTER V

THE EVOLUTION OF THE JUNGLE FOWL

MAY the little wild fowl always live in the Indian jungles. The sudden startled run and the flying of a wild fowl always thrills us when we walk through Indian jungles. I am impressed with the similarity between the wild hen and her domesticated sister, the tiny little Indian country hen who ekes out her meagre existence around so many homes.

There seems no doubt that the credit for being the first to tame the wild fowl is due to the Indian people. They tamed the hen, but they did absolutely nothing to improve her, so that she has remained through centuries of domesticity just like her wild sister—and no better. Like the wild bird her idea is to lay only a nest full of eggs, about nine, then sit on them and hatch them into chicks. She will expect to repeat this process once or twice later in the year. With that she considers her work well done.

Experts tell us that in every one of the wonderfully improved breeds of fowls we are now bringing back to the Indian people, there is this ancient Indian (Asiel) blood. What a difference has been accomplished! Western traders took the little Indian hens to various European countries and to America where scientific study and great devotion has been put into the task of improving them by most careful selection and by breeding only from the best in each stage of improvement. The story of what has been done to improve hens, until one called Lady Cornell weighing only 3·2 pounds

laid in a year eggs weighing 29·5 pounds, 9·2 times her own weight, is a story of real accomplishment. Another, Lady Macduff, laid in twelve months 303 eggs weighing 42 pounds. I have brought back this improved type and said that they shall be available to every man or woman, or boy or girl—even the very poorest.

The Indian villagers were slow to accept poultry-keeping as a profitable cottage industry. There came a period of doubt when, because of ignorant handling, the birds did not thrive, when disease decimated their number, and when the market dealer refused to recognize size or quality. Not until the co-operative marketing of quality eggs was introduced, did that doubt vanish. Then the villager had to learn business methods and principles.

There is no doubt now in the line of happy faces at the Monday and Thursday morning egg markets at Martandam and Paraniyam. It is literally a line of faces for they have actually adopted the queue system. Age, caste, and social position are put aside and the earliest arrivals take the front places. No longer is the small child with one or two eggs pushed into the background. When an important citizen arrives he stands at the end of the line and awaits his turn. Every one is happy; order is established. We have to go very early on market mornings if we want to see the people, but it is inspiring to see this predominantly young crowd who have walked in barefooted from many villages to see their eggs weighed for size, tested for freshness, marked with the producer's number, stamped with the Martandam trade mark, attractively and safely wrapped, and finally packed. Happily they carry away money twice or thrice the local price for ordinary eggs.

The Co-operative Egg Marketing Society has now been entirely handed over to the egg producers. Ever

Plate VIII: POULTRY DAY IN A VILLAGE

since we started the marketing we have urged the members to stay each marketing day to help with all processes, so they might learn them. We said to them, 'Like every one of the projects we are teaching, this egg marketing must become your own, you must learn to do it yourselves, then no matter what may happen to us or to the Centre, you will understand the process so well that you can surely carry on permanently.'

In October 1935 they said they thought they were ready to take over and would like to try.

Our reply was, 'Certainly, try. We are not certain that you can keep up the quality, find your own customers, and carry on all the business for such an exacting clientele who pay good prices for quality and service, and not for charity. Also the rural reconstruction scheme for the Martandam Area requires that there be first class egg marketing at Martandam. If you do not do it satisfactorily we shall again have to manage it as your agent as we have been doing, or we shall run marketing of our own.'

We insisted that they must work entirely independently of us. We pointed out that it would be no test, that it would prove nothing if they conducted their business at our Centre and leaned on the Centre secretary with their major problems and correspondence. They agreed. They moved down the road to a rented house and compound, which the owner remodelled to suit their marketing needs. They whitewashed the building inside and out and put up their sign 'Martandam Poultry Co-operative Society No. 1739'. We loaned them a young worker to be their business manager for eight months. They paid him and also hired a clerk. At the end of the eight months they advertised for a business manager. It was interesting that none of the B.As. and M.As., who are begging for jobs as government clerks or teachers on as low as Rs. 10 a

month applied for the business managership of this prosperous Poultry Co-operative which pays Rs. 30 a month. It is an exacting job. Did they not feel competent? Was it not dignified?

The Society secured as business manager Daniel Abraham, a young Martandam High School graduate who like so many other lads was attracted by all the interesting activities at the Centre when he was in the adjacent high school. He joined our boy scouts, became a member of various other boy groups, and attended boy camps. Finally he became an apprentice and helped with all the activities of the Extension programme. With such a background of training he was an excellent choice for the business managership. He works not only at his headquarters, but he makes a general improvement of poultry and the development of poultry-keeping in the Extension Area, which we used to do, a part of his responsibility. Our Extension Department co-operates with him, giving attention to those whom he does not reach, to those who are receiving eggs from the Centre on the hatching plan, and to those who are being helped by the cock circuit.

For two years now the poultry-keepers have done their own marketing. They have not let the quality drop, they have kept up the volume of business, and have not lost their customers. They have marketed up to 13,275 large eggs a month. We personally are among the customers; we criticize, make suggestions and are as interested as ever in finding new orders.

Co-operating with our rural reconstruction programme, Abraham, like any other citizen, honorarily helps with other phases of our work. A lover of cattle, he acts as secretary of the Martandam Cattle Breeding Association, whose membership comprises those cattle owners who breed to our service bulls and who in other ways are working for the improvement of cattle.

The poor country hen is no longer to be found in some places. Paraniyam village people, who formerly sent their improved eggs all the seventeen miles to Martandam to be shipped from there, now do their marketing direct to their own customers under the auspices and direction of the Paraniyam village YMCA, using the same careful method and guarantee which they learned at Martandam. My little girl finds it pleasant to point out as she drives along the roads how all the hens and chickens running around the small country houses show signs of improved blood. In these places the jungle type of country hen is gone forever because the people know she is not profitable.

The improvement has been brought about by grading. Grading is the breeding up of common stock by the use of pure-bred sires. Breeding the best of the Indian game hens to pure White Leghorn cocks gives immediately better layers than the Indian hens and better bodies than the Leghorns. Authorities have spoken of the failure to make the most of grading as the greatest mistake farmers commit. If grading is continued for five or six generations, using pure-bred sires of the same breed each time, a uniform type of grade fowl can be produced resembling closely the breed of the male, having the laying propensities of that breed and more disease resistance than the pure-bred.[1]

From the first cross we have recorded a remarkable increase in size and number of eggs; sometimes the egg is as big or bigger than that of the pure-bred. There is undoubtedly an increased hardiness and disease resistance in the graded fowl.

It is possible to produce good grade fowls in an area much faster than pure-breds. The villagers may think a great deal of their pretty all-colours-of-the-rainbow

[1] Hatch, D. Spencer, *Poultry Keeping in the Orient*, p. 63.

cocks, but it is absolutely essential that all country cocks be disposed of if grading is to be successful. Some remuneration must be given for these rejected cocks. We are rigidly refusing these benefits to any one who does not co-operate.

Our Cock Circuit has greatly speeded evolution. Any poultry farm will hatch approximately as many young cocks as pullets, but for breeding purposes, it requires only one cockerel to ten pullets. These fine surplus fellows are invaluable; they are so essential in the cause of poultry improvement that they should hardly be sold at any price.

We put all surplus cocks out on circuit. The cock circuit is one of the interesting charges of a young extension worker. His duty is to schedule each cock in advance for two months with one family. The only condition imposed on the family is that they keep no country cock. The family knows definitely that it must get eggs and get them set before the end of these two months, for the cock is scheduled in the circuit book to go to another family for the next two months and without fail he will be moved on time. By this method one cock can help to improve the poultry of six families in a year. Our cock circuit is one of the most successful and highly multiplying schemes we know of.

The terrible fowl pest or cholera is still levying a heavy toll, but the feeding, breeding and marketing we have instituted has made poultry-keeping so profitable that people do not get discouraged when repeatedly they lose their fine fowls. Our circuit cocks run a dangerous gauntlet with this disease about and the mortality rate is high. No sure remedy has yet been found—strict isolation is the only method we have found useful, but villagers, including rural reconstruction workers who have had years of training, seem practically unable to understand and maintain strict

isolation. They seem to think they have isolated if they move a sick bird any distance, even if all the other birds follow along, and stick their heads through the slats of the isolation crate to watch the death struggles. In western countries Governments teach by force even the stupidest poultry-keeper what strict isolation means; they insist on it; and they eliminate such diseases as fowl cholera from their countries.

I have represented to the Animal Husbandry Department of the Government of India that this fowl pest is a matter of major economic importance and appealed to them to take adequate steps to find an inoculation or to enforce isolation so as to eradicate this disease. They inform me they are preparing to do so.

More than a year ago the Marketing Department of the Government of India became interested in our egg-marketing which we have built up over years of study and experimentation. Several of the officers came to study it and spoke highly of it compared with other egg-marketing they could find over India. They were concerned, however, that the improvement of poultry has become so widespread through our methods that there are in the Extension Area on market-days a considerable number of large eggs from improved hens which our Centre and the Martandam Poultry Co-operative do not have orders for. These extra eggs go into the old-style slow marketing system or are eaten at home.

The marketing officers are also concerned with all the little country eggs, and ordinary unimproved products which we do not consider we should include in our marketing as we are discouraging ordinary products and cannot and should not compete with those who sell them. The improved eggs from the villages are brought in every marketing morning by the producers themselves, or their children, without any

collecting effort on our part. This we are told is rather remarkable, and I found that even a man like Mr E. A. Slater of the Presbyterian Mission, Etah, who has done so much for the improvement of poultry, says he has never been able to get the people to bring in their eggs. The same is true in Baroda. Because of our policy to help people upward on all sides of life simultaneously, I would not be intersted in collecting eggs over a wide area unless we had other contact with these people. Though an important service, it would not in itself be important enough. The Government of India Marketing Officers, whom I saw in Delhi, asked me, 'Could you not set up a system for bringing in to your market these "extra" eggs?'

'Yes,' I said, 'we know how to get the people to produce more and better eggs, and I can at any time set up a system for bringing all the larger eggs into our market.'

'Then you should do that.'

'No', I replied. 'You can hardly realize the effort it has taken to create appreciation among buyers for the fresh guaranteed eggs offered in India, and to get them to pay the necessary better price. We are getting now almost to the limit of the number of customers we are able to find. We have, with the missionary spirit, taught our method (something that business firms will not do) to all who come to learn. Some of these people are nearer to our best markets and have become our competitors. So while we can collect more eggs at any time, I am unwilling to raise the people's hopes when I might have to tell them later we had failed to sell the eggs they had brought in.'

'It does not matter if you do fail', said Mr Livingstone. 'We shall have learned something.'

'Mr Livingstone, we can afford to have no failures. I shall ask the people's co-operation in nothing until I see the way to a reasonable surety of success. The man

who has co-operated in a failure thinks of himself as experienced—so experienced he will not try again. It is twice as difficult to interest him in the next project. I am unwilling to institute the collection of any greater number of eggs, until *you* find a way of selling them. While we have almost reached our marketing limit I believe that the Marketing Department of the Government of India now having relationship with local Government Marketing Departments and officers all over the country can arrange for the extra sale. Then I shall collect all the eggs from improved hens with no difficulty whatever.'

My feeling still is that the primary purpose of institutions like ours is experimentation and demonstration. We have experimented and have demonstrated both how to improve the poultry and how to sell the eggs. There comes a time when the growth of such a process should involve upon national Government Departments, like this Marketing Department of the Government of India, responsibility to help toward increased sales. The biggest need is to educate the general public, first in the value of eggs as a food, and secondly in the superior value of fresh, well-cared-for eggs. This needs to be done through a widespread campaign which can only be accomplished by the national Government. Such helps as reduced shipping charges for perishables, free return of empty crates as maintains in other countries, refrigeration, must also be arranged by the national Department.

This Marketing Department of the Government of India is trying an interesting experiment in our area. They brought a grading machine from England and set it up at Kottarakara, Travancore. For some months they received eggs from the two biggest egg middlemen in these parts. There is no organization in the Kottarakara area working for the improvement of fowls.

Naturally most of the eggs are of one rather uniform small size. The machine has now been moved to Chengannur in Central Travancore, the headquarters of one of these two big egg merchants who is supplying the machine with eggs. This again, is an area where there has been no work done for the improvement of poultry.

We shall co-operate with this venture in any way we can, but I am firmly of the opinion that the improvement of the poultry of the country is the fundamental which should proceed and underlie the whole process of successful production and marketing. It would seem hardly the right way to begin with the big middlemen, without any direct touch with the producers, and without any assurance that a portion of the increased income from helping the middlemen sell eggs would go to the producers. The educational programme should come first.

If a market for large-sized, fresh eggs is assured, there will be any number of villagers who will become keepers of improved poultry.

BIBLIOGRAPHY

1. Beebe, William, 'Hunting the Wild Chickens of Java'. *Asia*, March 1937.
2. Boyle, James E., *Marketing of Agricultural Products*. McGraw Hill, 1925.
3. Fawkes, Mrs A. K., *Poultry Keeping in the East*. The Methodist Publishing House, Lucknow, 1931.
4. Hatch, D. Spencer, *Poultry Keeping in the Orient*, Higginbothams, Madras. (In preparation.)
5. Rose, G. John, *Poultry Farming* (in Tamil). Coomarasawmy Naidu, Madras, 1937.
6. Slater, A. E., and Mrs Slater, *Feathered Missionaries*. Wesleyan Mission Press, 1926.

CHAPTER VI

CHANGING THE MIND OF THE INDIAN BEE

THE little Indian bee has come into her own. We no longer feel it necessary to bring foreign bees to India, because we have found out how to change the mind-set of the Indian bee and interest her in making a surplus of honey, whereas formerly she had not the slightest intention of doing so. A surplus is the whole necessity, if bee-keeping is to be the successful Indian village cottage industry it now is around Martandam.

In 1928 I brought bees from Italy at my personal expense and with so many interesting difficulties along the journey that *Asia* published the story.[1] We thought then the importation of better bees was essential because of two great faults of the *Apis indica*: they seemed migratory in nature; they were poor workers. We have learned how to overcome both of these obstacles.

Indian bees are not naturally migratory. They never leave the hive unless something is wrong. If he eliminates the wrongs the bee-keeper never has this experience which was so common and so disheartening in the early days when we first started teaching bee-keeping in the Martandam villages. It was discouraging for the new bee-keeper to find his hives quiet and still, dead and empty. The careful bee-keeper now inspects his hives once a week, clears them of any pests inside, and makes certain during the rainy weather that there is plenty of food. If pests annoy them, or

[1] 'Italianizing Indian Hives', *Asia*, June 1931.

if they run out of food the bees simply fly away hoping for a more peaceful and abundant life in a new home.

My mother's bees which were always about during my boyhood in New York State were not migratory, but they were not beset with so many pests. There was no wax-moth which is such a frightful menace to uncared-for bees here ; there was no king crow who sits close to the hive and eats many bees a day ; there was no huge black and yellow bee which flies about in front of the hive all day killing large numbers of honey bees ; there was no lizard who sits quietly inside just at the entrance and consumes a hundred bees a day ; there was no ferocious ant which can tear the insides out of two or three bees at once while they try to carry him out of their hive. These pests make whole swarms of Indian bees move from place to place as their homes are invaded. A weekly inspection of all the frames, and a thorough cleaning of the inside crevices and bottom board of the hive will eliminate any such intruders before the bees get worried about them. Only the lazy bee-keeper has these pests now. Of course where ants are numerous it is necessary to stand the hives in water. At the weekly inspection during the rainy season, which is the hardest for bees in any country, the bee-keeper will discover if the honey stores run low. When they do he places a little sugar and water in a shallow tin on top of the frames inside the hive and the bees think their home the finest place in the world to stay until bright days and flowers come again.

The migratory difficulty successfully overcome, we turned our attention to changing the mind-set of one of the finest minds of God's creation—a mind so sensible that it makes the Indian bee say : 'What is the use of getting all excited over working? We do not have to lay up stores. The weather is always warm, there are

always some flowers. We can dash out even between showers in the midst of the heaviest monsoon and likely find a few flowers with enough nectar to keep us going.'

It is with this set of mind that the Indian bees build combs and start filling them with honey. But when the combs are about half full some bee says, 'Look here, bees, what is the use of all this hurry and work? Look at all the honey we've got; let's just loaf around home a while. We have plenty of honey to eat.'

So they stop or nearly stop working. Then another bee has an even brighter idea. 'Why not have a big banquet tonight and eat up all the honey?'

They have their banquet and the honey stores which the encouraged bee-keeper thinks will be sufficient to extract by the end of the week, disappear overnight. The banqueting habit is well known to our Indian hillmen who collect wild honey. They know that stores of honey disappear overnight and say certain phases of the moon make the bees drink honey.

The scientific mind of the bee-keeper had to prove as good as that of the sensible, banqueting bees, or there was little chance of these small-producing bees ever becoming a profitable cottage industry for the hungry Indian villager. The method by which our bees are now made to work like Italian, English or American bees, producing surplus honey for sale, is very simple. It involves two principles: using the combs over and over again, and extracting often.

In the primitive method of squeezing the combs to get the honey, the combs or storage cells were ruined and before the bees could begin to gather more honey they had to make new combs. According to the best authorities it requires six or seven pounds[1] of honey to make one pound of wax comb. By the modern

[1] See Root, A. I. & E. R., *ABC & XYZ of Bee Culture*, p. 750.

method of extracting by gently whirling the comb in a small extractor, such as we make at Martandam for five rupees each, the combs are unharmed and can be placed in the hives again. What a saving in time and labour for the bees! All they have to is to begin to refill the combs. The tedious task of comb building need be done but once so the bees multiply their output.

A further increase in production results from one simple method of making the bees work harder and continuously. We cannot wait as we do in the West for the combs to be full, as I have explained. It is necessary for the bee-keeper to keep ahead of the bees. If he finds at his weekly examination that the combs are a little over half full he at once extracts all the honey from the super, putting the combs one by one into the extractor, whirling the honey all out, and returning them to the hive empty. Now the same bees who have started to loaf and have planned to banquet, call out excitedly:

'Why we have no extra honey at all! Come, we must quickly collect more.'

The mind-set of the Indian bee has been changed. When we have made them conscious of the need of working, they can do work faster than the western bees. I found this out when soon after I brought the 150,000 Italian bees to Travancore, they were attacked by myriads of *Apis indica*. From all around unbelievable numbers came, bent on robbery and seemingly resenting the invasion of the foreign bees. They stormed the portals of the larger new hives. Fortunately I was present. Big Italian bees would come out of their hives each with two or three small Indian bees on its back. In this terrific battle, I saw how the Indian bees had great advantage because they were so much quicker in their movements. This quickness helps

toward greater production when we instil the idea of industry into the mind, will, and plan of the Indian bee.

The results from handling the bees, as I have described, has expelled all doubts whether bee-keeping with *Apis indica* is profitable. While I am glad the Travancore Government are trying one more experiment with Italian and Carniolan bees, bringing several colonies just now from Australia, there is no longer any question that bee-keeping is a successful cottage industry even with *Apis indica*. Recently we surveyed 319 families—not by any means all of the bee-keepers in the Martandam villages—who have joined the one man with one hive whom we found when we began our teaching. These families owned 1,096 hives. They had made 4,304 pounds of honey to sell during the year. This meant an increased income for these 319 poor families of over Rs. 3,000. It should be kept in mind that this is all extra money. This income from bee-keeping, as from poultry-keeping and from other new cottage industries, in no way diminished the income they previously had from other sources.

Sometimes the bee-keepers are able to save this extra money. We took the members of the World's Rural Conference to visit P. Sundaram and his wife who live beyond mud walls over which we had to climb, in the village of Kaliakavila. They own thirty-five swarms of bees. He has adopted another cottage industry practised by several bee-keepers—that of building hives to sell to his neighbours. They sell honey through the Martandam Centre as well as directly to customers sometimes as far away as Bombay. Mrs Sundaram takes great interest in the bee-keeping. Sundaram said they had been able to save Rs. 170 from the extra money they had made on their bee-keeping last year.

Another day I was showing our National General

Plate IX : HONEY IN PLENTY

Secretary around some of our rural Associations near Chepad, about a hundred miles from Martandam. We were near the home of Daniel, a young farmer who had taken a short course in Cottage Industries at Martandam. He very proudly brought out a handsome new bicycle, telling us in Malayalam, 'I bought this with money I got from the honey my bees made.'

Dewan Bahadur V. S. Subramonia Iyer, former Dewan of Travancore, speaking at our last Rural Service Exhibition and referring to the large display of honey brought in by the villagers said: 'It has been thought a great thing to make two spears of grass grow where one grew before. What shall we say of having made these villages flow with honey where there was no honey before?'

Some of the villagers show almost unexpected ingenuity in labelling their honey. I remember going to Madras to work out with the best printers the design and colouring of our Martandam honey label. The villagers now draw their own designs and make the blocks right in their villages. Their neatly labelled honey looks very attractive as it sells in sales depots and exhibitions alongside Martandam honey.

When honey is taken unripened, that is before the combs are fully filled and capped, *it simply must be artificially ripened or cured.* I do not admit that Indian honey is inferior to honey from England, America, Italy, or New Zealand. I do admit that it is different as it naturally would be since it comes from different flowers. There are three reasons why Europeans sometimes say that Indian honey is inferior: first, they have in mind the home honey taste which is different; second, since the honey they get is usually that robbed by hillmen and squeezed, brood and all through some old dirty rag, it is thin unripe honey taken when combs are partly filled; third, they find it slightly sour. The

reason the honey tastes sour is because it has fermented. This unripened honey is bound to be thin because, in any country, nectar from flowers contains an excess amount of water. I quote this striking statement from our best authority. 'Some nectars have a water content as high as eighty per cent. If this is the case, to obtain a hundred pounds of honey, which would contain about twenty pounds of water in the final product, the original nectar would weigh four hundred pounds, which would consist of eighty pounds of sugar and three hundred and twenty pounds of water. Of this vast amount of water, three hundred pounds must be eliminated before the honey is ripe, or three times the weight of the resulting honey.

'To transform water into water vapour requires a large amount of heat, namely, 535·9 small calories per gram of water, or enough to raise the temperature of the gram of water 535·9 degrees Centigrade. To evaporate the three hundred pounds of water mentioned above would then require 72923·664 large calories. On the assumption that the sole source of these heat calories is the food of the bees, it would require the consumption of over forty-nine pounds of honey to evaporate this water. It is evident that the bees must under some circumstances consume large amounts of honey to obtain the energy necessary for the evaporation of the excess water in nectar. This in turn causes the necessity for gathering more nectar to take the place of the honey consumed in this process. If it were not true that the external heat assists the bees greatly in this elimination of water, the honey crop would in some cases be greatly reduced.

'The evaporation of the surplus water in nectar is one of the most interesting things in the hive behaviour of the bees. There are still many undetermined points regarding this course of behaviour but generally the

returning field bee does little toward this ripening but deposits her load in the first convenient place. This may be in the mouth of a young hive bee, in a cell of the brood-nest, even one containing an egg or a young larva, or even on the bottom-bar of the brood-frame. From this point on, the ripening process probably depends on the work of the younger hive bees. They move it from place to place, often with no apparent purpose, but the outcome of their work is that the thin nectar is placed in cells so as to expose as much surface as possible, thus aiding evaporation. Evaporation is also increased in proportion to the movement of air over the exposed surface of the liquid, and bees fan currents of air through the hive, even though it may be several stories high, and thus hasten evaporation. How this fanning becomes regular, in on one side and out on the other side of the entrance, is still one of the mysteries of bee life. Several investigators have studied the number of bees engaged in fanning at the entrance, and find that this number is in close relation to the amount of evaporation going on within the hive, so that it is evident that, in the marvellous division of labour within the colony, about the right number assume this task.' [1]

'*How do you insure first-class Martandam honey?*' is a question often asked. We employ Chellappa, a young, active, ex-high school boy, another of the many boys who during rural high school days learned about all the things we teach in our Centre which is adjacent to the school. He was a successful boy bee-keeper at his home and then showed his honey and bees at the exhibitions. Now he is paid Rs. 12 a month to work among the bee-keepers in the various villages. We do not yet quite trust the villagers in matters which require

[1] Root, A. I. & E. R., *ABC & XYZ of Bee Culture*, p. 747.

absolute cleanliness. We do not put our label on any honey which Chellappa, or another member of our staff, does not see extracted, cured and bottled. Chellappa says to the bee-keepers of a village, 'Let all extract honey on next Monday; I shall come early in the morning, bring our extractor (if the village Bee-keepers' Club or YMCA does not own one), and I shall help you extract. Any honey that you wish the Centre to help you sell, I shall take to the Centre to cure and bottle there. I shall help you here in the village with the curing and bottling of what you do not sell through the Centre.'

In this way Chellappa is continually teaching not only how to handle bees, but the curing and bottling of honey, all the fine art of preparation for sale, and cleanliness. He is continually pointing out wrong and careless practices. His small salary is met through profits in our bee-keeping department.

Back at the Centre the honey is 'cured' to the right consistency of thickness and moisture, by evaporation in a double boiler (one dish larger than the other with water in the larger and honey in the inside smaller one) over a Primus stove. The temperature of the honey is kept well below the boiling-point (about 150° Fahrenheit) until the required thickness is reached. If carefully watched, any temperature under boiling-point will not harm the honey, and the higher temperature will speed evaporation.

National Honey Week has just been celebrated in India for the second time. We expect this to become an annual event. We took the initiative in organizing last year the first National Honey Week because we felt such a celebration would not only spread this useful home vocation but stimulate the use of honey as a food. It will be a comparatively easy task to make the consumption of honey in India keep pace with increased

production as the vocation spreads. Honey has been our easiest product to sell. Never was a more fortunate stage set for the reception of a good product: every man, woman, and child in India is already very fond of honey but only a scattered few are accustomed to use it except by the drop as medicine. All we have to do is to educate India's millions to its unique *value as a food.* This we must do ahead of increase in production. We must not delay because the task is comparatively easy. As an educational institution, National Honey Week has been proclaimed for the first week in February each year.

This year a greater number of places over India, including several cities, celebrated Honey Week. The Dewan of Travancore, Sir C. P. Ramaswami Aiyar for the inauguration of the second Annual National Honey Week in the Martandam Area, wrote this message which interprets the purpose of the week: 'The use of honey as a natural and important food and the advantages of honey over cane sugar are becoming very well known and the work of the YMCA Rural Reconstruction Centre under the guidance of Dr Hatch has greatly facilitated the progress of bee-keeping in Travancore and has spread the knowledge of scientific bee-keeping in the State and outside. I wish all success to the National Honey Week and to the propaganda initiated at Martandam.'

As a suggestion for this celebration we gave all those in India, Burma, and Ceylon who have corresponded with us regarding bee-keeping during the past year, the story of the actual programme carried out in the various cities and villages of South Travancore last year. A typical programme began with a parade of bee-keepers accompanied by all the boys and girls of the village carrying banners advocating honey and bee-keeping. The parade was headed by a bullock cart

which carried tempting, attractive, large supplies of honey and enthusiastic demonstrators. Special songs about honey were composed and sung in the procession. After the procession had aroused the interest of all people in the place, they led the crowd to the Centre, YMCA, market or other meeting-place, where for an hour actual outdoor demonstrations of bee-keeping equipment, transferring bees to modern hives, extracting, curing, bottling, and labelling of honey were carried on.

Later at the meeting the best scientists and leading medical officers told the audience of the food and medicinal values of honey; why the ancient Ayurvedic physicians of India rightly used it in the indigenous medicines and why modern physicians make it the base of many preparations; how certain common superstitions about it, such as that it causes constipation, are erroneous; how even diabetics can eat honey without fear; how honey can be eaten as a food in quantity with great gain; how it is superior to other sweets, being sugar in inert form which is easier to digest; how excellent it is in the diet of children; how delicious whenever a sweet is required on children's bread or even in coffee or tea. The leading physicians in Travancore State are most enthusiastic about honey as a food. In my boyhood we had honey on the table every mealtime; we ate honey daily and it was remarkable that none of us, father, mother, or children ever got tired of it.

In a few of the villages *The Buzz of the Bees* or similar dramas were staged.[1]

'How do you get a wild colony of bees out of a hollow tree or hole in the ground or other cavity and put them into a modern hive ready for work?' scores of people have asked me.

[1] Hatch, Emily Gilchriest, *Little Plays.*

Schoolchildren or coolies will generally find several wild swarms if they know we want them.

We can trace any bee to her home by the following method of *bee-hunting*. It takes some time like any form of hunting. It could be recommended as a diversion for the unemployed. All the equipment the bee-hunter needs is a small box with lid, or a drinking glass with a flat cover. In the box or glass, place a piece of honey comb or a gauze-like cloth, and pour over it some honey diluted about fifty per cent with water. Full honey would make too heavy a load for the bees. Go near a wood or any place well away from an apiary, and look for bees taking nectar from flowers. Choose a bee that is collecting nectar and not one getting pollen, for the pollen gatherer will not be interested in your honey. Close the box or glass gently over a bee while she is taking nectar from a flower. She will be pleased to find the honey in the glass and will fill up with a load of it. Place the box on a post or stump and draw back the cover. The bee will come out, circle about, and start on a bee-line for her home. Sit down and wait until she comes back for another load. After one or two trips she will bring other bees to share the find. You can judge the distance the bees have to go to their home, for it takes about eight minutes for a bee to go half a mile and return.[1]

When you have a pretty good idea of the exact direction in which the bees go, gently close the lid when several bees are inside, walk toward a tree or some other marker along the bee-line, set the box down on another stump or fence, release the bees, await their return as before. Watch the direction they fly and note the decreasing time they take for the round trip. By shutting them in and walking to right

[1] See Root, op. cit., pp. 82-4.

angles some distance and releasing them you can establish a cross line and judge the position of the bee-tree or other home by the spot where these lines meet. If, as you proceed, the bees begin to fly in the opposite direction you will know that you have passed their home.

When found, every colony has to be diagnosed, for each will be in a different position and we have to decide how the colony can be got out and put into the hive. Let us suppose the bees are coming from a hole in a hollow tree. We first determine how far up inside the combs are and then cut a hole in the tree just above the combs. Into this hole we stuff cloth so as completely to shut off the cavity above. This is a wise precaution to prevent the queen and the other bees from crawling further up the hollow tree out of reach, when we begin to take out the combs.

Now we shall probably have to enlarge the hole by which the bees enter, making it large enough for the free passage of the hand and for the removal of the combs. We remove the combs one by one, cutting each one to fit into a frame of the brood chamber of the hive which has been kept ready nearby; we fit each comb into a frame, tie right round the comb and frame with a bit of string or with a strip of coconut fibre or tough grass. A few days later when the bees have fastened the combs to the frames with wax, these ties may be removed. Into some of the shallow super frames we tie any of the smaller combs and pieces which have been trimmed off. These serve as starters for the supers and encourage the bees to complete combs.

The hive is now ready for the bees, and we must decide how to get the bees, particularly the queen, into it. We try first by holding the hive close to the tree, just above the entrance and then direct some smoke through the hole we have cut above to make

the bees move slowly down and out onto their own combs in the hive where they will feel quite at home. We carefully avoid getting any smoke into the hives as bees do not like smoke and would not then stay in the hive. As soon as the queen goes in, the other bees will quickly follow. It is difficult to find the queen amid the thousands of others but if she is spotted, shut into a match box and placed in the hive the bees will quickly go in. Sometimes the only way is to take the bees gently by handfuls and put them into the hive. When a lucky handful contains the queen the remaining bees will begin to swarm in of their own accord.

When taking the colonies from small cavities in earthen walls we first clear off the earth along the line of the entrance-hole or tunnel until the combs are exposed. These are removed one by one as described above. When all the combs are out we place the hive close to the top edge of the cavity, if possible direct some smoke from the inner back side of the cavity to get the bees slowly to move out onto the combs in the hive. Bees in walls of houses, verandas, roofs, and other types of cavities can be hived in this way. We have hived hundreds of colonies of wild *Apis indica* by this method in our villages, and village bee-keepers do it by themselves whenever they discover a colony.

To those who write from so many parts of India, Burma, and Ceylon asking how to *get started in bee-keeping*, I advise first a search in their area for these wild colonies of *Apis indica*; and to rejoice if they are found in numbers. Our experience leads us to believe that chances are not good for bee-keeping where bees are not found in nature. When we started the Rural Reconstruction Centre for the Hyderabad Government at Pattancheru the Government was anxious that the Centre should quickly make a showing in bee-keeping.

They encouraged Mr Stephen, an experienced and careful bee-keeper who was in charge of the Centre, to set up orderly, impressive, rows of painted hives even before he could have bees in all of them. Mr Stephen was not able to find colonies of bees anywhere around, and the bees he imported did not do well in that section of Hyderabad State.

The Baroda Government was just as eager to make bee-keeping a success and we tried from the Kosamba Centre to establish it. Not being able to find bees in the locality, several colonies were imported from Martandam. They have not done well at Kosamba. We have scouted different areas of Baroda State for wild colonies. I am advising that bee-keeping be established first in those remote hill or forest sections where wild colonies can be found, and in the city of Baroda where there are many honey-producing flowers in and around residences. There is no doubt about the possibilities of successful bee-keeping in the several parts of Ceylon where I have recently made investigations. Government officers trained at Martandam are hopeful of making a success of *Apis indica* in Pudukkottai. The new Centre at Trichinopoly, with a Martandam trained man, is making a good start in bee-keeping. I see encouraging beginnings in Mysore, though as yet on a very small scale. Coimbatore and Martandam and Central Travancore are our most flourishing areas. It is especially interesting to know that Martandam area (now described as 'flowing with honey') was chosen for a Rural Reconstruction Centre because it was the most barren country where people were poorest. People honestly thought there were not enough flowers in these parts, but bee-keeping is prospering mostly on the natural flowers.

In any bee-keeping country anywhere in the world there is the need of supplementing natural flowers with

others deliberately sown for bee pasturage. In New York State we sowed white clover for the first spring flow of honey, sweet clover for midsummer, and buckwheat for the final crop in the autumn. We were interested that there be plenty of bass-wood and chestnut, golden rod, and berry blossoms; and Mother planted many of the best honey producing annual flowers around the house every spring 'for the bees'.

The dainty antigonon creeper (Mexican Coral Vine, Bride's Tears or Mountain Rose) with its very beautiful, pink or white flowers is the plant which we have chosen to lead our campaign of *Beautifying and Sweetening the Villages.* Can your imagination vision the changing picture in these poor villages where there were no flowers, but where now over the mud walls and thatched roofs of each small house or hut, climbs this flowering vine spreading a radiance of beauty? There are generally no flowers in the villages, owing to the scarcity of water, lack of fencing against goats and cattle, the presence of insects and fungi, as well as ignorance, poverty, and no experience of such things of beauty in village life. It never occurred to the villager that it was possible for him to beautify his home: that was a part of his hopeless apathy. For centuries his ancestors have had no flowers, they are outside his tradition. A visit to Kurumathur proves that these backward class people have a real appreciation for the antigonon flowers which add so much to their enjoyment. In the pretty setting between two thatched houses covered with antigonon in blossom, they will arrange an exhibition of their folk dances, or exhibit the mats and baskets made by the women, and show other improved products.

We are pushing this campaign by making antigonon easily available. A California catalogue quotes the price of one antigonon plant as '$1.00'. We put seeds

bulbs and plants in abundance within reach of the very poorest; and we sell both bulbs and seeds at a low price to other people.[1] Dawning appreciation of beauty spreads, cheering village life; the bees always swarm about antigonon. To find an antigonon flower spray without bees on it would be proof of an area devoid of and unsuitable for bees. This is the best honey-producing plant possessing the quality, in Travancore, of blossoming and providing bee-pasturage every month in the year.

BIBLIOGRAPHY

1. *Bee-keeping.* Bulletin No. 46, Government Experimental Station, Pusa.
2. Hatch, D. Spencer, 'Bee-Keeping for the Indian Villager'. *Young Men of India,* August, September, and October 1929.
3. ———, 'Italianizing Indian Hives'. *Asia,* June 1931.
4. ———,' Fiercest of Indian Honey Bees'. *Asia,* May 1933.
5. Hatch, Emily Gilchriest, *Little Plays.* 'The Buzz of the Bees', and other plays. (In English, Tamil and Malayalam), Keston House, Trivandrum, and Christian Literature Society, Madras, revised edition, 1937.
6. Kenly, Julie Closson. Illustrated by Kealy C. Henry, *Cities of Wax.* Appleton Century, 1935.
7. Root, Amos Ives, and Root, Ernest R., *The ABC & XYZ of Bee Culture.* A. I. Root Company, 1929.
8. Thomson, C. R., *Bee-keeping* (Malayalam). Government Press, Trivandrum, 1930.

[1] Bulbs, Rs. 2 per 100; As. 6 per dozen: seeds, As. 4 per packet.

CHAPTER VII

MORE HOME VOCATIONS

RECENTLY Mrs F. E. James whose judgement of art and of quality is much respected, toured the whole length of Travancore to find specimens of industrial arts which she deemed good enough to display in an exhibition in Madras designed to show the very best that present-day India can produce. During the part of this search when I was with her she found only two things which she thought of sufficiently high quality—our *kuftgari,* and some gold-thread hand-woven cloth made in the village of Balaramapuram. Article after article she turned down as second-rate or poorer. This is an illustration of the general poor quality of Indian handicrafts. We have had and still have a long way to go in our fight for quality products which will be worthy of the best in our workmen, which will be saleable at more than a starvation price, which will lift us above competition with the ordinary middlemen in the market-place with their second- to fourth-rate articles.

Toleration of the second-rate is one of the most common and serious sins in India. While this persists, people must remain poor. We find little realization of what high quality means. Unless someone takes a strong hand in respect to any particular product the people and even their teachers seem content to go on year after year never perfecting it so that it will sell for a decent price, or reflect credit on themselves.

We are helping with several cottage vocations because a rural reconstruction scheme needs at least a dozen. Not all families or all members of families will like

the same cottage industry, and since they will and should begin each on a small scale, one is not enough to bring the increased income the family needs. All of our home vocations are suited to men and women. Some of them have reached a high quality, some are only started on the way. Some people have hardly believed there are a dozen cottage industries. The students in our last Training School named within a few minutes fifty-seven possible cottage industries suitable for villages.

Every product needs so much attention, so much experimentation, so much careful study and recording, and the rural reconstruction staff have such a comprehensive programme to attend to, that progress in improving products is often so slow as to be disheartening.

Baskets and Mats. To see an example of the efficacy of demanding quality come to Kurumathur, a backward class village, and examine the baskets they are making. So attractive are they that visitors sometimes buy their whole supply. When we first turned our attention to this backward village there was one girl who was making baskets so poor in quality that they would not sell. We showed her how to make saleable ones. The very next time I visited that village the women of eight families were making saleable baskets. A few sales at a decent price are a miraculous stimulus. They make attractive mats also and have enthusiastically begun to spin coir yarn. We are now teaching these women of Kurumathur how to make the flat purse-like baskets which are so useful for many purposes and which are convenient for purchasers to carry away, to pack in their travelling trunks, or even to send by post to foreign countries. Formerly we bought this type of basket from Mohammedan women but they were at such a distance and so conservative we could not bring them into other benefits of Rural

Plate X: MAKING BASKETS AT KURUMATHUR

Reconstruction and we are never content simply to help economically. Kurumathur enjoys many features of the comprehensive programme.

Thread and Rope. 'Follow as far as possible the felt needs and expressed desires of the people rather than try to introduce things for which as yet they do not ask' is one of our proved principles. There are more palmyra palms than coconut palms in the Martandam area. This very fact has caused the coconut products to be somewhat neglected and less well handled than further north where coconut products are a main source of income. The people of Kurumathur village in their dawning progressiveness sensed the need of learning how to make coir yarn and rope locally and felt they could make this another cottage industry. Two visitors, Sir Baron Jayatileka, Chief Minister of Ceylon, and Mr Frank V. Slack of New York, were so impressed with the idea that they left money for the large spinning wheels needed for making the coconut fibre yarn. The villagers prepared soak-pits for the husks, and on my last visit I found them already spinning. This *charka* for spinning coir is an example of the simple type of equipment which even the people of backward villages can quickly understand, operate, and take care of.

Hand Weaving continues to be a paying subsidiary cottage industry and we should like to see a loom in every rural house for spare time and for spare—unemployed—members of the family. I have examined weaving institutions and schools as I have travelled over India and Ceylon and everywhere I see too expensive looms being demonstrated. A loom costing from Rs. 40 to Rs. 100 is not within the reach of the average villager, and the demonstrating of such expensive looms is obviously one of the main reasons why more homes have not procured them.

Pit looms with fly-shuttles can be installed at approximately one half the cost of full-height looms. The operator sits level with the floor with his feet in a pit, so that only a low framework is required. The pit looms are capable of doing just as fine work, and are more easily accommodated in a rural house which is often low and small. All teaching institutions should demonstrate both types.

Our greatest help to the weavers has been in showing them what kind of cloth would sell. In our last Training School, when lecturing to the class on this subject, I said:

'Too many people weave *mundoos*.'

A Government school teacher arose and said, 'I do not think weaving is a successful cottage industry. I put in four looms and have lost considerable money because I can't sell my cloth.'

'What kind of cloth do you weave?'

'*Mundoos*.'

The class shouted with laughter. No wonder he lost money. The market was flooded with *mundoos*. If they exercise a little ingenuity and exert a little energy, our Centres can sell quantities of towels of very many types, girl guide *saris*, shirting, curtains, table covers, bed covers, sheets, provided they are well woven with fast colour yarns.

A manager in charge of a hand weaving department and school seemed satisfied with poor quality, bolstering his satisfaction with the remark, 'Fast colour does not mean entirely fast.' He will have to learn that 'fast colour' means colours which will not run or fade from washing, boiling, sun, or other conditions which cloth is subjected to. He will have to find it out very soon, or those who weave cloth with fast colours will capture his buyers whom he might have kept. Cloth buyers want quality: why should they not demand it?

All the processes of preparing, sizing, dyeing, and bleaching yarn can be performed at a Rural Centre, as are done at Paraniyam. When yarn is not bleached before weaving, we insist on the cloth being bleached before it is put on the market. It looks more attractive when bleached, and the bleached towels show their absorbent qualities better.

Palmyra Sugar. We are still in the process of perfecting palmyra sugar for its various possible uses.

Come down a long steep winding foot-path to the rural home of Mr Moses, an Irenepuram Village School teacher and watch Mrs Moses make us some sugar. The sap has first been brought down by a climber from the tops of several of the trees which form almost a forest here amongst the blackened granite boulders. It is hot near the stove in the little half-open kitchen at the side of the small, unroofed, inner court of the house, but Mrs Moses does not mind and we must go close to see the thickening syrup nearly at the sugaring-off stage over the fire. She tests it often for the precise moment, then lifts the earthen pot from the fire and carries it to the courtyard where she ladles it into neat wooden moulds of the type we have taught villagers to make and use. Each mould is lined with a clean strip of palmayra leaf so that the cake can be removed when hardened. The sugar, a rich light brown colour, quickly cools and hardens. After a taste it is easy to understand why we recommend this sugar for all the uses to which white sugar is put : for after-dinner sweets cut into pieces just as it is, for icings, flavouring in cakes, ice-cream, puddings, in coffee, and in tea.

As a contrast come along to the jaggery section of the Kaliakavila market on the roadside just south of the main market. Is it possible that that black stuff covered with dust and flies is jaggery which people eat? Since this stuff is called jaggery, this filthy black

mess, we do not want to call the clean attractive product made by Mrs Moses by the same name. Although both are made from the sap of the palmyra palm, they are totally different products: one is filthy jaggery, the other is clean palmyra sugar.

The villagers who prepare the ordinary sugar jaggery must always suffer the penalty of low price because it is not fit to eat, and has to be refined before use. Palmyra sugar brings a good price at once because it is a quality product.

There are several sections of India where there are many palmyra palms not tapped at all. In some places they are tapped for intoxicating liquor. In Rajpipla State I know an Indian Christian whose conscience would not let him sell juice to the drink shops so he did not tap his trees at all, losing all the income. When I am in Baroda and travel on His Highness the Gaekwar's narrow gauge branch railways which instead of cart roads take us to the villages, I am sorry to see the long lines and groves of palmyra palms untapped. I am trying to assist in bringing them into usefulness. Sir Alexander Tottenham, Administrator of Pudukkottai State was concerned that the palmyras in that State were unfruitful for the people did not know how to tap the trees and make sugar. Last year the Pudukkottai Government sent four officers for apprenticeship with us. These men studied sugar-making and the Development Officer, Mr G. Venketeswaran, won a prize at the Rural Service Exhibition for palmyra sugar he made himself. I hope they will bring those Pudukkottai palmyras into fruitfulness.

Pappadams. Clean, safe food is a worthy aim. Picture a narrow path down which thousands of people go to attend the meetings of a large Christian Convention. Picture the most horribly deformed

beggar-lepers in the last stages of the disease lined up by their able-bodied managers close to the path where people must walk. Picture a break of several feet in the line of lepers and in this space a woman making pappadams! All the thousands, and there may be 30,000 by the end of the week, attending the convention will eat pappadams daily with their curry and rice. Many will eat them in the several temporary restaurants not far from the lepers. Many will eat the pappadams made by this woman. Hastily she makes hundreds of pappadams for sale, and she spreads the flat, circular. food morsels on the filthy disease infected ground about her to dry.

Pappadams are probably one of the dirtiest staple items of the Indian diet. Only well-to-do families can afford to have them made at home under supervision. Nearly all Europeans in India eat pappadams regularly with their rice and curry course, pappadams their cooks buy in the open markets and bazaars. They are not always made as dangerously as I have seen them as pictured above, but all of us see them being dried in all sorts of filthy places along the roads and streets, sometimes walked over by mangy dogs, sometimes exposed to the dust of a crowded bazaar. Unless we know where pappadams are made we can be reasonably sure they are not fit to eat. 'But we always fry them well', said a European doctor's wife one day to my wife. 'True, but I do not relish filth even if it is fried', came her reply. An Indian lady-doctor has just told me she never eats pappadams any more for she cannot have them made at home and bazaar ones are too dirty.

We have established the Martandam pappadam supply service. In one village we have eleven families willing to make clean, delicious pappadams under our supervision in a specially constructed, protected, clean shed, with a washable floor.

By our twice weekly service fresh pappadams are sent out with other products on each shipping day to regular customers who place standing orders. They cost only five annas for a hundred plus carriage. We are equipped to fill orders anywhere in India or beyond.

Clean Tamarind. Another general article of food is tamarind used in curry preparations. The sticky reddish substance can be seen lying on the ground in rural markets all the time collecting more and more dirt that never can be removed. This I know is repulsive to all families who care for clean food.

We felt there was a need for us to supervise the gathering of the pods from the trees, preparing the tamarind, and packing it in tight wooden boxes for sale. So far this clean tamarind has not sold as well as we expected. As with other improved foods there is the persistent refusal of so many Indian housewives to pay a fraction of an anna more for freshness, cleanliness, or quality. Well-to-do families who care for clean food prepare the tamarind for themselves in their own homes and do not use the dirty stuff from the market. The rise to the general use of quality food must come through a process of education. It will not be accomplished overnight.

Pineapples. Gardening is a cottage vocation possible, in at least some small way, to almost every rural family, but very few do any decent gardening. A Rural Reconstruction Centre is seriously neglecting its opportunity, if it does not have a good nursery to supply improved varieties of plants to the villagers. Two improved varieties of pineapples are among the plants distributed from Martandam. One variety grows large, up to thirteen pounds, is deliciously juicy and sweet; the other variety is much smaller, crisper, finer grained, and very sweet but not so juicy. It is

interesting that about an equal number of customers have preference for one or the other. These beautiful pineapples grow now in an area where the people actually did not know they had all the conditions for growing the very best. Only small ones grew by chance in the hedgerows, absolutely uncultivated. Slightly to the north and nearer the malarial foothills where the rainfall is higher, they grow better than actually in Martandam. They grow well in nearly all parts of the State and even in the hills up to 3,500 feet. Experiments carried out by our friends at the Ramakrishna Mission Mutt near Trivandrum indicate that pineapples, which generally ripen in two seasons separated by several months, will ripen every month in the year if some are planted every month.

The growth and sale of these delicious pineapples through the Centre is meaning much to some of the poorest villages. Dr Victor Heiser of the Rockefeller Foundation said to me when I last met him in New York, 'The greatest loss in those tropical countries, is from the absence of provision to take care of surpluses.' In all western countries, some of our first recollections include a variety of ways in which the surpluses of the fruiting seasons were saved up for the barren months: canning of fruits, jams, jellies, and vegetables; preserving eggs in water glass or lime solution; meats in salt brine; hay and grains stored away in barns; green fodders, chopped and packed in silos. To help preserve this surplus in pineapples and other fruits I have brought out a Max Ams Canning Machine. We turn it easily by hand, and seam tins of different sizes. We have learned to solder seams when necessary. We have a large pressure cooker to help in the processing. We are also experimenting with the making and bottling of pineapple juice and tinning pineapple jam.

Plate XI: CULTIVATED PINEAPPLES

This tinning requires much study and experimentation, but we hope to develop it.

Cashew Nuts. The simple mail order business for marketing the finest selected cashew nuts, mostly in India, continues to be profitable to the women who prepare them and who formerly had to stand in the hot dusty road near the bus stops trying to sell them by handfuls. They have joined a simple kind of co-operative which sells the nuts through the Martandam Centre. The nuts are sorted, packed, and sent out by post all over India. The payment comes back right into the little Martandam post office. Even poor country women can understand this simple process.

Owing to the great increase in demand for this nut, especially from America, there is a real epidemic of starting 'cashew nut factories' in Travancore. Agents of these factories scour the villages trying to buy all the nuts at the lowest price as soon as they are harvested. This takes away the steady income from those women who have earned their living from collecting and preparing nuts for local sale. Except at harvest time they have great difficulty in finding nuts, even when orders come. Paraniyam Centre has just started its own small marketing fund for cashew nuts.

While I was investigating schemes for Rural Reconstruction in Ceylon, I came across a useful example of roadside-marketing—a system much in vogue in America. On the road about midway between Colombo and Kandy we found organized roadside-selling of cashew nuts. At intervals of about one hundred yards small thatched bamboo huts afforded the sales-lady and her cashew nuts protection in case of rain. In front of each little hut was a table piled with nuts. In attendance was a neatly dressed sales-lady. Each girl I was told, represented a family. Other members of the family collected and prepared the cashews for sale. So

attractive was the whole arrangement that every one was inclined to stop and buy. This roadside-selling idea should be helpful in many rural places.

Palmyra Umbrellas. The real farm labourer had some ingenuity some time for he invented for himself a leaf umbrella which would sit on his head like a hat and leave his hands free for work. It was really an umbrella-hat. He made also non-collapsible leaf umbrellas with bamboo handles.

We are now persuading them to make bigger umbrellas six or eight feet in breadth suitable for lawn and beach purposes with strong bamboo handles which can be set in sockets in the ground. It sounds simple, but is it? Like the long months of struggle we had to get bamboo basket makers to change their traditional baskets a bit to suit our marketing of eggs and other products, we have had and are having a real struggle to get these leaf umbrellas enlarged. The wider spread needs much stronger braces and underweaving. We are perfecting these umbrellas trying some hardy varnish over the top to increase durability. They are appealingly quaint on lawn or beach.

Fortunately these huge umbrellas can be transported by train without crating. I tried to put one on my car to take to a place 300 miles distant. I could not tie it on in any way. Without much hope, I put an address on it and sent it with the gardener to the railway station. I could hardly believe my eyes when back he came swinging the yellow booking receipt. He had sent it by parcel for only seven annas. 'But the parcel clerk no not like this. He say it fill whole van and he can send no anything more on this train.'

The umbrella arrived in good condition. We hoped the coolie who delivered it appreciated the picture he created as he carried it down the road—a small frog under a huge mushroom!

Kuftgari. I do not agree with histories of Indian art which insist that the possibilities of great art have passed with the ages and that potential artists are no longer born in India. The artists and craftsmen of old India generally were encouraged by rajas and others so that they worked with a will taking time to put into their creations their very best. I want our rural reconstruction movement, in a different way of course, to give some encouragement to these present-day expert craftsmen whom God has endowed with creative gifts. *Kuftgari,* silver pounded into iron, was listed among the dying arts in Travancore. A little encouragement is all that was needed to revive it.

I marvel at how our *kuftgari* craftsmen can listen to our descriptions of a design, sit down and immediately draw the design on a bit of paper, then, with only a few primitive tools, fashion the new sheet iron into the desired shape, and set into minute hatchings our design in silver—marvellously, beautifully. The silver will never come out. It can withstand future ages.

But only the old men can produce the best *kuftgari.* They do it for love of the work; the younger men do tawdry things for the tourist; and all of them make plates, boxes, and picture frames—not desirable enough objects to be saleable in any numbers. There are not many *kuftgari* workers left. We are inducing them to make more useful articles and helping them with selling. *Kuftgari* cuff-links and pendants sell readily. We want all our projects to be permanently helpful, growing and increasing long after we have gone. But what a time we have had trying to get the expert old man to teach his son or other young men. As gently as possible we point out that he is really very old. We want him to teach some younger men to do the beautiful designing and high quality of work that he can do. It is almost useless; he refuses to see our longtime plan.

Whenever we urge him he says over and over again naively: 'Do not worry. I will work very hard and fast; I will work nights. I can take care of all orders. No one but me can do good work. No one can learn.' There are ways and means. Since he needs our help in marketing, economic pressure can be brought to bear and we are getting some teaching done. A few young workers are becoming fairly proficient. 'Your *kuftgari* work was greatly admired and readily sold', wrote Mrs James after her exhibition. Good *kuftgari* is, but only the highest quality will command praise.

Sea Shells. Boys and girls have a large part in our cottage industries. The next few I describe are peculiarly theirs. Grit must be given to fowls to help them grind their food and supply eggs and to increase the number of eggs. Sea or oyster shell is one of the best grits and the most common commercial one.

Whenever I walk on our shores I gather small sea shells to take to my little girl. Numerous boys follow me and soon notice that for some reason I like shells. They at once begin collecting and in no time I am deluged with handfuls of them. This is how I got the idea. What an excellent boys' work project.

The Boys' Work Secretary directs the boys near different seaside villages along our coast to collect shells and pays them. The shells have to be broken up to convenient sizes for the hens to eat. This is done by some in their homes as a cottage industry and by others at the Rural Centre. The Centre has added 'Oyster shell for fowls' to its sales list and ships the product to poultry-keepers.

There are shells and shells. They differ at various places along the sea coast. Too thin shells are not good; they must be from one-eighth to one-quarter inch in thickness. We had to find the best places for collecting,

and train the Boys' Secretary and the boys to prepare a first grade product which will bring a good price.

Fans. There is the double negative Malayalam proverb, 'No part of the coconut palm is not useful.' The same applies to the palmyra palm. I have written of the palmyra sugar. Another project is the manufacture of fans.

The whole leaf trimmed and bound with its own stem for a handle cannot be excelled on the hottest day in any country as a breeze-producer. We are now making folding fans, in full or half-circle shapes.

They cut palmyra leaves neatly and artistically into narrow strips; superimpose one strip partially onto another; sew them with neat threads; and support them with wooden handles. The fans are most attractive and useful. Like so many other handicrafts this one languished in a second-rate-quality-and-finish stage until we recently found time to give enough attention to it and demand that the fans be perfected. They are now really attractive and have every chance of selling in large numbers.

Christmas Cards and Gift Cards. Too seldom do we find any inventiveness. One of our constant regrets is that our rural staff or village leaders never seem to originate an idea. The Christmas cards are an encouraging exception. Dasiah and his boys worked with their own idea of making Christmas cards from the leaves of the palmyra. They had to climb to the tops of the highest trees for only in the very largest leaves is the distance between the ribs wide enough for a card. The first card was tied with a cheap ribbon of such a lurid hue that it entirely blasted all chances of sale.

'Why not tie it with a local product?' I asked. 'Why not try a strip of the same leaf, or of screw pine, of kora grass, dyed by the villagers in some attractive colour?'

The improvement was gratifying. Last Christmas they sent a large shipment to Denmark and had quite a sale in India. They are now booking orders for next Christmas, some to America.

The boys are busy perfecting an idea given them by a Scotsman friend: a palmyra leaf gift card to tie onto parcels. Millions of gift cards are used in various countries of the world but as yet no palmyra ones. Our palmyra cards carry a statement of how ancient manuscripts were always written with a stylus on palm leaves and a few words actually written with a stylus.

Lacquer. Our Boys Department have started to make lacquered articles, such as candle sticks, boxes, games and toys. They begin with the rough wood; hew or turn out pieces to the required size, smoothness, and shape; then apply the lacquer by whirling the wood rapidly enough to melt the lacquer by friction. This vocation has some commercial possibilities and is further valuable because it teaches young people to use tools. Since village people generally have no experience with any tools—not even the hammer and the saw—it is not difficult to realize what a valuable step it would be to bring about the general use of tools.

Fret Work. The use of fret saws is another handicraft given to the boys. They take to it keenly. We try to avoid their making the usual bad-taste and dust-collecting bric-a-brac to which the fret saw is conducive. Although we look upon this as only a beginning which will lead to more substantial work, our boys' leaders have turned out some very useful things: household articles, letters and designs for sign boards, and jig-saw puzzles which are so delightful a diversion for young and old. We hope this will lead to the general use of more substantial tools like the saw, plane, and hammer.

Paddle Tennis. The Martandam Centre is an exponent of paddle tennis, a new game which is becoming increasingly popular. It is especially suited to rural parts and rough and rainy hill areas, but is just as much fun in towns and cities. The rules of play are exactly the same as for lawn tennis but the space required is smaller. The court does not require as smooth a surface as a regular tennis court nor careful and expensive maintenance, and play can continue right through the monsoon rains.

Any net similar to a lawn tennis net may be used. Net making for volley ball, tennis and paddle tennis has become a cottage industry. The paddles are made of wood, very durable and inexpensive. The special paddle tennis ball of semi-solid rubber is not available in India. We play with used tennis balls. New tennis balls are too active and of course expensive for villages.[1]

Paddle tennis is an ideal rural reconstruction game, within the reach of limited funds and limited play space. It is enjoyed by boys and girls and by adults as lawn tennis is enjoyed. Planters in our hills where rainfall is so heavy, have found this game a boon not only for themselves but for their Indian employees whom they desire to keep happy and give recreation after working hours.

Boys and Girls in Industries. Boys and girls especially those who come walking barefooted from miles around to the rural high school just over the mud wall from the Centre, find all these vocations going on there very fascinating. They are often interested sooner than adults and begin to practise some of these self-help activities before their parents do. Many parents have

[1] Full paddle tennis sets comprised of 4 bats, a net, 4 used tennis balls, printed rules, are supplied from Martandam at Rs. 7-8.

been brought into the rural reconstruction programme by their children.

We feel we must encourage and help all these boys and girls. One of Dasiah's responsibilities is to keep in touch with every one of them. He carries in his pocket all the time a book with the names and addresses of the boys and girls, so that whenever he is near their homes, he can stop in to see them and give his intimate, expert guidance. It is fitting that these boys and girls who are making such a priceless contribution to the spread of beneficial home industries should have the final word of this chapter.

CHAPTER VIII

CLEANER LIVING

WHAT is the excuse any more in most parts of India for living in rural places in houses crowded on top of each other like slum dwellers in a big city? Are there dangers of sudden invasion? Is there need of mass defence?

The beginning of a revolutionary change is occurring in connexion with the rural reconstruction programme in the extension field of the Kosamba Centre in Baroda State. A majority of the people about there live in the usual congested Indian villages where insanitation is such that any one used to clean living could not be happy there one single night.

Out in the rural areas there was plenty of good open land owned by persons who lived in these dirty villages. These owners leased their land to renters or left them to caretakers. Neither the renters nor the caretakers looked after the lands well and income was, therefore, small. Naturally owners were not interested in the land which brought such small returns nor was the land ever properly developed.

From Congested Filth to Spacious Living. The Centre Secretary began to talk with these absentee landowners. He pictured to them the possibilities of improving and making full use of their land: how they could easily dig wells, water the land and use manure, and how with proper cultivation of improved seeds, they could get a splendid crop. He pointed out what a perfect place it would be for keeping some of the improved poultry demonstrated at the Centre. He explained that healthy, interesting, profitable, and satisfying living awaited

them on their own land. A few years later he took Mrs Hatch to visit some of these owner-cultivated farms. She tells the story.

'Our Dunlop cart—I don't think the bulls appreciated these rubber wheels more than we did—turned in under the imposing signboard *The Gaekwar Diamond Jubilee Rural Farm.* I had my doubts about the jubilance of such a farm! I saw a shack with one or two rooms enclosed, partly in chicken wire. I heard some shouting and splashing noises. I was wondering just why I had been brought to this place when the owner of the farm appeared. And then I knew. He greeted Mr Souri with obvious affection, his eyes shone with a happiness of living, his voice rang with a healthy pride as he welcomed me.

'"I am proud indeed to show Mrs Hatch my farm." He smiled understandingly, "Of course, there isn't much to show now for I am just beginning. You are thinking my house looks more like a hen run, I am sure. Well, this was quickly put up, it is sufficient for me and my servant, it is open to all the fresh air which is one thing I want."

'As we walked about the vegetable garden, watching the chickens and ducks, the cow and her calf, and the building of the well, I too began to smile. With my host, I saw a permanent well-built home, a lawn and flowers; I saw a big vegetable garden verdant with the best varieties; I saw the fowl runs and the cattle sheds; and beyond for acres on all sides I saw the fields waving with luxuriant growth; and best of all I saw a family living a clean outdoor life, healthy and happy in the midst of their own possessions.

'"How did you happen to come out here?"

'"Mr Souri aroused my enthusiasm and my curiosity. I came out here a year ago. I shall never go back."

'"What did you do before you came here?"

'He smiled, "Just what most of my friends are doing now. Sitting in yonder dirty, stuffy, village doing nothing. All day I would wander from home to the bazaar, to the teashop where we would play cards, drink tea, smoke, talk, and just sit. I did nothing worth doing. This land was rented and I was satisfied with that."

'"Will your family come here?"

'"After a while they will come. Just yet they do not wish to live so far away without their neighbours. They will come.... Look at my well here."

'Slop. Splash. Up came the buckets full of muddy water. Tirelessly the bullocks walked to and fro pulling up bucket after bucket. Deeper and deeper sank the well.

'"I am having a pukka well. It will cost a few hundred rupees but I shall have a permanent structure and a sufficient supply of water the year around so that my lands can be well watered. Look at the field out there. I have only begun. I have given only the least cultivation, yet that field is producing more than I have ever seen a field produce."

'The field certainly was a contrast to those renter-worked fields beyond. I caught my host's enthusiasm.

'"Over there I am trying an experiment. Everyday I learn something now. My life is full of interest now and I have so much to do, so much I want to do.... No, I cannot go back to my village. My skin does not like the feel of the air there."

'Splash. Slush. Slop.... Adam Dawoodji looked out over the acres: his own coming into full yield; beyond, half-cultivated, neglected fields; far beyond, the rich green fields of another adventurer who was daring to break with tradition, daring to work with his hands, daring to turn his intelligence toward a right and profitable cultivation. Adam Dawoodji was

silent . . . . After a time his racing thoughts took words.

' " One by one they will come. In twenty years yonder village will be deserted of its landowners. All these fields will be green. Children will be happier and healthier . . . . Let it be so. It is well."

' And in my heart I echoed, " Let it be so. It is well." '

Later when we visited the farms of such courageous men we were struck with the evidence that they were the most enthusiastic, contented, and happy people we saw in all that region. As we went from congested village to congested village, other dwellers told us, 'I have land and I am making preparation to move out onto it.'

This ought to happen throughout India, and it will indeed be a revolution in an upward direction. It will bring fulltime employment, full use of the land, more food, more abundant and cleaner living. Fortunately in Travancore we already have, to a large extent, this scattered housing. Although every rural person will tell us to what village he belongs, and the people think in terms of villages, the houses are so spread out that we often look about for the village when we are in the midst of it. In some villages there is congestion in certain sections such as ' caste streets ', but in general we do not have much of it.

Investigators, especially rural workers from other parts, say, ' You cannot realize the advantages this gives you in many particulars of the rural programme.' They see at once how much easier it is to teach and accomplish sanitation. There is room at every house for the bore-hole latrine. If a family wishes to take up better practices or ways of living, there is ample room for them to do so, whether their neighbours do or not. There is not the backward pull which always comes from other houses when they are crowded upon each

other. The difficulties of improving all kinds of live stock are diminished. If houses are at a distance any farmer who takes one of our White Leghorn circuit cocks in place of his mongrel cock, can have his hens bred by that cock, even though he has no confining runs, and he will soon have improved chickens. In the congested village, arrangement with a single family does not protect that family's flock from visitation and breeding by all the mongrel cocks of the village. It is essentially the same with improved bulls and bucks for breeding up the cattle and goats.

When a fearful epidemic sweeps down upon the congested village, what chance has any family to protect itself? Isolated houses in the rural areas can keep away from an epidemic when it visits the area. When cholera came to our congested seaside villages near Martandam last year, all the families fled in all directions spreading the disease as they went. Nothing frightens people like cholera. The families in our sparsely spread villages stayed at home, for if they had their own wells and were sufficiently careful, they knew they had nothing to fear.

This argument holds equally true of animal and fowl diseases. Fowl cholera in a congested village will kill off all the fowls in a few days whereas all that the isolated family has to do is to refrain from bringing new birds home during the time of epidemic.

THE BEST METHOD OF RURAL SANITATION

In this country, where the ground is so filthy because of lack of latrines, where disease is being bred by this filth seeping into the water supplies, and by people walking barefooted over the dirty ground from which hookworms crawl through the tender skin between their toes into their blood streams to multiply and impoverish their blood, the problem of a proper, cheap, sanitary

arrangements has brought us more questions than any other subject. Sometime ago I wrote a series of weekly articles on Rural Reconstruction, for *The Madras Mail.* The two articles on 'The Bore-hole Latrine' brought forth more comments and more inquiries than any of the other articles. To answer these many inquiries, I am going to tell here the reasons why such latrines are suitable and how to construct them.

The bore-hole latrine is cheap to construct. Our Centres' own borers cost from Rs. 50 to Rs. 100, complete with extension rods to bore as deep as twenty feet. They may be purchased from several places in India though so far I have brought ours from America. We loan these to the villagers who do their own boring. Depending on the softness of the soil three or four men bore a hole in a day or two. We require those who would accept the loan of a borer, to cover the top of the hole with a proper slab. We make these slabs out of the granite rocks in the area. They cost from eight annas to one rupee each. Dr W. P. Jacocks, Director of the Rockefeller Foundation Health Work in India, says that this is the cheapest successful slab he has seen anywhere in the world. Each slab is hewn in two pieces which fit together: it is easier to make it in two pieces, and the halves are lighter to move. Dr Krishnan Tampi of our Public Health Department has brought the cost of reinforced concrete slabs down to Rs. 3. The construction is so simple that they are easily and successfully made even by the honorary workers of the Paraniyam YMCA Centre. Dr Tampi's directions for the slab are: reinforced concrete 2′ 6″×3′ with a uniform thickness of 2″. There is a centrally placed oblong opening 14″ long and 5″ broad at the rear end and 4″ in front. On either side of this are two foot-rests elevated above the surface and sloping gently to the front. The entire surface is concave and

dished in such a way that any water or urine falling on the slab will find its way into the hole. The humorous but practical and effective reason for the elevated foot-rests being made 'sloping gently to the front' is that should the user try to sit the wrong way round, which would dirty the slab, the sloping foot-rests will pitch him over backwards.

Choose a site on the down side from the well. Dr Tampi tells our students that it has been found safe to put such a latrine within twenty-five feet of a well. I advocate at least a hundred feet if possible. The villagers like the 14″ borer better than the 18″ one because 'it goes down faster'. The 18″ borer is better as it makes a hole of greater capacity. Bore down 20′ if possible. If rock is struck, it is necessary to try in another place. If laterite, a soft decayed rock, is struck a few feet can be bored each day by filling the hole with water at night to soften the laterite. Even if a real rock is struck at 10′-12′ the hole may be used.

When the boring is completed, put part of the earth which has been lifted out around the hole to form a small mound on which the stone or slab is placed. This will prevent surface water flowing into the hole during the rains.

The ordinary family can use a latrine like this from one and a half to two years. When the hole is filled to within about three feet of the surface, remove the slab, fill up the remainder of the hole with earth, and drive a wooden stake into it to mark the place. With the same borer bore a similar hole close by and place the slab over it. When the second hole is filled within three feet of the top, bore out the first hole with the borer; put the stone back on it; fill up the second hole with earth and mark it with a wooden stake. In this way the family can proceed through the years alternately using the two holes.

This sanitary system will work at a neat profit, for the residue after it is decomposed, de-odorized, and pulverized by the soil bacteria can be utilized or sold for fertilizer. A hole yields about three cartloads of this fertilizer which sells for four or five rupees a load.

This kind of latrine is free from offensive odours, is clean, and not unsightly: dark inside, it is impossible to see its contents. Birds, reptiles, or insects accused of spreading bowel diseases, will not breed in this hole. Washing in the Indian manner can be done over the hole, for the water going into it will do no harm.

'Suppose the ground water level is above the bottom of the hole a portion of the year.' That makes no difference. Authorities say that the action is then something like that of the septic tank. Do not choose a site which would flood over the top during the rains.

'What about sandy soil?' In real seaside sand, the sides of the holes may be supported by wicker basket work until they have hardened. Tin or iron may also be used.

'What do you do when the people do not use the latrines or when they dirty around the outsides of them?' We never have any such case. With us the question does not arise. We have been told that this is the great difficulty in places around Madura, where the District Board is said to have bored about 3,000 of these latrines *for the people.* That is the reason for their trouble; they did not use the self-help method; they bored latrines, and gave them to the people. We may be sure that if the families are induced to bore these latrines themselves, they will not only use them but they will use them carefully, appreciating them as people always appreciate self-help benefits on which they have spent something or done some work.

Our system would give the bore-hole latrine to every family, one by one, as they are gradually convinced of

the need of them and the decency of having them. It is interesting to see the idea of the need growing in a village. One little backward class village boasts a latrine for every house.

Sometimes we give a few rupees to encourage a village. These few rupees are distributed at not over half a rupee to a family to assist it in the purchase of the top stone or to give them food if they stay away from their cooly work to bore the latrine. In very poor villages where many families have almost no money the loan system (see p. 23) can be used.

THE FASCINATION OF COMPOST

Compost making is not only a valuable economic discovery for India, it is also a fascinating enterprise. Readers will be surprised that it has even found its way into an art society. Sir Albert Howard, C.I.E., delivered a lecture on 'The Manufacture of Humus by the Indore Process' in London before the Royal Society of Arts. Grainger finds it an inspiration to poetry.

Of composts shall the Muse disdain to sing?
Nor soil her heavenly plumes? The sacred Muse
Nought sordid deems, but what is base; nought fair,
Unless true Virtue stamp it with her seal.
Then, planter, wouldst thou double thine estate.
Never, ah! never, be ashamed to tread
Thy dung-heaps.

—From *The Sugar Cane*

It certainly is a joy to make something useful out of nothing, especially out of unattractive and harmful material. I like to turn useless things into value, and at the same time contribute to cleaner living and it is splendid to have plenty of fertilizer at hand for one's garden.

The planters of our State are energetically enthusiastic about compost. Every manager has orders to make so many hundred tons of compost on his estate a year. These keen business men find it fascinating, too, for they are getting results from greater yields, and naturally their enthusiasm and appreciation mount.

If rich estate-owners so value compost, why should not the villager, who is so poor, gather up all his waste material and make as much as he can of this valuable fertilizer, and at the same time keep his premises neat and clean, sanitary and healthy? How to make compost of the best kind and from different sorts of material, including human waste, may be read in the books and pamphlets listed in the bibliography at the end of this chapter.

I give here the outline of my very simple method. I include human waste, the loss of which is one of the greatest wastes in poverty-stricken India.

1. On any level bit of ground, the area of which will vary in size according to the amount of material available, lay out a space, say, 16′ long and 8′ wide at the outside. If more material, make several such spaces.

2. Spread, until 9″ deep, green material, weeds, human waste, hen manure, sacking, newspapers, refuse, anything and everything.

3. Put on a sprinkling of urine earth (made by bedding cows or other animals with earth) and ashes.

4. Put on a layer of fresh cow-dung about 2″-3″ thick. Even if no cow-dung or urine earth are available, compost can be made provided more than one-third of the residues is soft and of fine texture such as fallen leaves, legume crops harvested green, green grass and weeds. The addition of ordinary soil is necessary, and wood ashes, or lime if the soil is deficient in lime.

5. Water thoroughly.

The process thus far constitutes one layer. By the addition of the manure, earth and ashes the mass is 'charged' so that the bacteria will start multiplying and working.

6. Repeat layers until 3′ high.

7. Fifteen days after charging, turn and water thoroughly, putting one-half of the heap on top of the other half. The heap will now be only 3′ high owing to decomposition and settling.

8. Fifteen days later, thirty days from starting, again turn the whole and water.

9. Thirty days later, sixty days from starting, turn the whole a third time, and water.

10. Thirty days later, ninety days from starting, the compost is ready for use.

Great are the joys of a cleaner, healthier village. When visitors who are really interested in rural improvement go around with us, nothing pleases them more than to see that the villagers have caught the vision of a cleaner life and have cleaned up. I recently visited several villages with our Dewan, Sir C. P. Ramaswami Aiyar. Nothing on the whole trip seemed to please him so much as when he came to the backward class village of Kurumathur, where cleanliness was actually practised. He mentioned it several times. He stopped on the rocky path above to glance back at the village.

'Have they really learned to like this? They didn't clean up just for my coming?'

'No, it always looks this way nowadays.'

'Well, this is great', he said.

I believe in the possibility of pushing this campaign for cleaner villages and more spacious, cleaner living, until every house will have its own latrine, until

attractive sitting places under trees or by streams will not be defouled, until leaves, rubbish and filth will be transformed into valuable compost to enrich the land.

BIBLIOGRAPHY

1. *Bored-Hole Latrines—A Latrine for every Home.* L. No. 15, Public Health Department, Travancore, 1932.

2. Hardinge, H. R., 'Broadcasting and India's Future—The Peshawar Experiment'. *The Asiatic Review,* 1935.

3. Harler, C. R., *The Culture and Marketing of Tea.* Oxford University Press, 1933.

4. Howard, A., *The Manufacture of Humus by the Indore Process.* A Lecture delivered before the Royal Society of Arts on 22 November, 1935, with an appendix on the Manufacture of Humus from the Waste Products of Tea Estates. The Royal Society of Arts, John Street, Adelphi, London, W.C.2.

5. ——— 'The Waste Products of Agriculture: their Utilization as Humus.' *Journal of the Royal Society of Arts.* December, 1933.

6. ——— and Wad, Y. D., *The Waste Products of Agriculture.* Oxford University Press, 1931.

7. Inter-governmental Conference of Far Eastern Countries on Rural Hygiene, *Preparatory Papers Relating to British India.* League of Nations, Geneva, 1937.

8. Inter-governmental Conference of Far Eastern Countries on Rural Hygiene, *Sanitation and Sanitary Engineering (Ceylon).* League of Nations, Geneva, 1937.

9. Inter-governmental Conference of Far Eastern Countries on Rural Hygiene, *Report of Health Organization in Ceylon.* League of Nations, Geneva, 1937.

10. Inter-governmental Conference of Far Eastern Countries on Rural Hygiene, *Sanitary Engineering (Java).* League of Nations, Geneva, 1937.

11. Inter-governmental Conference of Far Eastern Countries on Rural Hygiene, *Final Report of (Java) Conference.* League of Nations, Geneva, 1937.

12. Jackson, F. K. and Wad, Y. D., *The Sanitary Disposal and Agricultural Utilization of Habitation Wastes by the Indore Process.* Institute of Plant Industry, Indore, Bulletin No. 1, 1934.

13. *The Making of Rain-Watered Compost Manure from Farm Wastes.* Institute of Plant Industry, Indore, Leaflet No. 2, 1935.

14. Tambe, G. C. and Wad, Y. D., *Humus Manufacture from Cane Sugar.* Institute of Plant Industry, Indore, Bulletin No. 3, 1935.

CHAPTER IX

REORIENTING EDUCATION

THE STORY OF OOLLANNORE

ALONG a country road that follows a small brook in the narrow Oollannore Valley, came a barefooted high school boy. It was moonlight and after nine o'clock. He was on his way home from teaching in a night school of depressed class and untouchable children. He was a Christian boy. His mother was watching for him from the high cliff a little way out along the road from home. She had a complete clean suit—shirt and *mundoo*—ready for him.

'Dip yourself in the brook, Keevarchen, and put on these clean clothes', she called. Every night when he came from the night school he had to do this because he had been with the untouchables.

She was a good Christian woman and a very good mother: she was only training her son in the general custom at that time concerning the untouchables. Indeed, Keevarchen's father was even more careful. Every time he came from market he dipped in the brook; and the rule was that there must be a man to watch so that, if necessary, this man could testify that the dipping had been 'all over'. Even when he came in from the fields where he directed the working of farm labourers, he dipped in the brook before going up to his house, for were not these labourers Parayas and Pulayas, depressed and untouchable?

That was thirty years ago.

This school boy was M. K. Varghese, the founder and living spirit of the new Oollannore Rural

Reconstruction Institute which has been founded on the six acres of the land surrounding the same old home. The main school building and the smaller ones are grouped around the old house on the bluff high above the road.

Socialization in action is the outstanding characteristic of the Oollannore project; and at every function the most striking phenomenon is that men and women, boys and girls, of all classes and creeds, including the former depressed and untouchables, all the people of the Valley are there, moving happily together without any sense of contamination.

I consider this Institute one of the most important developments in the field of Rural Reconstruction in the past two years. Its aim is so to reorient education that the young people of this valley will not have any abnormal discontent to make them want to get away to the cities; that the school shall so train them that the majority should be able to return to the lands of their fathers and live there a happy and successful life. It is expected that in ten years time there will have come about in the Valley a complete upward change toward a more abundant life, the school being the social and educational centre for both old and young. This is a new kind of Centre—the School Centre. All the teachers, who are well above the standard of usual rural teachers, act as extension workers in their spare time, much as our extension men work out from Martandam Centre. This project is an activity of the little Oollannore YMCA which works under honorary, unpaid leadership as so many YMCAs in our area do.

In addition to the benefits to Oollannore Valley, we expect that this project will be an example which may be studied and will have an influence throughout India and beyond.

A system of education suited to the needs of rural areas is a pressing need in India today. Probably all educationists agree that the present system is unsuited to such a rural country and that it is producing a growing problem of the somewhat-educated unemployed. The wrong orientation of the present system has been clearly pointed out by several expert committees and several educationists.

The Royal Commission on Agriculture in India said, 'Unemployment is being accentuated by the present system of education . . . agricultural-bias schools are a remedy.' The Auxiliary Committee of the Indian Statutory Commission supported this view saying that the present system based on urban requirements is wasteful and harmful. The Travancore Unemployment Inquiry Committee reported that the present system of education had neglected the formation and training of character, and that its contribution to the economic development of the State has been disappointing. They recommend that English and Vernacular middle schools in rural areas should be converted into agricultural-bias schools. The Travancore Educational Reforms Committee recommended the establishment of vocational-bias schools.

'After many years of experience and effort in the villages of the Punjab,' says Mr F. L. Brayne, Rural Reconstruction Commissioner, 'I am convinced that there is no better or cheaper agency possible for remaking Indian villages than rural uplift schools.' Dr Kenyon L. Butterfield reported, in his *Christian Mission In Rural India,* 'The real nucleus of rural uplift is the village school. It should give the village boys and girls an education that fits them for life in the village. Adult education should be an important feature of the school.'

As I write the Government of Madras after a survey

of its whole field of elementary and secondary education have issued a *communiqué* which points out 'the defects in the present elementary education system and its curricula, including the antiquated methods and the divorce of teaching from environment. It emphasizes the need for rural bias...'

We hope that Oollannore will show the way. If it is to do so the curriculum is very important. Obviously a school with its pupils taking part in agriculture and gardening on these six acres of land, doing poultry-keeping, bee-keeping, weaving, other cottage industries, and domestic science, cannot do all these things adequately and well, and at the same time keep on doing all that is required in an ordinary school.

Mr Varghese and his fellow educators have drawn up a syllabus which is just now being considered by the Education Department of Government. It includes rural reconstruction subjects, domestic science, enough fundamental subjects, and enough cultural subjects to provide a good education for a happy and successful life in rural India. The pupils come to Oollannore after four years of study in eight ordinary primary schools in the area around. They stay at Oollannore the fifth, sixth, and seventh years. If they then begin life as farmers, business men, traders, or home-makers, they may continue reading with the aid of books from the school's circulating library, they will have the benefit of the adult education and extension programmes, and constantly visit the school as their social centre.

'What about the small percentage of these rural youths who really ought to go on to High School and College?' After finishing the seventh class at Oollannore, such a pupil may join the Second Form in an English school and proceed straight on through High School and College. Had he gone to the English

school in the first place he would have been in the Third Form instead of the Second, but from being in the Oollannore School, he has gained all the extra richness of that fuller training. Even though he will study a year longer before going to College, he will have saved Rs. 24 in total fees, a big amount to poor parents, since the fees at Oollannore are only Rs. 18 for three years, whereas in the First Form of the English School alone, of which he skips the fee, is Rs. 24 for the year.

It is interesting to note that a larger percentage of boys from the Oollannore school passed the regular Government Vernacular School Examination than boys from nearby vernacular schools. This is in line with experience in other countries where pupils who spend part time on vocational projects do as well in cultural subjects as those who spend full time on cultural subjects.

The school provides a meeting-place for the officers of the Government Agricultural, Industrial, Co-operative, and Public Health Departments enabling them to come in touch with the rural people. The results of the experiments conducted by these departments are communicated to the people and translated into action through the medium of the school and its teachers in their extension teaching.

It is the remarkable co-operative spirit at Oollannore that impresses everybody. When sanction for this school was received two days after the state schools opened for the year, they were not sure how many pupils would come. The first day there was only one pupil administered to by two high grade teachers in a room in the old Varghese home. In a month there were 103 pupils. The very urgent need for at least a roof to cover the pupils and the teachers was manifest. Hindus and Christians of all castes and creeds and conditions joined together, and in one day built and

thatched a very substantial shed, adequate in size to house this growing school.

Then this co-operative spirit began to spread throughout the whole Valley. Across the fields stood the Jacobite Church without any roof; it had been roofless for nearly twenty years. An eye-witness of how the co-operative spirit took hold of this situation writes: 'Though many people do not believe in miracles in the twentieth century, yet a real miracle was performed through the Oollannore YMCA. You are aware of the great split that cut asunder the Jacobite Church of Malabar, about two decades ago. You know of the attempts made by Lord Halifax, Bishop Gore, Bishop Pakenham-Walsh, and others, to bring about peace in the Jacobite Church. The little roofless church which you have seen from the roadside, do you know how that little church lost its top? That was due to the great split that took place in this Jacobite Church twenty years ago. The parishioners of Oollannore were so divided they did not thatch the roof of the church building. The roof fell down, the worship was stopped, and a small jungle grew up inside the church. Thieves could hide behind the bushes. All these years there has been no Sunday worship, no Sunday School worth the name, no spirit of fellowship among the parishioners. Now you must come and see what a great change has taken place. The parishioners are united. They are one in mind and spirit, the jungle has been cleared away, the restoration of the church building is taking place in right earnest. It is an inspiring sight to see all working as one, the Hindus helping with the carrying of stones and other materials. It is a sight on which angels in heaven look down and smile. It came from the prayers and the work of the YMCA members and the school.'

The Hindu temple was in a dilapidated condition.

The Christian leaders called the Hindus together and talked with them about this. They were all interested in every institution in that section being well looked after. The temple, like the church, needed a roof. The villagers recalled an old form of co-operation between Hindus and Christians in connexion with the temple tank which in olden days was annually cleaned by all people joining together. So now they went to work, thatched the temple roof, renovated and cleaned up the premises. Out of this grew a successful appeal to Government who have now taken over the maintenance and care of this temple—an assurance that it will be well maintained in future.

The account continues: 'Oollannore village was notorious for petty thefts. There were a number of young men in the village whose habit was to idle away their time. They wasted the day in card play and sleep; night was the time of their activity. They earned their daily bread by the nightly stealing of the agricultural products of their honest neighbours. Honest farmers gave up their cultivation because the fruits of their labours were snatched away by these nocturnal parasites. Now, a great change has taken place in these young men. They frequent the reading room and library; they attend the farmers' classes, night school, lantern lectures, moral and devotional addresses. Personal contact, wholesome influence, and the interesting model cultivation in the school compound has further helped to bring a great change. Stealing abandoned, these fellows get wages for some of the work at the school, quite sufficient to maintain themselves and to make small savings. With the savings they have begun to cultivate their own lands. When the thieves took to cultivation, the honest farmers began again to cultivate, and with redoubled energy. There will be a plentiful harvest this year.'

Drinking was another curse of the village. 'The leader of the half dozen confirmed drunkards was the terror of the village', a correspondent from that section writes. 'Now you must come and see this leader: he is now a perfect gentleman, always doing some useful work for the school. Our plan is to give him plenty of work to do, to give him good company, and to pay his wages in kind. He has now given up the drinking habit and become a very useful man. The school has created a healthy atmosphere in the villages so as to make the wicked people feel ashamed of their wickedness and gradually depart from it.'

The folk dances of the villages, which are different in form from those in the Martandam area, but vigorous and excellent ones, are being revived. Since the school began to encourage them, those who knew them have been going from village to village teaching them.

There was no hospital or qualified medical aid in all that region. The Institute desired to run a dispensary. A Canadian delegate to the World Conference visited Oollannore and gave a few rupees to start a medical fund. Then Dr Howard Somervell, the great missionary surgeon, he who climbed Everest, accepted an invitation to open the dispensary and to give one day of his busy life to Oollannore. The usual opening function is entirely talk; this was a working opening. He was to come at eight in the morning. The day before, the sick began to come in or to be brought in. Before the doctor arrived the school had registered 140 patients. By noon he had examined fifty cases and he asked the authorities to send away fifty of those registered, as he expected there would not be time for so many. With his usual vigour he worked straight on, eating a bit of bread and butter which they gave him at noon, occasionally jumping out of the window of the new building and racing round the compound

to get a bit of air. The people were deeply impressed with his good nature and tireless energy. When the teachers were annoyed at the great crowds pushing into the place to see the doctor work, he was goodnatured, mischievously throwing some water on them when it was necessary to push them back. He examined patients steadily until 9-30 in the night, and then drove over a hundred miles back to his hospital at Neyyoor, where more patients would be waiting for him.

Dr Somervell was so impressed with the needs of the sufferers of this area that he has agreed to be a regular member of staff, visiting periodically. The school is now employing a young doctor and a compounder. The dispensary administers to an average of twenty persons a day. The doctor conducts hygiene and first-aid classes in the school.

The Institute's Co-operative Society is of a new type. The Valley is frightened of the very word 'co-operative'. The usual Co-operative Credit Societies were established there. They were unlimited liability banks; borrowing was easy; there was not 'all-the-way supervision'. Many are in debt there today because of the failure of that kind of co-operative society. Our Oollannore Co-operative had to start with teacher members whose participation would create confidence. The principle is that no money loans will be given. The teachers receive provisions and other necessaries of life the cost of which is charged against their pay. Members other than teachers can do all their purchasing and selling through the Society which supplies them with such things as manures, seeds, implements, yarn for their looms, beehives.

Two surveys have been completed but not yet fully tabulated. One is the general survey conducted on the 'sample' plan under the direction of Miss L. C. M. Ouwerkerk, Professor of Economics, H. H. the

Maharaja's College of Arts, Trivandrum, with the help of the teachers and other local leaders. They prepared a special survey form and surveyed 62 families. These 62 families represent under the 'sample' survey system 620 families of the area.

The second is a dietary survey conducted under the direction of Dr Akroyd of the Government of India Nutrition Institute at Coonoor. For this survey it was necessary for a trusted surveyor to be present in every house, of the twenty typical families, before every meal, as they had to see the materials for each meal of the day before cooking. When these findings are tabulated, we shall know somewhat exactly what these rural people eat and shall be able to take steps for a more nutritious and better balanced diet. The Oollannore surveys will be as useful as the surveys we have done in other places and which we need to do wherever we work. They have emphasized the fact that while the expert surveyor is needed to direct, such surveys can never be correctly made by outsiders, however expert, without the co-operation of a number of local leaders who have plenty of local knowledge and the confidence of the people.

I was a bit anxious when I heard that Sir John Russell, who had come to India to advise on Agricultural Science, was to visit Oollannore, for he is a real scientist, and we had not yet been able to do things very scientifically at Oollannore. However, after the visit Mr Varghese wrote : 'It was a grand visit. Though the Director of Agriculture on arrival declared that the time allotted at Oollannore was only twenty minutes, Sir John and party stayed here for two hours. They inspected the library, co-operative store, weaving works, poultry, bees, and the demonstration farm. Sir John had a long talk with the farmers who had assembled here. He went rather minutely through the statistics

of the economic survey. He was alarmed at the condition of the villagers. He said, "The Martandam ideal as translated into action at Oollannore is the right way and the only way for improving the condition of the villages. Though slow, it is a sure way." '

After one year of school the big shed was no longer sufficient, for 250 pupils were in attendance. During the past year, they have put up a very substantial school building, and classes are being carried on in both the big shed and the new stone building. The clay tiles for the roof of the big new building arrived by river in the picturesque, hand-poled *wallams*, but the river was two miles from the building, and there was no money to hire coolies to carry these tiles. About 150 Oollannore citizens came forward and carried the tiles on their heads from the river boats to the Institute.

Scarcity of funds is the besetting problem. Mr Varghese and his teachers say over and over again, 'When we seem to be down to the lowest depths financially, something providential happens.' I had advised Varghese to keep his teaching job in the Government School six miles away and to direct this institution in his spare time. How could he support this large new project without this monthly income? He has been going ahead on faith putting all he could possibly spare of his personal pay into the school. Yet the school had such debts in Varghese's name that a month ago he received notice from Government that unless by the end of the month he paid off his debtors who had made attachments against his pay, he would have to leave his government job until his debts were paid. Then in that dark moment there came from New York a cheque in answer to an appeal I had made on the Institute's behalf. This enabled Varghese to clear the debts and continue to do his work in the High School.

The teachers at Oollannore are dedicating the years

here as a labour of love. They work without assurance that there will be money to pay them, and for a small amount when they were paid.

The Spencer Hatch Rural Reconstruction Institute and School—they have paid me the rare compliment of naming the whole project after me—with its fourteen teachers doing extension service, the people of the Valley co-operating, is one of the most promising of our developments.

BIBLIOGRAPHY

1. Begtrup, Holger; Lund, Hans; and Manniche, Peter, *The Folk High-Schools of Denmark and the Development of a Farming Community*. Third Edition, Oxford University Press, 1936.

2. Brayne, F. L., and Ryburn W. M., *Socrates at School*, Oxford University Press, 1935.

3. Buck, H. C., *Syllabus of Physical Activities for Secondary Schools and Manual of Instruction for Teachers*. Government Press, Madras, 1932.

4. Chen, C. C., *Socialization of Medicine in Rural China* (Chinese Mass Education Association). League of Nations, Geneva, May 1937.

5. Eaton, Theodore H., *Education and Vocations*. John Wiley, 1926.

6. Evans, J. A., *Extension Work Among Negroes, Conducted by Negro Agents*. Circular 355, U. S. Department of Agriculture, September 1925.

7. Hatch, Emily Gilchriest, 'Chautauqua: A System of Mass Education'. *Young Men of India*, April 1926.

8. Hatch, D. Spencer, *A Social Study of the Town of Dryden, Tompkins Co., New York. With Special Emphasis Upon Rural School Conditions*. Cornell University, 1916.

9. ———, 'Where Education has Immediate Reality (A study of Education in the Philippine Islands)'. *Young Men of India*, September 1927.

10. ———, 'Philippine Education: Agricultural and Vocational'. *Young Men of India*, May 1928.

11. Kilpatrick, William H., *How We Learn* (Talks delivered before the Vellore Educational Conference). Edited by Mason Olcott. Association Press, 1928.

12. McCarrison, Robert, *Food*. Macmillan, 1928.

13. Monroe, Paul, and Board of Educational Survey, *A Survey of the Educational Systems of the Philippine Islands*. Manila Bureau of Printing, 1925.

14. Ryburn, W. M. and King, E. L., *The New Light* (A course of Bible stories arranged for Indian Village Schools). YMCA Publishing House, Calcutta, 1936.

15. Somervell, T. Howard, *After Everest, The Experience of a Mountaineer and Medical Missionary.* Hodder and Stoughton, 1937.

16. Steward, R. M. and Getman, A. K., *Teaching Agricultural Vocations.* John Wiley, 1927.

17. Thorndyke, E. L., *Adult Learning.* Macmillan, 1928.

18. Van Doren, Alice B., *Fourteen Experiments in Rural Education.* Association Press, Calcutta, 1928.

19. Washington, Booker T., *Working with the Hands.* Doubleday Page.

20. Wise, Winifred E., *Jane Adams of Hull-House.* Harcourt Brace, 1937.

21. Wu, Hsien, *Nutrition in the Far East.* League of Nations, Geneva, May 1937.

CHAPTER X

ALWAYS IN TRAINING

WHEN we started Rural Reconstruction thirteen years ago, our first problem was personnel, and how to train the leaders when we found them. That problem still remains with us. We started as pioneers; we are still pioneers. I had had a good deal of training for this type of work, but I had to adapt what I knew to Indian village needs. My helpers had the desire to do something, the conviction that something needed to be done, but little technique.

Some of our earliest workers were teachers. They had so much to unlearn. They had grown up having almost nothing to do with practical things; they had never taken care of poultry or animals; they had never worked with their hands; they were unaccustomed to tools, machinery, physical labour; they looked about for some cooly, probably half-starved, when there was any heavy work to be done. This emphasized our first principle already listed in Building Pillars of Policy (Chapter III), that workers must have a rural background. They must be acquainted more with the practical things of life than with so much theory unrelated to living.

Four prominent obstacles beset the path of the rural reconstruction worker: lack of the scientific mind, lack of business aptitude, the toleration of the second-rate, and the lack of definiteness.

It is absolutely essential that a rural reconstruction pioneer have a scientific mind. No scientists have done the research for us here as scientists have done for

farmers in the west. Some years ago after very careful preparation I talked to groups of rural workers about the need of the scientific mind as they proceeded with their work. I realize now that they did not become scientific because they could not understand what I was talking about. The whole idea seems to be entirely outside their understanding. So much in village life is a makeshift. There is no idea of long-time, steady routine work. There is so much that is all a last-minute struggle. Another reason for this lack of the scientific mind is that the workers have practically no technique or equipment for observation and recording. They do not seem to possess the energy to read all the books related to their subjects even when the books are provided for them. They do not become possessed with the idea of learning and understanding any subject completely. Although there are always positions for skilled workers, the will to be skilled is not general. They do not know how to be scientific and it seems to be too difficult for their non-inventive minds to work out any procedure and get started on keeping records. All of their projects can exist in a poor condition and they can muddle through to some meagre end; so they do. They are satisfied with that.

How to overcome these difficulties? We have found it necessary to give full and sufficient equipment for any project and then to teach the worker how to use it. The accounting system at the Martandam Centre is a case in point. It had never been necessary seemingly for any of our workers to keep accounts. When they did they were written hit or miss, in this book or that, on a slip of paper tucked in a pocket and often lost. There was a terrific struggle to write up books at the end of the year. This seemed to satisfy them. They could do no better because they knew no better. Our Headquarters Office helped us to install a system

of accounting which would be as simple as possible and yet absolutely accurate and efficient. The accounts are now turned in monthly and audited annually. It has become almost second nature to keep the accounts as they should be kept. Any money, over which my district office has control, does not go out to pay expenses, until the required reports are in.

Not only must the worker be given equipment, he must be given a place to work and time to do it. When the egg-marketing was carried on at the Centre in the midst of all the other activities and when the Secretary in charge had so many other things about the Centre and Extension Area to do, we seldom could get accurate reports, comparative statements, or definite plans from him. When the egg-marketing was handed over to the Co-operative Society and this same Secretary was loaned to the Society for a period of eight months his whole attitude toward requests changed. Monthly statements were worked out and submitted, comparative charts and graphs were drawn. I was elated. This was the sort of thing we had been asking for for years. Why did we have it now? Because John Rose had a spacious place to work in and sufficient time to work out ideas. The result was that he too became an enthusiast and did his work better. I feel that he is acquiring the scientific mind. It is a delight to see the growing tendency in Dasiah and some of the other young workers to study deeply into the processes and science of their various projects.

Business aptitude has not been natural to the average candidate who has come forward for employment in Rural Reconstruction, yet the more practical sides of the comprehensive programme very soon lead the workers into business with many commodities. Customers who pay a better price for better products have a right to their demand for quality, promptness, and

business-like treatment. How difficult it has been for some workers to realize that the customers look upon their buying as a purely business transaction and not as a charitable deed. They will not tolerate excuses, simply because the YMCA is a philanthropic organization working with poor people. Nor should they. The staff in turn must learn to accept no poor work or lame excuses from the producers. How we long for a really first-class business manager to make the most of the advantages of wide contacts and friends all over the world, advantages which no mere business firm could hope for, but which the Centre enjoys.

The toleration of the second-rate, as I have remarked when writing of our cottage vocations, defeats progress. I began to realize after a while that all my talk of quality was meeting with no understanding response. This was due largely to a lack of vision, and to ignorance. Many of the articles which were brought in for sale were as good or even better than any such article the workers had ever seen before. Naturally they thought it was good and were satisfied with it. The only way I have found to deal with this problem is by tireless work. Every handicraft, every piece of social work, needs rigid supervision and watching until some person of judgement can approve. The approved article or work is then explained and set up as the standard. The struggle is to maintain this standard. Plodding along tirelessly and continuously is the only way, there are no short cuts. Workers must make up their minds that experimenting to perfect any project cannot be accomplished by doing it two or three times. Experiments may have to continue over months. We must accept the fact that experimentation is essential, that it takes infinite care and patience, plenty of time, and some money. If we are not prepared to spend

this, we are not really desirous of high quality, we are willing to tolerate the second-rate.

How much time, energy, and accomplishment is lost by those workers who are content to do every day just a lot of good deeds. Were that energy put into some definitely planned scheme of work, how great the accomplishment might be. Seldom do we find workers who have a definite goal before them and who work steadfastly toward that goal. Why do they not have such an aim? Because they never learned to put themselves to work. They have not learned how to work out a problem and follow it through. In our efforts to do away with this vagueness, we have banded ourselves into a definite working team. We have found it absolutely essential to fix responsibilities. There are no assistants at Martandam: no matter how young a worker may be he is an equal member in the team and is not working for another member of the team. The general operation of the Centre and of the Extension field is divided and definitely assigned. Mr T. R. Ponsford of England, during the session of the World Rural Conference at Martandam, challenged this statement and asked, 'In reality does it not work out that some senior man is responsible?' I replied, 'No, it is certainly not true that we hold the Centre Secretary to account for the failure of a younger worker in any responsibility that the younger worker has accepted. A senior man because of his experience might be entrusted with more important responsibilities.'

In our working conferences each man accepts certain definite responsibilities which he feels he can and would like to do. One does his best only when he is doing what he likes to do. He has a keener interest and more enthusiasm for this task and naturally accomplishes it better. If we find for instance that a

staff member is not keen about poultry, in mercy to the chickens we do not assign the poultry department to him. If we did, we should probably find that he was leaving the care of the chickens to a gardener or servant and the poultry would rapidly deteriorate. It is a bit encouraging to know that if one does persist and persuade some staff member to study a project deeply and learn to do it well he becomes really interested and will go at his work with energy and enthusiasm instead of in his former careless, listless fashion. Such a method of assigning definite responsibilities means that gradually we train our staff into a working team.

We have instituted a system of *monthly reports* which is most valuable both to me, who am responsible for the general co-ordination of the whole work, and to each individual as a check on his own work. The workers report on their special responsibilities or departments. Such reports help the worker to avoid vagueness and to visualize his progress, or lack of progress. The reason for lack of definite reports is often a lack of report forms. We first prepare together blank forms for each department of work or each project on which to record the operations during the month. Some of the workers who have not been used to keeping accounts or records and who have not even seen their parents keeping any records, tend to be tardy in preparing their monthly statements. They can, however, be taught that such definite observing and recording is not only a part of the scientific service of Rural Reconstruction but that it is a qualification for remaining on the staff. The ability to observe thoughtfully and accurately, and then to record that which is observed must be learned. We have found our monthly reports a useful way of teaching this necessary trait.

Another help toward definiteness is our *working*

conferences. How much joy there is in getting beyond what might be called the conference stage. Many people stagnate in that stage; some seem to like it so well they continue to hold conferences, squandering time and money. I do not believe in the conferences arranged by those who say, 'Now we must arrange a general conference to discuss matters. We must consider what we might do.' Those really wishing to learn can best do so by visiting and studying places where successful work is being carried on. There is little use in just meeting somewhere to talk and imagine what might be done. Professional conference makers who round up the talkers and sitters to inflict conferences on the real workers, are far from being a help to the cause. They waste the time of people who are eager to work and who need their time for working.

I do believe thoroughly in the type of staff conferences we hold regularly. It is a satisfaction when by relentless study, trial, and success, workers have found out methods which bring desired results. And it is a pleasure to share these findings with other workers. Staff conferences of our Martandam Centre and Extension workers are held about one day a month. We decide together what we shall do concerning the many items on our agenda and definitely assign the responsibilities. At each conference every member of the staff reports what he has actually accomplished on his part of these responsibilities. If he has not attended to any responsibility he accepted, he feels ashamed, and that item goes on to the agenda for the next staff conference. This is our most valuable check against forgetting or doing nothing, and our most valuable aid in keeping to the goal or aim ahead.

When we look at these problems of staff, let us ask

ourselves the questions: 'What is our moral responsibility? Can any organization afford to pay inefficient, careless workers month after month, year after year?' Although I do not advocate the Soviet system, I can understand its attitude when the State says to its executives: 'Our toiling masses, the Party and Government have given you a responsible position and you, what have you done? You turned out spoiled goods, we are not rich enough to tolerate this.' Therefore, the Soviet law says: 'Output of bad or incomplete production owing to lack of attention to tasks entrusted to managers of trusts, directors of enterprises, and administrative and technical personnel will cause their punishment by imprisonment of not less than five years.'[1] No movement such as Rural Reconstruction can afford poor workers.

One of the saddest things one sees in India is the need of early retirement. It is disheartening to see men still in their forties taking on the actions and attitudes of old men; to see them beginning to look around for younger men to run for them on any job requiring travel or action; to see them considering whether they are to go out in the sun, play in games, travel in more comfortable and expensive ways. They are old men though still under fifty. When any worker reaches this stage, he is generally in a rut which excludes him from changing his imperfect practices or bringing his projects to perfection. Usually by this time through increments of pay he is an expensive worker. What a pity that with all his training and experience he should decrease in usefulness so soon. But since this does happen too frequently, the situation raises a serious question of whether we should have still earlier compulsory retirement with adequate provident or

[1] *The Christian Science Monitor*, 15 May 1936.

pension arrangements making it possible for us to keep only active men on the staff.

We have learned that as far as Rural Reconstruction goes, workers are always students, they are always in training.

Women With Us. It is a mistake, though a natural one, that those actually engaged in the first years of the rural reconstruction movement are at least ninety per cent men. Rural reconstruction workers should number fifty per cent women. We cannot possibly make creditable progress until we have with us not only women workers but the general interest, understanding and participation of the women of the rural areas. I regret that among all the 900 leaders who have come to us for training since 1926 only ten per cent of them are women. Those who have come have set a high standard for the men students and have done very well while in training and afterwards. We are glad to have women students.

Mr Nanavathi, the Chief Revenue Officer in Baroda who spent unhurried time with me in the villages of that State, told me of employing an educated woman worker to go into the homes in Mohammedan and Hindu villages to give helpful progressive ideas to the women who take no part in progressive movements, partly because men are the leaders. He said that this woman worker had done what he, with all his great interest in rural improvement, had never been able to do. We brought the Secretary who was to take charge of the Baroda Centre to Martandam for training and with him his able wife who took the full course. As I went about the Baroda villages three years later, I saw what a wonderful help Mrs Souri has been, in spite of her home duties. Her husband goes freely to conservative homes to add his teaching

and guidance to hers, and he has this freedom only because of the confidence Mrs Souri has established.

We have to confess that in the Martandam Area we have made small success in enlisting women leaders. This may be due to several causes: we were a young men's association, and until recently we did not emphasize the enlisting of women workers so much: we hoped some woman's organization would join us and develop that side of the work. In the villages it has been difficult to get a leader for even a flock of Blue Birds, when the little girls were so eager to be led. Some of the women who are very capable of leading have families to look after, some have not: families do not seem to be the reason. Even when the care of families is given as an excuse I cannot help thinking of the vast services performed by wives of missionaries, who also have families and homes to look after.

I have been encouraged by the way in which women in Central Travancore have taken charge of the restaurants of our Rural Service Exhibitions in that area, have made all arrangements, prepared and served good food, and turned in a creditable profit toward the expenses of the exhibition. I am encouraged by the help with rural surveys which young ladies of the Women's College, Trivandrum, are giving under the direction of a European lady professor. I am encouraged with the accomplishments of those who have taken our practical training course in Rural Reconstruction.

We continually increase our emphasis on the women's side of Rural Reconstruction keeping pace—and are always on the look out for women leaders. I advocate the employment of trained women in rural reconstruction schemes. We make it almost a requirement, when recruiting a worker to our service, that he shall have a wife intelligent and interested in his work,

eager to help him, eager to help others in the villages about her, and who will take the same training that he does.

For any of my bachelor workers who find such a girl and bring her into the work of our programme, we shall sufficiently increase his salary.

Our Apprentices. Rural Reconstruction involves so many subjects that the need for longer training than our annual intensive practical course in March and April is evident. We have students whom we call apprentices with us at all times of the year. They are generally earnest and devoted men. Some of them have to make real sacrifice in order to do this apprenticeship: one now with us has taken leave from his teaching in Ceylon for six months without pay.

We advise apprentices to include March and April in the time they stay at Martandam for then they get the benefit of the intensive five weeks' course when we are all there giving our whole attention to training. Eight of the class of 1937 remained as apprentices.

A Director of Studies, a member of the Martandam staff, is appointed for the apprentices. He guides the course of training in accordance with our printed *Guide to Apprentices.* This *Guide* directs the student in prescribed reading and other methods of acquiring counsel and information. Each apprentice has regular daily duties at the Centre, such as taking care of poultry, bees, and live stock. After a few weeks they take over certain of these features for a definite period as their own responsibilities. They take part with the members of the staff in all the activities both at the Centre and in the extension villages. Within a few months they have helped with and are conversant with all the operations of the widespread, comprehensive programme. They keep careful note-books recording

all they do. These note-books are regularly examined by the Director of Studies, and by me.

Naturally we cannot take many apprentices at a time, for they must receive individual instruction and assignments. We do not like to take more than six or eight which explains why we have a waiting list of prospective apprentices.

One of the apprentices from Ceylon at the end of his eight months at Martandam said in a public address: 'Before I came to Martandam I spent long hours in my father's office in his easy chair reading books. Since I came here I have done many kinds of work. I have walked much in the villages until my fellow-students make much fun of my worn heavy shoes. I am no longer a sitting man: I go back to Ceylon truly a "Rural Worker".'

Short-term Students. The experience we have gained in Summer and Training Schools since 1926 has helped us to include only the most useful subjects in our Practical Training School in Rural Reconstruction which we hold in March and April.

The course General Rural Reconstruction, which I teach, uses my *Up From Poverty* as a text, and while it presents the whole field of Rural Reconstruction, it gives special emphasis to poverty and its elimination; village organization for effective service; socialization, working for and with the whole community; the demonstration method; co-operative credit, production, and marketing societies; co-operating with Governments and other agencies; extension; and rural leadership.

My Centre and Extension colleagues assist both in classes and in the practical working periods with village surveys; night schools for young and adults; adult education in the villages and market places, the village library and circulating library system; the use of

charts and pictures; work with boys and girls; the various cottage industries, including eighteen class lessons in poultry-keeping and ten in bee-keeping; gardening; improvement of cattle and goats.

The course Quickening of the Religious Life of the Village consists of morning devotional periods and study of the religious practices in the villages.

The Information Service course is given in the belief that when any one accomplishes anything useful, it is his conscientious duty to pass it on to others. Rural leaders can do this by public speaking, writing and advertising. In our public-speaking class the students get honest, sympathetic, criticism to correct mannerisms and other mistakes. In our writing classes, every article is written for a previously stated magazine or paper and submitted for publication. Actual advertising forms for use in the business side of Rural Reconstruction are worked out.

Our Health and Sanitation course is one for which we call on expert friends including the doctors of the Neyyoor hospital and the Public Health Department. Dr Somervell teaches what such rural leaders as our students can do to prevent air- and water-borne diseases and how to lead in case of epidemics. Dr Orr has specialized in teaching about correct rural diet. Dr Krishnan Tampi has been one of our most successful lecturers on various phases of the sanitation programme.

Two qualified Physical Directors trained in the National College of Physical Education give us their time free during the vacations of their colleges. They teach character- and health-building exercises, playground games, and group games which can be played with almost no equipment and in limited spaces. Every student participates in these games so that he learns them well enough to teach them to others.

The students in groups make actual practice surveys

in different villages—health, temperance, bee-keeping, poultry-keeping, and cattle and goats. These sectional surveys enable them to understand more comprehensive general surveys.

The students conduct educational market and village demonstrations, visit night schools, study the central library, and the village libraries which get books from it; they study actual groups of boys in our boys' work and observe the programmes carried on by the boys; they take part in the construction of bore-hole latrines and in the application of sanitary methods.

The students help with the small exhibitions in the villages and with the big Annual Service Exhibition for the whole area at the Centre. They witness how the villagers present our entertaining, teaching, socializing dramas, and they take part in typical examples of these dramas performed in connexion with school and central exhibition functions.

From the answers to our final examination paper question 'What improvements can you suggest for the Centre, the Extension Department, and the Training School', we learned that the practical part of the school is greatly valued. Students suggest that they should have more than the early morning working practicals. In these practicals one group took care of the poultry; another of the cattle and goats; another, the bees; another did gardening and general work. The groups changed, so that all students did all types of practical work. We are now introducing other practical periods in the midday and in the late evening after the games.

The types of students coming from all over India, Burma, and Ceylon to this Training School and for apprenticeship have gradually risen. We have great hopes for the future of Rural India when men and women of such splendid calibre are studying to lead in it. Every year some new idea originates in the

Plate XII: MORNING PRACTICALS. STUDENTS BATHING BULLS

student body. Last year they founded *The Old Boys' and Girls' Accomplishment Bulletin,* an issue of which is given as an Appendix on page 184. This year they published the first classbook. It grew from their desire to keep in touch with each other and to have a list of the names and addresses of the seventy students and staff. Photographs of all students and staff were pasted in the book. The classbook of the class of 1937 with its foreword, and actual photographs turned out to be a very neat souvenir.

The Annual Old Boys Reunion and Dinner is always an inspiration. The pride and spirit among the Old Boys and Girls of this simple rural school, the headquarters of which is an eighteen-rupee, temporary, thatch-shed classroom gives us much happiness.

Six weeks of hard work and much fun at Martandam forges a bond of union among the students. Wherever these 950 students go all over India, Burma, and Ceylon, this fraternal tie helps and cheers them.

BIBLIOGRAPHY

1. Borden, Richard C. and Busse, Alvin C., *Speech Correction.* F. S. Crofts, 1925.
2. Buchan, John, *Oliver Cromwell.* Hodder & Stoughton.
3. Fleming, D. J., *Helping People Grow :* an Application of Educational Principles to Christian Work Abroad. Association Press, 1931.
4. Hatch, D. Spencer, 'Training in Rural Reconstruction'. *Young Men of India,* July 1931.
5. ———, *Up From Poverty in Rural India.* With a Foreword by the Earl of Willingdon. Oxford University Press, 3rd edition, 1936.
6. Hinkle, Beatrice, M., *The Re-Creating of the Individual.* Harcourt Brace, 1923.
7. Kurif, Paul de, *Hunger Fighters.* Blue Ribbon Books, New York, 1926.
8. Millin, Sarah Gertrude, *General Smuts.* Faber and Faber.
9. Ratter, Magnus C., *Albert Schweitzer, a Bibliography.* Allenson & Co.,
10. Smith, Edwin W., *Aggrey of Africa.* Richard R. Smith, 1930.

11. Woodsmall, Ruth Francis, *Moslem Women Enter a New World.* Table Press, 1937.

12. Willis, Carrie Hunter and Saunders, S. Lucy, *Those who Dared, Stories of Early Days in Our Country.* The University of North Carolina Press, 1935.

CHAPTER XI

THE FINEST KIND OF CO-OPERATION

THE GOVERNMENTS AND THE PEOPLE

WHEREVER I go in India, Government officials tell me that they regret their inability to convince enough people to take advantage of the benefits which Governments provide. Knowing how non-official agencies can accomplish this I am continually saying, 'The finest type of co-operation is the co-operation between Government and non-official agencies, where the latter create the favourable attitude and confidence and then call in the Government to help with demonstrations.' In this way Governments can ensure their benefits reaching the people at very low cost. Through non-official agencies Governments get unusual devotion and skill for very little. Several Governments are proceeding more or less according to this method. The story of how the YMCA, the non-official agency I represent, is being called upon to help several Governments is an illustration.

Baroda. Few Rulers are more interested in the welfare of their rural people than His Highness Maharaja Sir Soyaji Rao Gaekwar of Baroda. At the people's Durbar in connexion with the celebration of His Highness's Diamond Jubilee, His Highness replied to the address from his people: 'On this occasion when my people all over the State are celebrating the Diamond Jubilee of my accession I desire to announce that I have decided, in commemoration of this happy event, to set apart a fund of one crore of rupees to be called

the Diamond Jubilee Trust, the income of which will be devoted to improving the conditions of life of the rural population, especially those of the poor and of the depressed classes, supplementing the amounts which will be progressively devoted to such purposes in the regular budgets of the State.

'My ideal is to improve the village life—all sides of it. I wish to develop in my people a keen desire for a higher standard of living, a "will to live better"—and a capacity for self-help and self-reliance. I earnestly desire to make village life interesting and farming a career the rewards in which will satisfy the most enterprising among the villagers.'

His Highness went on to say that the people all knew the main lines of his policy, compulsory mass education, village libraries, village panchayats and the abolition of harmful social customs like 'early marriage which has tended against nature and biological laws; caste tyranny; and untouchability which is against the laws of social justice....'

It was this ruler who, through his able Dewan, Sir T. Krishnamachariar, called us some years ago to cooperate with Government by helping to establish a Rural Reconstruction Centre. It was arranged that we would furnish a trained and experienced YMCA secretary to be the officer in charge of the Centre, that we should help with direction, and the Government should pay the expenses.

The place chosen for the Centre was Kosamba, a village on the main B.B. and C.I. Railway from Bombay to Delhi, about sixty miles south of Baroda City, a natural centre of villages. The Hindus and Mohammedans in those parts live in separate villages, and in the outskirts of any village, whether it be Hindu or Mohammedan, there is always a section where the depressed classes live. To a large extent dwellers in

the outskirts are those who serve the Mohammedans and higher class Hindus.

Early in 1933 I went to serve as actual Officer-in-Charge between the periods of service of two of our Indian secretaries. During that time, in accordance with the wishes of His Highness the Gaekwar, I conducted a Training Course similar to those we hold at Martandam.

Promising younger officers from five departments of Government—Education, Sanitation, Revenue, Agriculture, and Co-operation—were selected to train in my school. His Highness's very important idea in wishing all government officers to understand the comprehensive programme and in sending members of different departments to train together, was to break up the tendency of officers to go to a village only on a day when they were sure officers of other departments would not be there. There was need for greater co-operation between the departments.

Day after day during our Training School, we went into the villages, sometimes on the State system of lateral railways which branch out from the main railway line and take the place of roads which are difficult to build in the soft, stoneless soil of Baroda; sometimes by walking long distances, sometimes by bullock carts. We called all the people together and sat on the floor with them. The various government officers asked them questions regarding their needs.

In one village the people said one of their greatest needs was to have their bullocks castrated and they did not know how to do it. A government officer immediately said, 'Why, the rural headquarters of the Veterinary Department is only a few miles away, and there is a Government rule that the Veterinary Officer should visit every village periodically and that he should castrate all the bullocks free of charge.'

The Headman said, 'No Veterinary Officer has ever been to this village. We did not know that Government had made any law to help us in this matter.' I use this incident to illustrate that without the 'intimate, expert guidance', rural people often do not know what helps the benevolent Government has provided for them.

His Highness the Gaekwar said he wished he could be a pupil in our school. As soon as he was able he did come down to the Kosamba Centre. When His Highness was looking over the Centre he caught sight of my book *Up From Poverty* in the library.

'We must get this book translated', he said to the Dewan, 'and put into an edition so inexpensive that all may learn what it has to teach.'

The Baroda Government bought the translation rights and published a Gujarati edition which they sell at four annas a copy. This is in contrast to the translation of the same book in another language which costs six times that amount.

Last year after all the gorgeous functions and splendours of the Jubilee, my family and I went down to the villages in the Kosamba area. In the capital city I had carefully questioned the chief officers of different departments and found they all agreed that Rural Reconstruction should help the people to help themselves upwards on all sides of life simultaneously. This means that the Officer-in-Charge of the Rural Reconstruction Centre is essentially an 'improvement officer', helping to co-ordinate the works of all departments so that they may work together as a unit. He must have a general knowledge of the different phases of rural life and improvement; he must be able to make all the officers feel that he is a friend and helper in their work, or they will look upon him as a troublesome meddler; he needs tact to an unusual degree.

On the farms around, the owners gave testimony of how they had improved their crops and income through suggestions received from the Centre. Mr Bai Lal Bai, a cultivator, said that he had just refused Rs. 300 for some land he bought a few years ago for Rs. 40, and he gave the Centre credit for the improvements. Mohammed Patel was experimenting with dry farming—raising such crops as tobacco without watering. Cultivating by dry farming methods should be practised in many parts of India. Mr Motilal Patel at his Broad View Poultry Farm, showed us his forty graded Leghorns. Mrs Ibrahim, a Mohammedan woman, had sold seven one-day-old chicks for Rs. 6. When we offered four annas apiece for some newly hatched chicks she smiled and said, 'You know better.' All these people showed great pride in their accomplishments.

All through these villages we saw White Leghorn cocks which had been supplied from the Centre. The Centre takes two country cocks in exchange for a pure-bred. A poor family gives one country cock on receipt of the pure-bred one, and the second later on. The depressed classes were having difficulty in keeping their improved chickens because wealthier people, taking advantage of their ignorance and need of money, bought their pure-bred chicks for one anna each the day they were hatched. We saw some improved chickens in the depressed class sections of the villages.

We saw people who had moved out of the congested dirty villages onto their own land as I have described in the chapter 'Cleaner Living'. Adam Patel, at his Star Rural Farm, told how many people from many villages stop as they pass his place and ask questions. He is an example of the 'static leader' who has wide influence although he does not set out to be a leader.

Kitchen-gardens everywhere in the villages were among the most important new successes. Schools were

having school gardens and keeping them watered even during the dry weather, which is somewhat difficult.

At one village we found forty-five boys and thirty-five girls crowded on the floor of an upstairs school-room. It was encouraging to see the untouchable and depressed class children sitting about among the others, not isolated as I formerly found them in other places. Untouchability is weakening. Three years before I had gone into a nearby school and had seen a pretty little girl sitting by herself like a queen on a bench in the middle of the room while the other children were in a row around the wall. When I asked why this girl was sitting like this the other children pointed to her and said, 'Untouch'.

We were told here that a hundred per cent of the children attend school. That means that His Highness the Gaekwar's progressive law for compulsory education is really effective here. In my presence that day the teachers and village leaders wrote a request to the Government to help them provide a better school building. They signed an agreement to pay half the cost, if the Education Department would meet the other half.

In many villages we found the people making bed-tapes which is a new industry suitable for boys and girls or adults. In one village the people, dissatisfied with the muddy, bad lanes and roads, had spent over Rs. 1,000 during the year to improve them. They need to follow up their good beginning with sanitation improvements.

The Kosamba Centre deems training of leaders to be one of its most important duties. Since my first Training School they have conducted several schools for young village men, several schools for teachers of the Centre villages, a three months session for Veterinary

Assistants, and this year a Summer School of Cottage Industries.

The Centre markets eggs in Bombay. The system is not self-collecting as at Martandam and Paraniyam. A collector sent out by the Centre, visits eleven nearby villages and brings in the eggs. Kosamba would do well to specialize more in eggs from improved hens, in order that the better price may spur the people on to a rapid grading up of their fowls.

Hyderabad. Twenty-five miles out of Secunderabad City is the village of Pattancheru. Here we established a Rural Centre at the request of His Exalted Highness the Nizam's Government. We were to run the Centre, Government paying full costs, with one of our best trained YMCA secretaries in charge, until such time as our secretary had trained a local man well enough for him to take over. When such a time arrived, we would withdraw.

This was to be a Government Centre with everything done on a more splendid scale. Government would not be satisfied with a simple non-equipment, non-owned set-up like we have at Martandam. They never would be satisfied with our eighteen-rupee school building in which to do much important training of future leaders.

They desired from the very beginning that a fine lay-out along the main road would favourably impress passers-by. Plenty of land was provided and along the extensive front a neat wire fence was built. On the spacious land, fruit and vegetable plots were neatly laid out. Substantial buildings were put up for the live stock, poultry, and other needs of the Centre. A large and impressive building was constructed solely to house a permanent exhibit or museum. This exhibit was made so attractive and so educative that busloads of pupils from the cities were brought to see it.

A hundred beehives were set up in impressive array within sight of the road. This was done before bee-keeping had been tried out there (which was a mistake for it was discovered that honey bees did not thrive there).

After the Centre was started I went into the villages and saw the beginnings of extension work among the village families. These families had improved fowls to exhibit in a most successful poultry show and teaching demonstration, which Mr Stephen put on in the capital city.

In due course Mr Stephen handed over to a Hyderabad officer who would work the Centre under Government management. This officer very soon came down to make a personal study of our work in the Martandam and Paraniyam areas. He keeps before me an invitation to visit Pattancheru Centre whenever I can: thus we continue to co-operate with the Government.

Pudukkottai. My first thought as I drove through Pudukkottai State, answering an invitation from the Durbar, was 'What a lot of waste land. What a lot of cultivable land producing nothing'. I thought of how we practise dry farming in Canada and in our western United States. I remembered how farmers at home had always gone out after a summer shower to loosen the top surface-soil between corn rows, thus breaking up the capillary system and action in the soil. The dust mulch made on the surface would not permit the moisture in the subsoil to work its way upward through the soil tubes to the surface, to be evaporated quickly by the summer sun, for the cultivators had clipped off the tops of all these tubes. The evaporating system would not be set up again until the next rain.

When the skies refuse to yield enough moisture we cannot increase the rainfall, but we can do much to

hold what water the land does receive and to make it last longer. If land is sloping we terrace, or plough along the contour levels, or do 'strip cropping'. This means alternate strips of, for instance, clover and corn, planted along the contour lines: the grass strip between the cultivated strip tends to make the rainfall stand and soak in instead of racing away. We practise crop rotation with a good proportion of moisture-holding crops in the cycle, such as the grasses. We use the moisture of two years to raise one good crop when it would be insufficient for two yearly crops.

I recalled how Angus Mackay accidentally discovered this method as he pioneered in the stubborn soil in the Winnipeg area of Canada more than fifty years ago. Just as he had finished ploughing his lands ready to put in the wheat, rebellion was suddenly reported among the Red Indians of the far North. The military clanked and rattled across Mackay's lands, grabbed all but one of the horses, all his few hired men and took them to haul supplies for the troops of the new war.

There lay Mackay's fields all through the summer all ploughed but only half sown. Some fine rains came and the water sank into the ploughed fields. Mackay hated weeds and could not let them grow. With his one horse he could do no more than harrow the fallow ground to keep them down.

The next spring when the men and horses came back, he sowed wheat seed in all his land, both the half which he had sown the year before, and the half which had lain fallow. The strange unplanned experiment began. May and June went by with no rain. In July, instead of showers, came hot winds! Not a drop of rain, what could it mean but hunger and failure? Disheartened and anxious, Mackay watched his fields. He watched a miracle develop before him. The wheat of the entire North-west shrivelled in the stalk. August

came and went—hot, dry, merciless. On the half of his land which he had sown the previous year, before the men went off to the rebellion, the wheat was a failure, hardly two bushels to the acre; but in the fields beside it which had been fallow the year before the wheat grew and filled. Mackay reaped thirty-five bushels of excellent, hard wheat on every acre. 'Out of my loss, has come great knowledge and wealth', said Mackay. 'It is dangerous for this dry country to try to raise crops one year after another on the same field. Plough all the land in the spring, but let half lie idle all the year.' He had used two years' insufficient rainfall for one good crop.[1]

My first suggestion to Pudukkottai State was to introduce dry farming methods. In Travancore near Martandam I find native tillers practising dust mulching, although they have never heard of 'capillary action' in the soil. After a shower they stir the surface soil with their *mamatees*.

Pudukkottai holds the record for putting suggestions for Rural Reconstruction into action quickly and accomplishing a great deal without much extra expense. It appeared to me that Pudukkottai did not need to establish entirely new Centres at present but could use the Poor Home and the Agricultural Farm as bases. The Poor Home could start at once practising self-help, for the children could be taught to take care of the gardens, the poultry, do the housework and cooking. The change to this method would benefit the children who 'seemed to have no mind for work' and improve the projects, too.

One of my recommendations was that the Durbar should send two carefully picked young officers to Martandam for training. They sent four. On his return

[1] See fuller story in Kruif, *Hunger Fighters*, pp. 33-44.

one of them was put in charge of the rural development at the Poor Home Centre. The reports of his accomplishments are among the most pleasing I receive.

With the Administrator, Sir Alexander Tottenham, and the Assistant Administrator, Rao Bahadur R. Krishnammachari, we went to various villages. We found old women half-heartedly weaving wool blankets. A potter said he owed Rs. 300 at six per cent interest which he could not pay. A few old people were weaving poor quality *kora* mats in spare time, earning only one anna in three days. In the school they were weaving by hand some rather poor towels. They were making the same common mistake of demonstrating too expensive looms: one cost Rs. 100. There was no hope of the ordinary people copying these looms in their homes. We were told that a pit loom which would weave just as well, could be bought for Rs. 10, but there were none to be seen. Everywhere the story was the same: the young people would not learn these old handicrafts and stood about giggling at us when the old people complained. A good quality product and a lively market would change their attitudes, I feel sure.

At Valatharakottai village, Chinna Ambalagar, chief man of the village, was already following suggestions of the Improvement Officer who was one of the four trained at Martandam. This village has been made one of the State's chief centres for Rural Reconstruction.

It is fortunate that in this village, which has been selected as a Centre, Mohammedans, Hindus, and depressed class people live close together with good feeling between them. Socialization—the whole programme by, with, and for the whole people—can well be demonstrated here.

Mohammed Hussain Ibrahim, a leading man in Annavassal Mohammedan village, promised to demonstrate growing and producing different products recommended for the rural reconstruction programme. He will make these demonstrations for a nearby school. This is a valuable help to the Durbar and one of the best methods of demonstration. That the demonstrations can be carried on near a school will add immeasurably to the amount of influence they will have.

One of the most interesting meetings I have ever attended brought all the chief officers of the State together in the Durbar Hall. One by one I questioned these men regarding their activities in the rural areas. The superintendent of schools talked fluently on the need of changing the syllabus for rural schools so that time would be available for rural reconstruction subjects. He was then and there requested to prepare such a revised syllabus. This will not be so easy. As I questioned the Medical and Veterinary, the Revenue, Co-operation, Engineering, and Agricultural officers, we found for each direct connexion with the rural people. The last officer questioned was the Chairman of the Municipality of the one city, Pudukkottai. He assured us he had no connexion whatever with rural problems.

'What about that big market which operates just on the edge of town? The people and the products look rural. Does the municipality have anything to do with that market?'

'Oh yes. We collect a tax on all the articles sold there.'

'Then you do have a connexion with the rural people.' He admitted he should have.

This clinched the argument I had been developing through questioning these officers: every officer and

every department of the State has responsibilities for the well-being and progress of rural life, and should fit into a rural reconstruction programme; and that they should co-ordinate their work in the villages to make a concerted attack upon the rural problem.

Pudukkottai in a year and a half has developed several Centres under the direction of the four men who were trained at Martandam. The reports these men make spell real progress.

Mysore. In this progressive State the YMCA Centre is subsidized by Government. The Centre may be reached from Bangalore, about 23 miles north, by train or bus. The location was selected for several reasons: it is on the main highway and railway; it is the centre for several other villages; adequate buildings were already there.

Government gave the land and buildings, an initial grant for equipment, and provides the yearly maintenance grant. Mr Stephen, who had previously been at Pattancheru, has created a very orderly and neat Centre. To buildings already there he added further fencing, wells, poultry houses, and an apiary. This is our most polished Centre, in some respects probably almost too expensive an ideal for the villagers to copy.

The Centre is only three years old, but in the nearby villages which I visited I saw many improvements. I saw the improved breed of sheep which yielded two pounds of wool each more than the ordinary sheep. I saw the new bullock carts with inflated rubber tyres; compost heaps; cocks, distributed on the exchange system—one pure-bred for two country; pigeons, a profitable cottage industry; bed-tape weaving on simple looms; the co-operative store. I saw windows which had been built into some of the houses, and blocked up holes where windows had been because the

women said these new holes let in too much cold air! I saw chimneys, made of old kerosene-oil tins, on the tops of houses and breathed a sigh of thankfulness that the smoke from the cooking could find a place other than in peoples' eyes. Soak pits behind the houses absorbed the dirty waste water that formerly lay on the surface, a filthy, muddy mess. This water now filtered through a top section of small broken stones on which the sun's rays played into seven feet of broken bricks.

I met the village midwife who has been taught to use disinfectants, soap, clean basin, and clean towels. She was planning to earn the promised reward which was waiting her at the end of the year if all the mothers of new babies could say that she always used these improved accessories. I met the village barber who now disinfected his razor and reserved a special one for lepers.

I saw Mr Stephen's excellent exhibits at the World YMCA Conference at Bangalore. He has just held his third Rural Service Summer School to train leaders.

Ceylon. Last August I went to Ceylon, primarily because the Colombo YMCA had been urging me to help them establish the city-rural development for their Association. While still in Colombo Harbour, morning papers brought to me on the ship made it clear that I was to have a wider mission.

Except in time of war, I do not expect to find any country more interested in one cause than Ceylon was in Rural Reconstruction. The recent terrible malarial epidemic had forced the big prosperous city of Colombo, the Government, and the people generally, to the realization that there was scarcity of food and other necessaries of life among the rural people to an extent which they in their better fortune had never dreamed.

I found the Government interested, wanting to find out what to do, and willing to spend more freely than any other place in the orient has probably been willing to spend on Rural Reconstruction. Even when there is plenty of money, it is not always easy to know what to do. Mr Corea, Minister of Labour, Industry, and Commerce, whose scheme for Rural Reconstruction is now before Government, arranged for me to speak to the State Council on this subject and show how Government could accomplish much by co-operating with non-official agencies. It is indicative of the Government's real interest that nearly every member of the Council and the Ministers remained after a long heavy day in the Council to hear me. At the invitation of the Chief Minister, Sir Baron Jayatileka, I discussed the problems with him. Later Sir Baron came to Martandam and spent several days studying our work in the villages.

I travelled to different rural parts of the Island with various Government officers. I became convinced that, although one does not get an impression of great need as one motors along the excellent main roads, there is plenty of poverty among the rural population to justify all this interest. The rural people are not only poor, they are a prey to heartless middlemen who give them little for their products.

Although the big Government scheme is only on its way, there are some pieces of Rural Reconstruction on the Island already making progress. With a superintendent of schools I visited the Rural School Training Centre at Mirigama and some of the ruralized schools. Boys in these schools were building small houses and wells, carrying on agricultural projects, and practising handicrafts. This should help them to settle on their lands to live healthily and sufficiently. It was encouraging that this experiment, started only three years ago,

has grown to include about 150 such schools. These schools mark progress in the needed reorientation of schools for the rural population. At Mirigama, the Training Centre, we found teachers actually working in the fields, barefooted and coatless, doing themselves what later they would and could teach others.

The Boys Scouts of Ceylon have coupled training with practical rural service at the Kalutara Scout Colony. Unemployed scouts, after training, have reclaimed jungle land and built their own homes. This Colony runs Summer Training Courses. I saw a number of headmen who after training, had cleaned up their villages and developed parks, playgrounds, and reading rooms. They had improved agricultural methods. Because they had learned to co-operate they banded together into a village Rural Service Council to help forward their plans.

I was really impressed with what is being accomplished in the Ceylon Government's Marketing Department under the leadership of Mr R. H. Bassett. He embarrasses me by claiming that for whatever he is doing he got the basis for it through the description of our marketing principles and practice in my book *Up From Poverty*. His scheme for marketing co-operation between the great cities like Colombo and the rural villages was excellent. During my stay he opened a depot, at Galle, which would sell needed articles which the local merchants were not providing. 'If I find the sales here falling off, I shall close the depot, knowing that the local merchants are doing their job more fully and better.' Mr Bassett gathers the products of the villages and cottages into sales depots in Colombo for sale to city people and tourists. 'The best way of advertising Ceylon's produce is to sell it. By introducing the Ceylon public to their own products we increase the sale of Ceylon goods and

educate people to buy them.' He backs me wholeheartedly in my crusade for quality and believes that selling only the best will prevent the production and sale of inferior works.

Ceylon's great problem at the moment is to get rid of malaria. Wherever I travelled, to the south and to the north, to the hills and to the plains, I found mosquitoes. Although a gigantic task, I believe malaria can be greatly reduced. Panama's example is an encouraging support. With the dangers of malarial infection reduced, Ceylon offers a glorious field for Rural Reconstruction. The extensive, fertile Dry Zone can be brought under cultivation and become again the granary of Ceylon to feed her people. Methods of dry farming should be experimented with in this area.

The Colombo YMCA has selected the site for the Centre which it will sponsor and has recruited a Martandam trained man to be in charge.

Leadership in Rural Reconstruction is an all-important matter now. Many are interested in doing this type of service. This year alone twenty-one promising leaders from Ceylon have attended Martandam for the Training School or as apprentices, or both. Ceylon offers a glorious opportunity to rural reconstruction workers. An abundant rainfall, fertile soil, ready shipping facilities pave the way toward greater prosperity. Standing as she does on the crossroads of the East, she would be able to demonstrate to that horde of travellers who pass through her gates, the way to more abundant living.

Cochin. Cochin State is the latest. At the request of the Dewan, Sir R. K. Shanmugham Chetty, and the Government, we are assisting in opening on 1 March 1938 a Government Rural Development Centre which the Dewan believes may become the best in India, backed as it is by the resources and interest of the

Government. Cochin State is of convenient size and shape, a workable area, so that the whole State can be brought actively into the extension programme. We enter this new field with enthusiasm.

There are so many opportunities for co-operation between Government and non-official agencies. It is a time when one wishes he had several lives to give. There is the overwhelming consciousness: 'So much to do; so little time in which to do it.'

BIBLIOGRAPHY

1. Andrus, J. Russell, *Rural Reconstruction in Burma.* Oxford University Press, 1936.

2. Drummond, J. G., *Panchayats in India.* Oxford University Press, 1937.

3. Hatch, D. Spencer, *Looking at Ceylon Through Rural Eyes*, series of six articles in the *Ceylon Daily News*, 1936: 'Strong Forces Ready', 31 October; 'Out Among the Village People', 4 November; 'The Rural Problem in Ceylon', 7 November; 'Rural Reconstruction Centres', 14 November; 'Cottage Industries and Marketing', 21 November; 'Right Leadership in Village Reconstruction', 28 November.

4. ———, *Statement for the Government of Travancore on The Inter-Governmental Rural Hygiene Conference held under the League of Nations and also Study of Certain Subjects before and after the Conference (in Java and Bali).* Travancore Government Press, Trivandrum, 1938.

5. ———, *Up From Poverty in Rural India.* With a Foreword by The Earl of Willingdon. 3rd edition, Oxford University Press, 1936.

6. Howard, Albert, and Howard, Gabrielle L. C., *The Development of Indian Agriculture.* 2nd edition, Oxford University Press, 1929.

7. Kruif, Paul de, *Hunger Fighters.* Blue Ribbon Books, 1926.

CHAPTER XII

WE ARE SURVEYED

'IT is a sort of place of pilgrimage for those interested in Rural Reconstruction.'

So wrote Mr G. K. Devadhar after his study at Martandam when he was heading the Travancore Co-operative Inquiry. It does happen that our Rural Reconstruction is much visited. Many come without previous announcement. When we are informed in advance of visitors we always wonder if we have enough to show worthy of the confidence evidenced by their travel and effort to visit our work. Visits are always too brief and we, in each case, hope that the visitors can see some of the real activities in the villages besides just the Centre, and that somehow they can understand it all. Visitors are, frankly, somewhat of a problem in the villages where there is no proper accommodation, and the local staff have no transport for getting out to the villages far and near. But we like to have them come and we try to learn from them.

Besides individual visitors, commissions and representatives of other organized inquiries have come. They have studied from different points of view. Among them have been: the Holt Commission, studying from a World YMCA point of view and backed by the Rockefeller's concern that expenditure be made only for work on sound lines; the Lindsay Commission, studying Christian education; the Fact Finders, preceding and gathering facts to be evaluated by the Laymen's Commission; the Laymen's Commission, studying from the view point of supporters of the world

mission enterprise, very solicitous for methods to be effective in this age; the National Christian Council Inquiry into the rural work in India; the Travancore Co-operative Inquiry, in the interest of government economic service; the Marketing Department of the Government of India, a study by a two-year-old department wishing to know the best marketing practices in India to help it in shaping its programme; the Indian Village Welfare Association looking for ways to serve India; the Kerala Hindu Mission wanting to introduce Rural Reconstruction into its activities; representatives of various governments wanting to initiate Rural Reconstruction in their States or Provinces.

It is not necessary to comment separately on the findings and opinions expressed by these commissions, studies, and inquiries. An analysis of their findings shows that all the commissions have expressed surprisingly similar opinions. Their findings in regard to our work are strong, virile, and encouraging statements. That inquiries from so many points of view and diverse interests, could find in our comprehensive programme a plan for Rural Reconstruction which they could commend seems to be a pronounced indication that this comprehensive programme is a correct one for meeting the needs of rural India, Burma and Ceylon.

Dr Henry C. Taylor of the Laymen's Commission walked with Mrs Hatch across paddy-bunds to an isolated rural village. Seeing practices there he said, 'This sort of thing multiplied over India will change the very face of India.' At a conference on rural work held at Cornell University in America, in 1934, the methods and schemes practised in various countries were reviewed. In his summary at the close of the conference, Mr Donahue, representing the home board of the Methodist Mission told of his visit to interior Africa where there was a mission station representing large concentration

and outlay of men and money. Thirteen foreign missionaries worked out from that station where they had first put up a large number of expensive buildings costing so much that they had to be built and maintained with foreign money. 'Contrasted with this', he continued, 'is the Martandam enterprise having the part time services of one foreign worker. It has built no buildings, yet by team work with Indian leaders a work of far-reaching influence is transpiring. It is clear that the trend of future mission practices is to be away from the large and forbiddingly expensive concentration of men and buildings and in the direction of the Martandam example.'

To the rural section of the World's Conference under the International Alliance of our Associations came men and women from different nations who were deeply interested in Rural Reconstruction. These delegates came to India to learn. They were influential men and women connected with organizations which wanted to better the life of rural peoples in their countries; they wanted to learn of principles and methods which they could adapt and use in their home lands. We arranged a peripatetic conference so that these delegates might see the actual work in various places.

They visited the YMCA Centre near Coimbatore. In Travancore they studied the educational and colonizing work of the Alwaye Settlement for orphans and other underprivileged children; the Oollannore Rural Reconstruction Institute pioneering in rural education; the honorary work done at the Paraniyam Rural Centre; the work in Martandam and the surrounding villages. Everywhere they went they gathered every scrap of information they could. The last two days were spent in discussing the work they had seen and problems connected with it. They closed their report with these

words, an encouragement to us when we feel the need of it: 'We, the delegates, see clearly that the rural workers here have in their hands the means to transform village life and to bring in the Kingdom of God. We now know the methods which can be passed on to other countries. You workers here can feel that you are not working only for these villages, you are working for the Rural Reconstruction of the World.'

Authors have Written. From much that has been written of our enterprise, I have thought it well to discuss briefly certain statements of three authors who have taken considerable trouble to study our work before writing: Dr Kenyon L. Butterfield, recognized world authority on rural affairs; Mr C. F. Strickland, formerly of the Indian Civil Service; Major Francis Yeats-Brown, author of *Bengal Lancer* and *Dogs of War.*

Dr Butterfield, whom I have mentioned in the second chapter as being so much interested in the question of whether our pioneer Rural Centres were going to multiply themselves, was making the final revisions of his new book on Rural Reconstruction when death stayed his pen. He has devoted a whole chapter to the Martandam enterprise which he submitted to me for comment.

Dr Butterfield was a keen churchman. He was interested that the work of missions be fully effective in the rural areas. To that end he outlined a scheme which he called The Rural Reconstruction Unit. With the church as the centre, he would build around it the necessary institutions—schools, hospitals, farms, societies—which would serve the contiguous villages. He maintained that the Martandam enterprise, for which he had all praise, could hardly be called, as I have called it, 'A Rural Reconstruction Unit in Action'.

It seems to me that where the different organizations, individuals, and forces working for the improvement of

a locality even though under different auspices are brought to unite in a plan of betterment, that here the unit idea is present and the combined working forces may be called 'A Rural Reconstruction Unit in Action'. I feel what I call socialization to be one of our greatest responsibilities and opportunities. For this reason I strive so hard to work with the whole community; that is, with all castes and creeds, all races, ages, sexes, rich and poor.

If we go too far with the insistence on common ends, feelings and activities—his idea of a single-minded community—we find that our plan does not work. The Laymen's Commission came to me at the end of their studies in India and seemed discouraged because they said that most of what missionaries had shown as co-operation between Hindus and missions had seemed to them to be not much more than 'toleration' on the part of the Hindus. It is not necessary and probably not desirable to have a single-minded community. I am not at all willing to confine my activities to Christians alone who form only a percentage of the needy in our rural reconstruction areas. I must carry on with my scheme of socialization for I am convinced it is the most effective method for present conditions.

It is true that our unit area may not always be a 'group of contiguous villages located symmetrically about some accepted centre', for, as I have stated, our centre unit is bounded by lines of strength of interest. Local leadership is so important that at present we can make better progress by bringing into our activities villages which have live local leaders whom we can train and help, and by leaving out certain villages which may be nearer to the Centre but have no leaders to shoulder responsibilities. We can better let those villages wait for a while until they catch the gleam. In all this, we must avoid the artificial which is not likely to succeed;

and a set programme and an arbitrary selection of villages is liable to be artificial. Bringing existing forces for good to work together and then to fill in the gaps so that all may be served on all sides of life and all may help to serve, is the more natural course, more likely to succeed.

Mr Strickland is as concerned as any man about the cause of Rural India. We are indebted to him for his two studies : *Review of Rural Welfare Activities in India*, with a preface by Sir Francis Younghusband and a foreword by Lady Irwin ; and later *The Progress of Rural Welfare in India*. In the latter he says that his account of the welfare activities in the various parts of India leads him to believe that 'the importance of working on a plan, instead of haphazard or along a single line of advance, is being increasingly realized'. There are, he says, three agencies which, if united in consultation though retaining full independence in action, are likely to produce more fruitful results than if they remain isolated. These are : the departments of Government which are concerned with rural life and welfare ; 'centres' of rural reconstruction in one village or a small group of villages, in which every kind of rural improvement is pursued at once, and the pursuit is continued from year to year ; and the 'extensive' societies, such as the Red Cross, which operate throughout the country, not necessarily blind to the advantages of co-ordinated work, but compelled by the limitations of money and personnel or by the rules of their society to restrict themselves to certain types of activity and disperse their efforts over a whole province or all India. He criticizes each. 'The official department is present everywhere, but cannot bring about as full a result by itself as if the second and third agencies are working with it. The unofficial "centres" go deeper into

the life of the people and enjoy the advantage that, though confined to a narrower radius than a department, they are on the spot all the time. The "extensive" societies are not operative everywhere nor all the time, but they arouse public attention and secure the moral and financial support of prominent persons. . . . The ideal system, if an ideal *could* be realized at will, would be to multiply local "centres" of rural reconstruction, each of which, though located in a single village, would influence and conduct propaganda in all villages within a radius of, say, twenty-five miles from the "centre".'

Mr Strickland elaborates these points and then writes: 'In all this there is nothing that has not been said before, by Mr Brayne, Dr Hatch, Sir Frederick Sykes and many other persons, English or Indian. It is, however, appropriate to bring it on record at the conclusion of a description of the rural welfare work now in progress in India, since it should be clear from such an account that welfare work, while carried on with energy and devotion by a host of public servants and private individuals, is being done in a disjointed and often very ineffective manner, simply because they are working independently of one another.'

Then he makes this suggestion, 'The voluntary local associations working in any rural district should meet together—or be brought together by any official or non-official leader to whom they will respond—and should consider the formation of a new (or the rejuvenation of an old) district association for rural welfare in which they will all take part, preserving entirely their freedom (as in the Rural Community Councils of England) but consulting together to share experience and avoid useless duplication and competition.'

I would be keen for such 'consultation, though retaining full independence in action', if confined to a

workable, not too large, area. I have already stated how much I value freedom and my unwillingness to waste time in conferences and discussions, except 'working conferences of actual workers. Probably the government authorities would have to take the initiative in calling into being such a representative, co-ordinated, working body.

I wonder if our Travancore Government is not taking a step in this direction in its official order of 9 January 1937. Speaking of the former Economic Development Board the order reads: 'The Board has now been in existence for nearly fifteen years. From past experience, it is seen that the Board in its present form has not been doing much useful work. There has been no definite programme of economic planning for the whole State, nor is there any regular committee system to deal with each specific and important problem. The Board meets only three or four times a year for the transaction of business. It only discusses some questions of economic importance, passes resolutions thereon, and forwards them to Government.' To how many Boards and Committees all over India, would not this same criticism apply?

'Government consider that the Board should be reconstituted so as to make it a really representative organization, representing the economic interests in the State and comprising only those who can advise Government with authority backed by experience. It should function through sub-committees each of which should consist of three, or at the most five, members. Its object must be to help Government in bringing about well-conceived schemes of economic planning spread over a few years. The Board should not fritter away its attention on a large number of questions, but should pick out a few which are considered most urgent and important. Each one of these problems should be left

to a sub-commitee of the Board instead of the whole Board sitting over it. There cannot be more than three or four such problems, in any one year.' These policies are sound, as we, too, have proved through experience.

The reconstituted Board is to consist of ten officials, heads of Government Departments; and fifteen non-officials; three representing commerce; two, planting interests; two, agriculture; two, banking; one, industries; one, co-operation; one, rural reconstruction.

The only two *special problems* pointed out in the order come under Rural Reconstruction: 'One of the earliest duties of the new Board will be the organization of rural reconstruction work in selected areas preferably through non-official agencies. Government hope to be able to secure on the Board the services of one who has had special experience in such work. The marketing of the products of cottage industries will form another problem for consideration.'

The Government have nominated me as the member for Rural Reconstruction, and I have accepted. I hope that through this arrangement we can effect for Travancore State the co-ordination that Mr Strickland advocates. Travancore is an area of workable size. Should this scheme be enlarged to include all India or too large a section of India, I should be sceptical of its practicability.

Major Yeats-Brown has re-visited India. One of his commissions was to study Rural Reconstruction to see if anything rural was being reconstructed and to see 'Uplifters in Action'. He travelled about always with a friendly but keenly observant eye which looked through a problem to its core. Readers of the *Spectator* have smiled and sighed with him as he vividly describes his journeys through villages, Rural Reconstruction Centres, and his visits to Mr Brayne and Mr Gandhi.

Mr Blayne who says, 'I don't care if it is done for my benefit. The fact remains they are getting a move on.' Mr Gandhi who says, 'Compulsion is not wanted in Rural Reconstruction.'

Yeats-Brown came to Travancore. A few hours after his arrival we went on a moonlight picnic to the seashore. While the rest of us bathed, he badgered Mrs Hatch with questions about Rural Reconstruction.

'Are you just asking polite questions or do you really want to know?' she parried.

He pleaded his deep interest. He wanted to study Martandam. He wanted to know if Rural Reconstruction was really worth doing. He had not been overimpressed with the examples of Rural Reconstruction, governmental or non-official, he had already visited. He was grateful for the trouble officials had taken to show a 'wandering journalist' about, but he was suspicious of ever seeing their hopes fulfilled. It hardly seemed worth while to teach boys and girls the best methods of resuscitating the apparently drowned, when they lived in a dry area fifty miles or more from any water deep enough to be drowned in. He did not see much use in snake-bite treatment when the necessary equipment was kept locked up, and the key kept at a distance in the headman's house, and the headman gone to a distant city for the day, and the local people saying, 'If a man were bitten by a snake, we would send for the local snake-charmer, anyway.'

When my Indian colleagues heard that Major Yeats-Brown was coming to Martandam to study and then to write, they were frightened, for they knew that his pen could be more annihilating than a cholera epidemic. But when he came they were immediately disarmed by the friendly manner in which he sat and talked with them of their work and problems. He came back a second time for further study, anxious to

see the different operations actually going on—and the results.

In *The Spectator* of 15 May 1930 he wrote of Mr Brayne, of Mr Gandhi, of Mrs Hatch and me very kindly indeed, but he concluded with this most devastating paragraph.

'A thought which needs discussion, yet which would have been difficult to put to a social reformer on the scene of his activities is this: will not the causes, whatever they are—climate, heredity, what you will—which brought these people to their present pass, again operate when the uplifting agency is removed? Reformers are insistent on the virtues of Sindhi bulls, Leghorn poultry, active kinds of bees, but I have not heard that any of them have considered the possibility of making some radical improvement in the human material which is the chief factor in their endeavours.'

It is evident that in the short time Major Yeats-Brown had with us, we at Martandam failed to make him see and understand our comprehensive programme, with its five sides or departments, which I have tried to explain in this book—spiritual, mental, physical, social, and economic. Yeats-Brown with rare discernment touched the vital point of the whole matter of rural India's reconstruction. I have often said I certainly would not spend my life working only on the material side of this programme. But these same more dramatic features which catch the eye of our visitors and tend to keep them from seeing the even more fundamental parts, give food to the hungry villagers, give them hope and confidence in all else we teach, and make them ready to enter into other parts of the full programme.

The object of the five-fold comprehensive rural programme is exactly, in Major Yeats-Brown's words, 'for making some radical improvement in the human

material', or as I express it in our purpose *to bring about a complete upward development toward a more abundant life for rural people—spiritual, mental, physical, social, and economic.*

INDIA'S COUNTRY LIFE MOVEMENT

Theodore Roosevelt, the great, dynamic, farseeing, American, led in starting the American Country Life Movement. It was at a time when the farmer was disparagingly called a 'hayseed'. The farmer had an inferiority complex, knowing that city people, and educated people generally, looked down on him.

Roosevelt's Country Life Movement over a score or so of years helped to change everything. It brought to the rural homes and farms many of the advantages and amenities of living which formerly only city people had. It made city and country dweller alike realize that city conditions could in no way compare with the healthy life of the beautiful, wide open spaces of the countryside. It included agricultural college education for the farmer; it brought the teaching of agriculture, home-making, and home economics into the high schools; it brought the realization that agriculture and rural sociology were among the important sciences. Agricultural colleges took their places side by side with other colleges in the great universities. Rural life became more prosperous and happy. The whole rural populace lifted itself from the 'hayseed' stage to one of recognized equality.

In India, Burma, and Ceylon for the first time we have our Country Life Movement. It is called Rural Reconstruction. It has God's guidance. It can and must help our rural brothers and sisters to lift themselves further upward.

BIBLIOGRAPHY

1. Beguin, Charles, 'The Rural Conference in Southern India', *World's Youth*, Geneva, April 1937.

2. Brayne, F. L., *Better Villages*. Oxford University Press, 1937.

3. ———, *Socrates in an Indian Village*. Oxford University Press, 3rd. ed., 1937.

4. ———, *Socrates Persists in India*. Oxford University Press, 1932.

5. Butterfield, Kenyon L., and others. *Country Life Movements in Many Lands*. Special Number of *Rural American*. March 1933.

6. ———, Makee, William J. and Jones, Thomas Jesse. *Principles and Methods of Christian Work in Rural Areas*. International Missionary Council, 1926.

7. Hatch, D. Spencer, 'A Rural Reconstruction Unit in Action'. *The South Indian United Church Herald*, Secunderabad, August 1931. *Baptist Missionary Review*, July 1931; *Allahabad Student Outlook*. September 1931.

8. Hocking, Wm. Ernest, *Re-Thinking Missions, Laymen's Enquiry*. Harper, 1932.

9. Strickland, G. F., *An Introduction to Co-operation in India*. Oxford University Press.

10. ———, *Review of Rural Welfare Activities in India*, with a preface by Sir Francis Younghusband and a Foreword by the Lady Irwin. Oxford University Press, 1932.

11. ———, *The Progress of Rural Welfare in India*. Oxford University Press, 1934 and 1936.

12. Wiser, Charlotte Viall and William H., *Behind Mud Walls*. Richard R. Smith Inc., 1930.

13. Yeats-Brown, Francis, *Lancer at Large*. Gollancz, 1936.

APPENDIX

MARTANDAM PRACTICAL TRAINING SCHOOL IN RURAL RECONSTRUCTION

ACCOMPLISHMENT BULLETIN

NOTES OF WHAT OLD BOYS AND GIRLS HAVE DONE

Vol. I Martandam, January 1937 Number 1

NAME	YEAR	ADDRESS
ABRAHAM, A. G.	.. 1932	Secretary, YMCA, Kizhkara, Kozhencherry.

I have some fowls of improved breed, a few colonies of bees in modern hives and Guinea grass. Have done bore-hole latrines in my village and in the neighbouring villages. Bananas cultivated scientifically gave better results.

ALBERT, J.	..1935	Paraniyam, Poovar A.O.

At my house I have both bees and poultry. I help at the Paraniyam Rural Reconstruction Centre, giving talks and demonstrations to those who market there. I go out to help villagers in their homes.

BENJAMIN, Y. N.	.. 1932	Chaung Wa, Elementary Training Class, via Wakima, Burma.

I am keeping about 20 pigs, a few fowls, ducks, geese, and cattle for cultivating. During the rainy season the boys learn gardening by doing it. The labourers work the 20-acre farm where we demonstrate to the villagers pure seeds and implements from Government. We have bore-hole latrines which are satisfactory.

BALARAM, P. BENJAMIN	1933	Methodist Episcopal Mission, Vocational School & Rural Service Centre, Puntamba Dt., Ahmednagar, Bombay Presidency.

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Our Poultry Exhibition on 14 and 15 December 1935, in Puntamba, was held solely for the villagers who brought in 150 exhibits. Over three thousand people attended.

BHALERAO, V. R. .. 1933 A. P. Mission, Kodoli, Kolhapur State.

Seventy-five orange trees are growing well. We hope they will bear fruit soon. School gardening going on nicely, very much appreciated by the boys. I have started a co-operative society among the teachers; it is going on nicely.

CHACKO, A. A. .. 1929 Headmaster, C. N. I. V. M. School, Kottayam.

At my home I have bee-hives and fowls, both Rhode Island and cross-breds. We eat all the honey we make. The cross-bred fowls give eggs of very good size. At Tiruvella I taught in the school and gave Practical Training. The peon there has done well with bees.

CHRISTUDAS, I. P. P. .. 1933 Victor Lane, Krishnancoil, Nagercoil.

Started a village library, lectures in several villages, and in night school at Poonakaud.

COILPILLAI, P. V. .. 1935 Christian College, Kotte, Ceylon.

I have started a poultry farm on a small scale. Karupiah (Martandam—1935) is my chief helper. The Buddhist boys do not take an interest in this, because they think that by rearing fowls, they help others to kill lives. We have a dairy farm with fodder grass recently started.

CHINNIAH THAKADY, S. 1936 Veterinary Surgeon, Pudukkottai State.

I have organized the 'Rural Improvement Society' in Sathiamangalam. Government has entrusted me with a new poultry venture in my District and charge of two Rural Centres at Keeranur and Viralimalai.

DEVATHURAI, A. JABEZ. 1934 Ooliyasthanam, Sarah Tucker College, Palamcottah.

We have vegetable gardens in our school.

EAPEN, M. C. .. 1931 C.M.S. Community School, Ranni.

In our residential school we keep bees and poultry. From 2 hives we sell Rs. 10 worth of honey per year. All senior boys

NAME	YEAR	ADDRESS

handle the bees. Some villagers have also taken up these industries. Rattan work and carpentry are taught in the school. Night schools in English and Malayalam, and a YMCA are conducted. In 1934 and 1935 we conducted two summer schools for the school teachers within a radius of about ten miles, giving some training in Rural Reconstruction and in new methods of education. We have scouting in our schools and some second class scouts.

EZRIAH, G. V. .. 1933 Mission Compound, Dornakal, Nizam's Dominions.

I teach theory in poultry-farming, bee-keeping, cattle breeding, village health and sanitation for 4 hours a week. On Mondays and Thursdays we go to three surrounding villages taking with us either fowls, goats or piglings for demonstration. Twice in a month we take health and sanitation charts supplied by the District Health Officer. Took some of our live stock and rural health and sanitation charts to the Mangalagiri car festival where we demonstrated daily to about 1,000 villagers. We sold some of our stock to villagers at half rates, but there was such a demand we could not supply all. For the three villages where we were going weekly for demonstration, we supply eggs and take half the number of chickens within 1 month; cross our boar, buck and bull for quarter rates; give some medicines like quinine and iodine for half rates.

GEORGE, K. .. 1936 Near Convent, Alleppey.

Lectured on Rural Reconstruction with particular reference to bee-keeping in some of the clubs here.

HANUMANTHACHARYA, VIDVAN, K. 1936 622, Sultan Bazaar, Hyderabad State, Deccan.

Trying to start more Rural Reconstruction in the state.

JAGANATHAN, K. .. 1936 Agraharam, Camp Aruppukottai, Madras Presidency.

Arranging to start a cinema company with the object of giving education to boys and rural people through movies and talkies.

KAMALAM, D. P. .. 1933 Zionpuram, Parakkai A.O.

I delivered lectures in public teachers' meetings, schools and village YMCAs. There are more than seventy-five bee-hives in the surrounding villages. I visit these bee-keepers, examine the hives and transfer swarms in their presence, and help in marketing honey. We circulate thoroughbred cocks, and have a library system.

NAME	YEAR	ADDRESS
KOSHY, Rev. T. N. ..	1931	Vattakottal, Kumbanadu.

Lecture at camps and in villages. Have started a savings system in the local YMCA.

KOSHY, T. A. ..	1933	Student, Agricultural Institute, Allahabad.

I have been helping the Institute Social Service League in Rural Reconstruction; also the Student Christian Association of the Institute in preparing demonstrations of rural uplift for the Ettah Mission Field.

KARUPIAH, S. ..	1935	Christian College, Kotte, Ceylon.

The poultry yard which you saw one night at our College is in progress and our idea in starting it is to teach the students about the use of it. Now there is a Social Service Movement through which we have more opportunity to help the depressed classes in all respects.

MASCARENE, G. JOHN	1935	Vazhuthacaud, Trivandrum.

Kept poultry successfully for the last five years. Cultivated improved varieties of sweet potatoes and helped near and far with cuttings. Tried cultivation of buck wheat, soya beans and improved varieties of chillies, brinjals and other garden vegetables and helped others. I teach poultry-keeping at Martandam.

MATHEW, K. M. ..	1933	Headmaster, M. T. V. P. School, Kattanam, Pallikal.

My bee-hives have attracted much attention; others are copying them. More interest is taken in poultry by my neighbours. I keep both Rhode Island Reds and White Leghorns. Both bees and poultry are successful.

MANIKKAVASAGAM, Rev. JOHN D.	1931	Manager, T.D.T.A, S.P.G. Elementary School, Mukuperi P.O., via Nazareth.

Our Centre attached to the T.D.T.A. (S.P.G.) Higher Elementary School at Maviduppannai is attended by students of thirteen communities. We have Leghorns, ducks, pigeons, rabbits, school gardening, tank fish, goats, Guinea and Napier grass, at the Centre, and help villagers to have them in their homes.

MAMUNDI SERVAI, K...	1936	Agricultural Farm, Pudukkottai State.

NAME	YEAR	ADDRESS

I am in charge of the Agricultural Farm Poultry Centre, Pudukkottai, where we also have bees.

MATHEW, K. T.	..	1934	Koluthal, Mulanthuruthi, Cochin State.

Following lectures on bee-keeping, about 25 villagers are keeping bees; a local carpenter has been trained to build hives; many are selling honey. Organized a distributive store in the co-operative society.

MARIAMMA, Mrs P. V.		1935	Bethel Ashram, Tiruvella.

The poultry shed in the Ashram has been enlarged from one to three parts. This year the children's project is poultry-keeping. These children go with me to the villages close by to speak about this work. They have agreed to buy chickens and eggs.

MILLS, K. J.	..	1935	Green Villa, Manipay, Ceylon.

Keep bees which do very well.

MIRANDA, A.	..	1935	St. Joseph's Catholic Institute for Home Industries, Tuticorin.

Bee-keeping and poultry-keeping have been established in the farm at Mangalagiri. Sugarcanes are planted and to provide pasturage for the honey-bee an orchard is being formed. In May 1936 our short summer school was attended by 47 students. Many of them on their return home are busily engaged in keeping wild colonies of bees. The lay brother who attended the summer school has, at the orphanage at Adaikalapuram, a dozen hives. The children there are very much interested. The students who came from Palayakayal have exhibited two bee-hives to their brethren in the village. Mr Thomas Ratnam, a Christian *sadhu* from Ambasamudram, who attended the Mangalagiri Summer School this year has been working among the poor in his taluk. He reports that fifty wild colonies have been hived since he took up this work. He has applied to the Institute for help in marketing honey extracted by him and for a White Leghorn cockerel.

MATHEW, T. O.	..	1936	Christa Sishya Ashram, Tadagam, Coimbatore Dt.

We are busy planting our vegetable gardens. Planning a good flower garden.

MAUNG NET	..	1936	General Secretary's Office, YMCA, Rangoon, Burma.

Lectured on Rural Reconstruction honorarily in classes of the National University which university came into being as a result

NAME	YEAR	ADDRESS

of a university students' strike while I was at Martandam. Wrote several articles on Rural Reconstruction which were published in Burmese newspapers.

MUDALIHAMY, PETER 1932 The Training Colony, W. G. B. Peradeniya, Ceylon.

I have experimented in planting Guinea grass which proved a fair success. The grass plots were leased to people after they reached a cutting height annually. Guinea grass was also planted in a half-acre orchard interplanted with mangosteen and durian: the grass gave an income of nearly Rs. 40 per annum.

PACKIANATHAN, V. .. 1931 Teacher, Pasumalai, Madura Dt.

In Pasumalai I work on a dairy farm, and at bee-keeping, farming and poultry also.

PEREIRA, MISS SUPRIYA H. 1933 Amreli Farm, Kathiawar Peninsula.

I helped Mrs Souri at Kosamba to teach sewing, knitting and embroidery to the girls of the vernacular schools and ladies of the village. The Government of Baroda granted me Rs. 20 towards starting a small poultry farm on the Government Agriculture Experimental Station at Amreli. Have supplied so far 188 eggs for setting and 112 for table; 24 White Leghorn chicks to several of the poultry keepers. I give advice regarding the upkeep, feeding, and preventing of disease. I was engaged for some time to teach sewing and embroidery to the girls of the Amreli Mahila Vidyalaya.

PHILIP, A. G. .. 1930 L.M.S., Punalur.

In 1935 I had a trade in bamboo mats which helped about 200 families in Veanjakkala. In 1934 and 1935 I carried on preventive and curative treatment for cholera and malaria in Thalavoor. I am carrying on boys work, poultry of my own, and have begun bee-keeping.

PHILIP, GEORGE .. 1932 Nayaranpalam, Narakkal A.O., Cochin.

I have been forming 'The Pioneer Poultry Club'. We sell hatching eggs at three annas per egg and distribute eggs free to very poor villagers. We are organizing a co-operative egg society. Have done propaganda work in bee-keeping and cattle breeding. A series of many articles on useful cottage industries have been published in the Ernakulam vernacular daily *Deepam*.

PHILIPOSE, C. . .. 1933 Auditor, Tiruvella.

I started poultry-farming on a very small scale; began with

NAME	YEAR	ADDRESS

6 hens and one cock and have a few generations of them. They have been free from diseases and have been supplying us with all the eggs we need.

PONNU PILLAI, P. .. 1933 Palkulam, Kuzhithurai A.O.

Temperance work has resulted in the reform of some drunkards. I have 4 hives I built myself at a cost of Rs. 2-2. I built my own poultry house and have fowls. My goat feeds on Guinea grass I raise. I have a vegetable garden.

PRABHU, S. V. .. 1934 T. D. High School, Cochin.

Give magic lantern lectures on health, village sanitation and various diseases.

PONNIAH, K. .. 1934 Teacher, A.B.M. Central Boarding School, Narasaravupet, Guntur Dt.

In charge of school gardens, teaching proper planting, and preparation of manure. Students bring manure from outside to the school compound where we treat it. Production of crops is greatly increased.

RAJENDRAM, N. .. 1932 Headmaster, A.A.M. Higher Elementary School, Melpadi, via Ranipet, North Arcot Dt.

We have improved the cattle around by breeding with a good bull bought from Mr DeValois. Poultry-keeping has been taken up by the villagers. A Health and Baby Week here has done much good.

RAMAN PILLAI, K. N. .. 1933 Kochukallikal House, Mallika Muri, Thattail, Thumpamon.

Poultry-farming and bee-keeping are carried on on a large scale in my locality since my training and they are a source of great income among village people.

RETNAM, J. S. .. 1935 Secretary, YMCA, Santhiady Circle, Nagercoil.

We conduct annually an Agricultural Folk School at Agasteespuram, the first of its kind in India, at the end of the summer holidays, with the co-operation of our YMCAs and the Agricultural Department. More than 50 bee-hives are in our villages.

RAM SWARUP AGARWAL. 1936 Government Rural Development Dept., United Provinces.

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I have demonstrated and explained to interested audiences how to keep bees and to increase the production of honey. An illustration of one of my demonstrations can be seen in *The Madras Mail* of 21 October 1936, and in *The Illustrated Weekly of India.*

SAMUEL, M. C. .. 1932 YMCA, Haripad.

For the last 5 or 6 years I have been growing Guinea grass in my own compound for my own cow. Eggs from my White Leghorn trio has been sold for settings. Now many in my neighbourhood have improved cross-bred fowls.

SAMUEL, P. O. .. 1933 Kalavamcode, Shertallay.

By means of lantern lectures, many people became interested in improved fowls, bees, and cottage industries. I keep fowls and bees, and demonstrate at exhibitions and in villages.

SUKKIAH, K. .. 1935 M.E. Mission, Sironcha, C. P.

Worked at poultry for the mission and the Government of Hyderabad. We taught one villager to prepare bones for manure. He is now a regular bone contractor. Taught bee-keeping in the mission. Hived 52 swarms with little difficulty but have had trouble enough keeping them since.

SATHIAMOORTHY, R. .. 1936 Sri Vijaya Raghunatha Home, Pudukkottai State.

I have been appointed as Manager of the Government Poor Home. I am doing bee-keeping with 7 hives. I have a Poultry Farm with Hancock strain, newly imported White Leghorns from Keston and Martandam.

SIVASANKARA PILLAI, A. 1936 Government English High School, Martandam.

Eggs from Martandam Centre were distributed to friends and relatives with instructions. Some have done well with the poultry. I take every opportunity to pass on my knowledge to cattle breeders, and to help villagers in health, sanitation and use of good agricultural implements. Have a vegetable garden at home.

SAN TIN .. 1936 No. 47, 101 Street, Rangoon, Burma.

Some of the members of Y.I.S., Wakema, and I give series of lectures on Rural Reconstruction including rural education, sanitation, agriculture and economy. At present Ko Net and I are working as Honorary Rural Reconstruction Demonstrators in the National College, Rangoon.

THOMAS, G. .. 1936 Vazhayil, Karipuzha, Mavelikara.

Latrines have been constructed in over 60 houses. Poultry-keeping is being taken up. Bee-keeping has increased. Have

NAME	YEAR	ADDRESS

organized a poultry club and purchased 50 Hancock White Leghorn eggs from Keston.

THOMAS, T. V. .. 1933 Bethel, Purulur.

I made a survey of our place and encouraged home industries. Poultry-keeping has been taken up. I have spread ideas regarding village sanitation, health and co-operation. The games I studied at Martandam are useful since I deal with boys in clubs and societies.

THOMPSON, J. .. 1935 Evangelist, L.M.S. Church, Kurisumuttam, Malayinkeel.

I am keeping with great success a bee-hive, a few White Leghorns and a number of country fowls (no cocks). Give lectures to my church people concerning poultry-keeping and gardening. I encourage my church members also to keep a few Leghorns each. Have a small vegetable garden in front of my new house, to which I invite the children of my church to teach them how to care for their own gardens.

VARGHESE, Rev. P. M. .. 1933 Mar Thoma Church, Kuzhikala A.O.

Keep bees and White Leghorns, raise Napier and Guinea grass. In home-visiting sanitation is discussed and improvements made. Have a little medical store for first aid work.

VARKEY, M. V. .. 1926 C.M.S. Catechist, Chengannur.

Lecture on subjects studied at first Summer School.

VARKKEY, P. C. .. 1934 Tiruvella, Eraviperoor A.O.

I am raising a nursery. I am proprietor of the Malabar Nursery and Fruit Farm.

VASAVAN, N. .. 1936 Teacher, V.M. School, Mayanad.

I have started bee-keeping and poultry farming on a small scale. Have a thoroughbred cockerel which I am crossing on country hens. In June and July delivered speeches to the Teachers' Association, Mayanad and Paravoor on Rural Reconstruction with special reference to bee-keeping and poultry farming: meetings were attended by about 100 teachers.

VENKATESAN, G. .. 1936 Rural Improvement Officer, Pudukkottai State.

The village of Vallathirakottai is my special work. After some months' work, the villagers take pride in keeping their village clean. Almost every house has a vegetable garden in its backyard. A hand loom of the 'pit type' has been set up in the Adi Dravida Chery and towels are being made. An old man is

NAME YEAR ADDRESS

teaching weaving to the younger folk. Some of the women already know how to assist in the work. We have put up a mat loom for weaving *kora* mats. Our first attempt to hive bees was thwarted by the colony swarming out thrice obstinately, but we have just caught another and hope it will not desert us. I am educating the people on temperance, improved methods of agriculture, better live stock, poultry-keeping. I work all the time with and through the chief man in the village, a natural leader. I am conducting a preliminary survey to find out the possibilities of palmyra jaggery and the cashew nut industry in the State.

YESUDASON, J. .. 1932 Teacher, Vanniyoor, Madathadikavila A.O.

I am the owner of 23 colonies of bees.

YOHANNAN, M. .. 1935 L.M.S., Thalavoor, Kunnickode.

I visit houses regularly giving special attention to the betterment of sanitary conditions.

ZACHARIAH, N. M. .. 1931 C.M.S. School, Muttapalam, Kanjykuzhy, Kottayam.

With boys we visit homes to teach health and sanitation. Some good improvements have been made.

ZACHARIAH, V. K. .. 1932 Headmaster, St. George's English Middle School, Thellyoor (Camp), Vennikulam.

Introduced bee-keeping both at school and at home. Help those who have followed my example in keeping bees.

Vol. I Number 2

For all Old Students who desire the further edition of the *Accomplishment Bulletin*, two things are necessary; information and money. Write to Dr D. S. Hatch, Martandam, Travancore about the work you are doing and enclose four annas in stamps to help toward expenses. The next edition depends on your co-operation.

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