



GOLD COAST

ANNUAL CONFERENCE
ON
MASS EDUCATION
AND
COMMUNITY DEVELOPMENT
1955



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EVALUATION OF
MASS EDUCATION AND COMMUNITY DEVELOPMENT PROGRAMMES,

Report of an Evaluation Conference for Senior Members
of the Gold Coast Department of Social Welfare and
Community Development held at Legon Hall, University
College of the Gold Coast, December 1955.

Edited with an introduction

by

Professor L.J. Lewis



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Introduction

The first of these courses was directed to a re-consideration of the aims of mass education and community development in the light of working experience with special reference to establishing training needs and methods of meeting them. In planning the second course, it was originally intended to pay special attention to the use of visual aids in mass education and community development, but a request addressed to the Department of Social Welfare and Community Development for organising a campaign directed to cocoa farmers, to win the co-operation of the farmers in applying scientific methods in the war against the cocoa diseases, and to persuade them to adopt better ways of husbandry, resulted in the course being altered to a study of the whole variety of techniques relevant to the cocoa campaign. In the third course, with which this report is concerned, an attempt was made at general re-assessment. Review of work done was followed by an analysis of what had happened as opposed to what had been expected when the particular projects were in the planning stage. Aims and methods were reconsidered in the light of experience and particular attention was paid in the discussions to consideration of outcomes other than those originally sought.

Every mass education and community development project is an exercise in attempting to satisfy a community need, and almost invariably results in creating new needs, or in revealing related needs which prior to the satisfying of the original limited objective had little immediate significance in the eyes of the community. Success in literacy campaigns in the mother tongue produced the forecasted need of suitable follow-up reading matter and the problems of distribution. The more intangible social consequences, leading to readiness on the part of the community to voluntary development work in entirely different directions, were less easy to foresee, but their coming into being stressed the importance of intelligent anticipation of new directions at the earliest moment. The improvement in food production seen as a particular objective in the northern territories may result in problems of cash economy that call for community training in spending and saving. A single successful rate-paying campaign raises question of the greatest concern for the future, and point to the need for progressive and continuous education of the local community, its representatives and servants in the wise application of local funds. One of the lessons to be learnt from the evaluation of past experience is that of anticipating at the earliest stage the secondary consequences of the project in hand, in order to prepare for the new programme.

Another lesson brought out quite clearly is the importance of the co-operative effort at the personal contact level. Mass education and community development workers are not merely service agents for whatever government departments that may wish to use them.

Nor are they independent workers in their own specialised field. The purpose of their being, as is clearly indicated in several of the papers which follow, is that of extension, which implies an organic relation between the people to be served and those technically responsible for the service or its outcome. It might well be that this feature could be stressed to general advantage by a change in terminology by talking of Extension Services and Extension Service Workers instead of Mass Education and Community Development and the accompanying labels which go with it.

Several papers in their different ways stress the value of working together with other persons not only in respect of the planning and the technical features of projects, but also in the sphere of human relations. If the technical specialists tend to adopt a "do it the way we tell you" attitude, it is not sufficient that the mass education and community development officer, shall come behind and rectify the error in personal relations with the people it is intended to help. The technical specialist and the extension worker must "go it together". The greater understanding of the emotional aspect of reaction bred from officers working together will produce greater confidence in, and co-operation from the community, in the pursuit of development projects. Experience shows that tendency to see the business of knowing and understanding the people as a property peculiar to the extension worker which the technical specialist can tap when wanted is a mistake. If, as is frequently true, the extension worker is close to the people, and the technical specialist distant from them, it is all the more important that they come together and that the people do not get the opportunity of developing the attitude of mind which labels the technical specialist as a stranger or an enemy, and the extension worker as a friend. It is the special contribution that the extension worker must make of ensuring that the technical specialist is regarded by the people equally as a friend.

In the discussions which followed the reading of the papers, there was a considerable degree of emphasis on local variations in conditions, human and physical which called for differences in treatment and approach. This raises the ever present question of workers knowing their districts and people and at the same time avoiding the development of excessive parochialism from absorption in the local phenomena to the exclusion of knowledge or interest in parallel activities elsewhere. This in its turn raises the question of exchange of information and experience, and the importance of making easily available to other workers details of procedures and results, of successful and unsuccessful projects. The learning from mistakes and failures was seen to possess a value only too frequently ignored.

In the review of the health education, more explicitly than in any other report is brought out the importance of the people having knowledge and understanding of what the development project is about. This indeed is a keynote of all mass education and community development work. People doing things for their own betterment not because they have been told it is good for them, but because they know and understand the worth to themselves, individually and collectively, of the effort they are encouraged to make.

The papers which follow reflect something of the range of work carried out by the Department, define some of the problems and indicate the value of evaluation made deliberately and at leisure in time set apart from the daily routine. In spheres of work where so much needs to be done, and when enthusiasm has been stimulated, the temptation to press on regardless is very great. The lessons derived from the consideration of these papers serve to emphasise the value of temporarily standing back and taking stock.

THE USE OF VISUAL AIDS IN THE GOLD COAST
COCOA CAMPAIGN
MR. R. PROSSER.

The Gold Coast Cocoa Industry has been suffered for some considerable time by disease known as Swollen Shoot. It has been discovered that this disease is a virus disease, and despite continual research and experiment by West African Cocoa Research Institute and the Department of Agriculture the only known cure is to cut out the diseased tree and burn it. The Cocoa section of the Department of Agriculture has carried out a tremendous task in surveying each cocoa farm in the Gold Coast which are in scattered holdings throughout the forest area; identifying the disease, taking precautionary measures by cutting out diseased trees and subsequently inspecting the Cocoa areas for fresh outbreaks.

Cutting out the diseased trees would mean a declining industry if other measures were not taken; and the Department of Agriculture is encouraging the planting of young cocoa trees, to maintain a balance with cutting out and to increase the total yield of cocoa.

It was discovered fairly early on that the new plantings were attacked by an insect known as capsid which caused considerable damage. Further experimentation demonstrated that capsid damage could be controlled through spraying the new plants with the mixture of D.D.T.

The problem was to make cocoa farmers aware of the danger of capsid attack on the new plantings and to popularize the purchase and use of spraying machines by the cocoa farmers.

The Department of Agriculture requested the Department of Social Welfare and Community Development to assist in organizing a campaign to make the farmer aware of the danger and to demonstrate what measures the farmer could take to protect his cocoa.

At the outset, it was clearly understood that the professional direction of the campaign in its agricultural context was in the hands of the Director of Agriculture. The Department of Social Welfare and Community Development had to interpret and explain in the language the people understood, the measures necessary for the cocoa farmer to take in order to preserve his trees and increase the yield of cocoa.

After consultation, it was agreed to organize a campaign covering the cocoa regions of the Gold Coast and to continue this campaign initially for one year. Despite the fact that the main emphasis was to be on spraying against capsid, it was decided to bring in three other features of good cocoa farming. They were:- Reporting Swollen Shoot, Preventative measures against Black Pod disease and the planting of new cocoa in lines for ease of inspection and treatment.

Disregarding the intangibles such as better co-operation of the farmer with the Department of Agriculture, the goodwill that might be engendered by such a campaign and its educative value, it was agreed that the success or failure of the campaign would be judged by the sale of spraying machines to the farmer.

To understand the method employed, it is necessary to give a brief explanation of the organization of the Department of Social Welfare and Community Development in the Gold Coast.

The country is divided into six mass education regions each region having a Community Development Officer in charge and he in turn has a descending hierarchy of staff consisting of Assistant Mass Education Officers and Mass Education Assistants. In addition the Department calls upon the services of voluntary leaders from every walk of life 15,000 of whom are trained each year.

Broad policy papers are issued from Head Office and then regions work out an adapted policy to suit the local needs of the region but maintaining the objectives defined in policy papers.

For the cocoa campaign the regions concerned were the Ashanti region, Eastern Region, Western Region and Trans-Volta/Togoland region. A 100 extra junior staff was taken on for the cocoa campaign, the preponderance of whom were posted in the Ashanti region as a greater proportion of new cocoa plantings were in this region.

The main lines of the campaign were an introductory stage where publicity was given to the campaign by means of Mobile Cinema Vans, Posters, One day Schools, the distribution of broad-sheets called "The Cocoa Farmer" and speeches by the Minister of Agriculture and other prominent people on the Gold Coast Broadcasting net-work.

This was followed by itinerant mobile demonstration teams moving from village to village. 9 teams operated in Ashanti, 2 teams in the Western Region, 3 teams in the Eastern Region and 2 teams in Trans-Volta/Togoland. The usual complement of the team was 3 Mass Education staff and 2 Agricultural staff. The teams stayed at each Centre for 4 days the remainder of the working week being used for maintenance and travelling. In this manner, each team covered 4 main cocoa producing areas in a month. The teams were equipped with film strips, Posters, teaching posters, the cocoa farmer broad-sheet, spraying machines and other equipment for demonstration purposes.

With this outline of the method employed, it is possible to understand the variety of visual aids used.

3 new films were made dealing with Capsid, Black Pod and Planting in lines respectively. A film that had been made early dealing with Swollen Shoot was also used. 16 copies of each of these films were ordered and used in the campaign.

4 film strips dealing with Capsid, Black Pod, Planting in lines and Swollen Shoot were made. They were in colour and 50 copies of each were ordered and used.

A series of 8 posters depicting aspects of the campaign and demonstrating the use of the sprayer were designed and sixty thousand were published in the main vernaculars and in English.

An illustrated broad-sheet called "Cocoa Farmer" appeared quarterly throughout the campaign. This was illustrated with line drawings and showed the process of good cocoa farming in an attractive manner and also stressed the economic advantage of good farming.

For many years, the Community Development section has used village drama as a means of entertainment and education. For the purpose of this campaign each team wrote and rehearsed a series of village drama declining problems facing a cocoa farmer's family and the best suitable solutions to these problems.

The foremost Gold Coast dance band was commissioned to write a cocoa "highlife". This was recorded and 3,000 records were distributed to Bars, dance halls and other meeting places of cocoa farmers

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and the public.

The Department of Broadcasting gave massive news coverage to the Campaign and included the campaign in such radio features as "Men At Work". At a later stage in the campaign a serial story of a Cocoa Farmer's family who were caught up in the campaign was written and broadcast.

To round off the variety of visual aids used, the Department of Post and Telecommunications agreed to frank all letters in the country with the slogan "Support the Cocoa Campaign".

During the latter part of the campaign an evaluation was made of the techniques employed and several interesting features came to light. Dealing firstly with the films, it is perhaps apt at this point to state that there are 2 schools of thought on the making of films for a campaign of this description. One school of thought states that the films required are films that make an emotional impact on an audience. They need not contain any lessons in the accepted sense of the words but should capture the imagination of the people and point through human interest to the particular problems facing an industry or the country. It is said if this is achieved then the emotional surge will be such that people will be eager to adopt new methods and to accept the teaching of the expert.

The other school of thought states that the film required is one that contains specific lessons that must be taught if new methods are to be adopted. It can and should contain human interest in the old accepted stories of Mr. Right and Mr. Wrong Mr. Wise and Mr. Foolish. The lessons must be contained in the film and should stick out like a sore thumb. Mr. Wise does the right thing: he is shown doing the right thing and prospers. Mr. Foolish does the wrong thing: he is shown doing the wrong and he suffers.

Our own view is that both types of film have much to offer in the field of Mass Education but we have yet to see the film produced that has the emotional impact that will make a rural community wish to change its work habits. When this type of film is made we hope to be the first to use it.

Accordingly we opted to make the Mr. Right Mr. Wrong type of film scripted to demonstrate how cocoa farmers could protect their crops and increase the yield of their trees.

The films were stark in their simplicity and were directly related to family scenes and background. By sophisticated standards they were not good films but we all tend up to construct judge and use films from an European point of view and to forget that we are using our media in rural Africa. Whatever merits a film acquires as a work of art if it does not succeed in conveying the message we wish to

convey to the people we are working with, then it is a failure.

The films were a success drawing large audience whenever they were shown. From the teaching point of view they were more successful in stimulating interest in new work techniques rather than hammering the lessons home. As is always the case with large audiences. People were selective in their understanding and grasped what was of immediate interest to their peculiar problems and background.

The film strips were carried by demonstration teams and were used with selected groups. They were useful and popular. The frames in colour vividly demonstrated the recognition of pests diseases and the farmers drawing on their knowledge and experience were able to identify quickly the damage caused. The quality of impact varied with the quality of the instructor. The use of the film strip is relatively easy to describe but it requires a skilled adult teacher to make the most of this technique and to import what can be an exciting learning experience.

As stated earlier, 8 posters were produced for the campaign. These posters were meant to appeal to the cocoa farmers economic needs such as more wealth from increased production; they were meant to shock the community into action by demonstrating the loss of wealth to the Gold Coast economy through cocoa pests and diseases. They were meant to popularize spraying with insecticide by showing the modern cocoa farmer spraying his cocoa. In fact they were meant to do far too much. From experience in the campaign we would say cut down the number of separate posters to the absolute maximum required to high light the campaign and then produce in thousands to achieve a massive impact. It is essential that every village concerned should be placarded with a group of posters.

As far as captions are concerned, and they are as important as the visual material in the poster, it is essential to work from the vernacular to English and not from English into the vernacular. The arresting phrase the clever play on words even the direct message can suffer a terrible fate when translated into the vernacular. Caption writing should be entrusted to an African who has skill in the writing of his own vernacular.

The teams used puppets in their demonstration work. There is one thing that needs to be stressed in this technique. The puppet is impersonal and can therefore say things about cocoa farmers and cocoa farming which no member of staff dare or the community would be mortally offended.

The gramophone record provided a theme song for the campaign. Many professional people forget the importance of singing in the daily life of rural Africa. The "highlife" written for the campaign was

quickly taken up by every Dance Band in the country and from there extended to the Brass Bands in the rural communities. It extended further than this, for villagers soon composed their own songs around the theme of the cocoa "highlife" and it became a very valuable publicity and good will earner.

Formal Cocoa Campaign dances were organized and advertised as cocoa campaign dances. One enterprising team planted a cocoa tree in the middle of a dance floor and during an interval in the dance the tree was solemnly sprayed by the Chief of the State using a Mysto Sprayer.

As broadcasting does not as yet have a wide outlet in the rural areas it was more valuable in keeping the urban areas informed of the progress of the campaign and stimulating interest. This was of the utmost value as the literate urban dweller has a tremendous influence on the thinking of rural communities through his improvement society and his family connections in the villages.

Letters franked "Support the Cocoa Campaign" had the same effect in constantly keeping before people the idea of giving every support to a national campaign for better cocoa farming.

The illustrated broad sheet "The Cocoa Farmers" proved popular and appearing once quarterly gave visual impact to the lessons taught by the demonstration teams. The Campaign successfully achieved its objective and Mysto Sprayers were sold in all areas to a total of 17,000. There is a continuing demand for Mysto Sprayers. The Department of Agriculture reports an increased interest in planting in lines and there is every appearance of more generous attitudes on the part of the cocoa farmer to the work of the Agricultural Department. The next phase of the Campaign will have to concentrate on the proper use of the Mysto Sprayer and this is in hand.

The Campaign has demonstrated without a shadow of doubt the value of integrated visual aids in extension work and has proved that it is possible to stimulate interest and to bridge the gulf between the knowledge of the professional expert and the needs of the peasant farmer. As is to be expected our results have shown that visual aids, excellent in themselves, are useless unless they are handled by skilled adult teachers who can fit the aid to the need. The Campaign has further proved that there is a great need for systematic research in the use of audio visual aids in extension work and this research should be conducted now.

LITERACY CAMPAIGN
MR. OWEL BARTON

In thinking over what I could say, and in trying to find something useful, which in the light of my experiences might be a contribution to our work, I have decided to emphasize not literacy itself, but what comes out of literacy or even out of a superficial literacy campaign, without follow up, when a man becomes no more permanently literate than that he no longer puts a cross and thumb print. He signs his own name but reads nothing.

In the early days in Togoland and Ashanti we had literacy classes established - not campaigns in the way we have now - but no examinations. Those who were keen were drawn into the classes and one can only assume that when we did introduce examinations, those who attended the early classes were interested enough to sit the examination.

Voluntary leaders were trained in the techniques of teaching adults to read and write the vernacular. This was done by having two week courses at various centres and making the courses interesting by the introduction of amusing music and drumming and dancing, drama, cinema shows, games. Then there were lectures on various subjects such as first aid and at the end of the course there was an examination for a red cross certificate. Popular crafts which could be taught in two weeks were introduced - sea grass stools which were extremely popular, simple book binding so that people could make their own photograph albums, needlework cushions, a craft we intended for the women, but the men thoroughly enjoyed this craft, and then odd things like paper flowers and shoe horns. Most of this was a bait for the potential voluntary leader and during the process of the course he was taught how to use the literacy charts and the special methods required to teach adult illiterates.

The first courses in Togoland were staffed almost entirely with borrowed people. For Ashanti a team of Assistant Mass Education officers was recruited and trained.

This phase of the work was extremely important as Mass Education became popular with the public and resulted in the production of an ambitious plan for mass literacy and the provision of considerable funds for staff and equipment.

The follow up after these courses was superficial of the very meagre permanent staff and the large areas that had to be covered.

With the implementation of the mass literacy plan, the mass education organization gradually spread to all areas and we have our present set up.

Each area had its own method of literacy organization. One day schools, week end and residential courses and in some cases one week and two week courses. All aimed at creating an atmosphere of enthusiastic voluntary service and teaching literacy techniques.

I will describe the techniques used at this stage in Ashanti.

After training staff were allocated to areas and each man had between 10 and 20 villages for which he was responsible.

A cinema van with suitable films and accompanied by a member of staff, visited as many of the towns in the group as possible. The member of staff talked about the literacy campaign and made arrangements for the visit of the Assistant Mass Education Officer in charge of the district to visit and hold a public meeting.

A public meeting was held with the Chief and Elders the young men and any influential people in the village at which a Development Committee or a Literacy Committee was formed. Then voluntary leaders were recruited and a date for training arranged.

This done an appeal was made for voluntary donations for the purchase of lights and kerosene and in Ashanti most villages raised enough for one light and sufficient kerosene and some raised as much as £100 for the Committee.

Most officers had different techniques at this stage, but the most effective seemed to be to get each member of the Committee and each voluntary leader to undertake, in front of the people, to carry out their tasks with honesty and consistency.

The training of voluntary leaders then took place either in a centre convenient to most of the villages or in the particular village itself.

The class organization was left to the Committee and the voluntary leaders and the member of staff in charge visited as often as possible.

This system resulted in the organization of literacy classes in 735 villages in Ashanti and the production of over 10,000 new literates.

The organization of examinations and then the presentation of certificates and voluntary leaders badges at literacy days presented a tremendous task. The first examinations were held by temporary staff employed during college vacation period.

We found the greatest need for very careful check at these examinations and tricks were evolved to discover tricks of impersonation where school boys and girls were trying to sit the examination in the name of some illiterate. Literacy days were made as colourful as possible and every chance taken to talk about the importance of literacy and to give praise to voluntary leaders. Literacy days in Ashanti take up every Saturday and Sunday for about four months.

This process has continued and by now we should have collected into literacy classes the cream of the community. The figures indicate however, that a large number of people still need to be persuaded that literacy is a good thing.

The early literacy was interesting because it was forced upon us in many ways. The original courses were for the educated young men and women of the community whom we wished to encourage to give voluntary service to the people of their towns and villages to teach them the techniques of literacy and encourage them to go back and organize classes. We found, however, that large numbers of illiterates turned up at the courses expecting to be taught. The courses were rearranged and these people were catered for and the potential voluntary leaders had plenty of real pupils to practise on. Many of the pupils on return to their villages assisted in the organization of classes.

A very great deal has been written and spoken about the importance of literacy. It is obvious to most enlightened people that illiteracy hinders the spread of knowledge and enlightenment. This is seldom realized by the adult illiterate. It is only realized when a group in a village become literate that there has been a change in their attitude. Apathy for a reason which I am unable to fully explain seems to go and a desire to do something to improve the status, the appearance or the amenities of the town arises. The man who comes into a literacy class spontaneously does so quite often simply to learn enough to be able to sign his own name - this can sometimes be dangerous as I have come across cases where documents not understood have been signed and court cases have resulted. Nevertheless the lift given to the self respect of the individual is quite important. Again a cocoa farmer sometimes wants to know enough to recognise the arithmetic of cocoa brokers. Others come in because it is a social occasion. Often young men join because the literacy classes offer opportunities for social intercourse in a lit and pleasant atmosphere. With adolescents who have missed school, the thirst for knowledge and the desire to catch up with their contemporaries at school is evident. Others again are keen to become literate for quite impossible reasons, the chief reason being that government will give them a job.

It has been my experience that the good village which is developing well, where there is happy atmosphere, where there is thought for future progress, is the village where there is a well run literacy class. Quite aside from anything else, the social activity which the class provides fills a village gap and the very fact of a group of people meeting together in "mice eddication" will sooner or later spring off a community project. Where classes are poor or irregular, I consider it unfortunate. Some progress is being made and unless staff can be spared away from other work I do not think we should worry unduly.

One other point I wanted to touch on and that is costs of producing a new literate. An average worker in Ashanti can probably provide a fair example.

The Mass Education Assistant in charge of 14 villages in the Kuntanase area produced 345 new literates in this campaign. His yearly pay is £180 plus £25 on completion of a years satisfactory service. His travelling costs are on the average £2.10.0. per month. Supervision and administration has to be added to that. There is an Assistant Mass Education Officer on a motor cycle and a Mass Education Officer in a car to keep an eye on him. These costs can only be worked out in relation to the total number of new literates produced each year and the total Departmental costs. It would appear then that each new literate is costing about £1 to produce at a low level. I claim that this is cheap. In addition he looks after three projects. One which is almost finished at the low cost of £100. It is worth at least £450 by any contractor.

I mention this point because I consider it most important that an eye is kept on costs and the point could quite easily be reached where the cost of each new literate ceases to be economically sensible. The money could perhaps be better spent on economic improvement of the village farmers or on local health and living facilities.

The achievements in literacy over the past 7 years have been considerable. The literacy figures are impressive, the creation of a spirit of devoted voluntary service is in itself something fine, the new spirit of support for all our community development principles is probably our most important gain - and this has come out of literacy.

VILLAGE BUILDING TECHNIQUES
MR. A.L. TITLEY

I have been asked to talk to you this morning on village building techniques; this would I feel have been much better dealt with in a symposium than read as a paper as most of you have already had considerable experience in village building. Further, the techniques used in or suited to one part of the country are not always acceptable in other parts, and my own experience has been limited to two fairly small areas of Gold Coast. Nonetheless, I think it will be possible to discover as a result of later discussion principles on which we would probably all agree.

I will refer throughout my talk to the normal village dwelling house: similar principles apply to other buildings. Although this village house varies in design throughout the country there are wide-spread traditional methods of building, and most of my remarks will, I trust, have a reasonably wide application. A rough description of the normal traditional method of building a house is this: First a small trench is dug for foundations (if they are to be used) and in this are put stones which are either rammed together or have the interstices filled with swish mortar. On these foundations are built the swish walls, normally no more than nine inches thick. They are laid in approximately 18" courses, each course as it is finished being covered with palm fronds and left to dry slowly before the next course is started. Frames for doors and windows, when these are wanted, are put straight into the swish walls; if there are to be no doors or windows then openings are left as the walls are being built. Over the top of the openings are put wooden lintels, normally just planks or pieces of aggor (borassus palm) laid flat. When the top of the wall is reached in a rectangular building a wall-plate of timber or aggor is anchored to it with pieces of hoop-iron; on this the roof-members are fixed, either timber, aggor or bamboo, and a thatch-roof completes the building. In a round-house a centre-post either rising from the ground or erected on a main beam spanning the hut supports the thatched roof, which is finished with a pot put upside-down on the apex or a collar formed from a worn-out basin, and perhaps a twig to act as "lightning conductor". Admittedly there are many houses in our villages which are of a considerably higher standard than this, but this is the type in which probably the majority of people in our rural areas live. Such a house can literally be built entirely from materials growing in the bush or dug from the ground; even nails may not be necessary.

If we are to improve upon this type of house we have first to take into consideration the hard fact that the normal peasant farmer, except for the lucky few who are fortunate enough to have large farms in the cocoa areas, has little hard cash, but plenty of time and a fair amount of unskilled labour provided by his family. A yam-farmer in Krachi who earns about sixty pounds a year cannot afford to spend very much on iron sheets or cement. He cannot even afford to borrow money for these if he has to pay it back at a rate approaching his total annual income. He therefore cannot build a much more expensive house than the one in which he lives at present. All we can really do in this case is to show him various ways in which he can improve upon the building at the smallest possible cost to himself. I propose to give a few examples of the way in which such improvements are possible and try to evaluate as I go along the progress we have so far made in popularizing such as we have tried to introduce.

Let us, then, consider the various parts of the construction and see what satisfactory methods there are of erecting them cheaply. It might perhaps

be logical to begin with the foundations and end with the roof, but I propose, for reasons which will become apparent as I go on, to begin with the walling. What improvement can be made, at low cost, to the traditional swish walling? (I am omitting entirely consideration of timber or wattle-and-daub walling; the former is too liable to infestation by ants; the latter is normally only a bad excuse for making the swish walls thinner, as the bamboo used is very attractive to white ants, and when it is destroyed the wall is so seriously weakened as normally to collapse). One which has been proved practicable in the Northern Territories is the use of pise de terre, or earth rammed between shuttering. The use of shuttering is an added expenditure, but there is no reason why local councils should not supply this (if necessary at a very small hire charge). It could also be a regular part of the equipment of the Mechanical Field Units of the Department. There is a certain amount of extra labour involved in ramming the swish, but labour, as I have said, is not the limiting factor. I am unaware of the extent to which pise has proved popular in the North, and as far as I know it has not been used elsewhere so that I cannot give any estimate of our success in teaching its use, but when deciding upon what improvements to concentrate in future we can at least feel that this is one which has already long ago proved its excellence. Let me quote from Pliny's Natural History" written about 100 AD "Have we not in Africa and Spain walls of earth known as "formocean" walls, from the fact that they are moulded rather than built, by enclosing earth within a frame of boards constructed on either side? These walls will last for centuries, are proof against rain, wind and fire, and are superior in solidity to any cement. Even at this day Spain still holds watch-towers that were erected by Hannibal" - And Hannibal had died 300 years before!

Another cheap method of improving swish buildings is, one with which we are all familiar, the use of cement or other material to stabilise the swish. As far as I know we have concentrated on the use of cement for stabilisation, bitumen has not been used, and such small experiments as I and I believe others have made with oil as the stabiliser have not been successful. This soil-cement mix can be used both in rammed-earth and in making blocks. There is probably not a great deal of advantage in its use in rammed-earth, which does not normally need the added strength; the only possible improvement would be that the walls could possibly be made thinner, but since, according to Slater, 9" is thick enough, there is little advantage in this. Its usefulness in the form of blocks has, however, been proved beyond doubt. In addition, there are in most parts of the country with which I am familiar a number of semi-skilled artisans capable of laying blocks. This means that we are not introducing something entirely foreign to local tradition, but building on it. It has proved extremely popular in my region, largely I think because of the building of the Rural Training Centre. The cheapness of this group of buildings has created a strong impression on those who have seen them, and it is noteworthy that it was after the buildings were put up that the large number of requests which we are now receiving for the loan of landcrete machines started to come in. Perhaps, therefore one of the best ways of

15/.....popularizing

popularizing these is the erection of public buildings in landcrete.

It may be advisable at this stage to say a little on the vexed question of the type of machine used in making these blocks. This is a question on which some of us have rather strong opinions as a result of our varying experience. Everyone will agree that the normal hand-operated landcrete machine is an extremely useful, efficient and, most important, sturdy machine, which has proved its worth. (It might be useful here to mention an experiment I have not myself tried, that of giving a sandcrete finish to the blocks by putting this mixture on top of the soil-cement in the machine. This will probably allow the blocks to be laid on edge instead of flat without scaling taking place as a result of weathering.) It is when we come to the power-operated machines that the real conflict of opinion on whether or not power-operated machines are worth the extra cost. Looking at the actual work for which they are normally needed in this department, including the Mechanical Field Units, I would at first sight say that they are unnecessarily expensive, and that there is little need as a normal rule, to turn out blocks at the rate at which it is alleged they can be produced, or even at the actual speed at which they are produced. A block-layer will rarely lay more than forty blocks a day, on anything except on straight walling, and that only under strict supervision, and therefore a hand-operated machine working under the conditions of communal labour can turn out in one day sufficient blocks to keep three layers busy; there are rarely in villages even that number able or willing to devote their whole time to communal building. If it is a question of a man and his family, possibly with the help of a few neighbours, building a house, then there is even less need to produce large numbers of blocks quickly. Power-operated machines require trained operators, though the skill required just for their operation may be of a low order; they also require much more maintenance than hand-operated machines, and are more costly to run. They have their place in large building schemes where they can be used to capacity and may well come into their own under the new schemes for village housing, but for small village schemes they are unlikely to be economic. On the other hand, there is undoubtedly in this country at present a great desire for mechanisation, whether or not it is in fact a practical proposition in the particular circumstances. The use of machines therefore is of great assistance in popularising the materials employed. It is arguable that this more than makes up for economic disadvantages, provided that there are no further disadvantages attaching to the blocks produced. But one of the machines produces blocks of the wrong size, that is, midway between blocks and bricks. The most important difference between bricks and the blocks used here is that a brick-layer uses one hand only to lay a brick, and wields the trowel with the other; a block-layer uses both hands to lay the block, putting down his trowel as he does so. A block too large to be laid with one hand should therefore be of as large a size as a man can comfortably lay with both hands; otherwise it is a waste of labour. This is one fault

with the machine of which I am talking; of its efficiency otherwise there are varying opinions. It would, however, seem reasonable to concentrate in future on machines which are generally agreed to be satisfactory, using the power-operated types on large schemes and for popularising soil-cement, and lending the smaller hand-operated machines to villages where smaller schemes are in operation. This fits in well, I think, with the Mechanical Field Units' work; the larger schemes, and those in which most technical assistance is required, would be the ones on which to use the power-operated machines, with our own staff, and the smaller, cheaper machines could be distributed round the country, fairly liberally, with only occasional supervision from technical staff, and day-to-day encouragement and less skilled supervision from Mass Education field staff.

So much for the two main ways in which we have tried to introduce improvements to the walling of village buildings. With plain swish walls, when no other alternative is possible, I suggest that we try to persuade people to build them no less than 12" thick. As you are doubtless aware this is the standard accepted in towns in which building is controlled by ordinance, and we should try to persuade people in rural areas not to be content with houses of a lower standard when the remedy is in their own hands. When sun-dried bricks are used a good deal of improvement would result from proper bonding being used; this, I am aware, is not something which can be taught quickly except to men with some experience already, but the simple bonds such as English and Flemish were learnt with reasonable ease at a course held for works overseers last year, mainly because the learners were so interested. Here Units can contribute to the improvement of village building, by teaching the already semi-skilled artisans more of the builders craft.

When we have decided what type of wall is to be erected then we can decide upon the type of foundation necessary. The foundation is usually one of the least satisfactory parts of a village building, and therefore needs much improvement, but when funds are a limiting factor it is obviously foolish to spend more than is necessary on any part. A man who is building a large cement-block house would be unwise to try to economise on foundations, but a man who is building the cheapest possible satisfactory house should not put in unnecessarily expensive foundations. It has proved quite satisfactory to economise on foundations by inserting in the normal concrete plums of laterite rock, thus saving cement, sand and aggregate. A satisfactory foundation for swish walls (or stabilised earth) can consist just of stones joined with cement or even swish mortar. I am trying out at present a foundation for a swish house made of stones well rammed in a trench and covered with 2 - 3 inches of concrete only. The total length of foundations, 18" wide, was 245 feet; there were three steps in them, and the whole only took seventeen bags of cement. On level ground it would have taken probably about a dozen.

Not only is the result stronger than the normal foundation for a swish house, but it is also a good surface on which to build the walls, and being carried an inch or two above the ground also assists in combating the erosion which normally takes place at ground level.

Improvements to footings may consist in the addition of buttresses, formed by thickening the corners or keying in blocks of stronger material. In the case of swish walls when no concrete floor is to be put over the footings, they can be rendered with cement or gumbo. Satisfactory footings can also be found already in many houses, where masonry is used, the stones being set in swish mortar. The addition of concrete floor laid over the footing walls would be a considerable improvement, and one obtainable very cheaply. Twenty pounds spent on cement will in most parts of the country provide at least seven cubic yards of concrete, enough to provide 63 sq. yds. at 4" thick, four rooms 10' x 12'. Failing this we can at least try to persuade village-dwellers to improve their flooring by using traditional methods of hardening or polishing the beaten swish.

One of the greatest improvements we could have in village housing, would be the provision of greater areas of wall openings. Building regulations lay down that these openings, doors and windows, should not be less than one-fifth of the floor-area. In many places they do not approach this. Schools, also could benefit from greater provision of fresh air in the class-room. It is true that they are obliged by the Department of Education to conform to certain regulations, but my experience is that class-rooms are generally very difficult places in which to keep awake during the afternoon. Half-walling is very helpful in reducing the tendency to sleep, and many of the schools in rural areas have in fact adopted this style, particularly those in French Togo. Where fear of thieves persists some provision such as expanded metal or the more expensive weld-mesh will guard against their entry. The main difficulty however is the provision of windows which allow of adequate ventilation over-night. Over far too large an area of this country houses are almost hermetically sealed at night, nor can I as yet suggest a really practical answer to this. Jalousie windows are expensive, air-bricks would have to be centrally produced and then distributed, (nor do I think they provide really adequate ventilation) and materials such as zibrimatting which allow air to enter are not considered sufficiently burglar-proof; the ends of tar-barrels, louvred and set into the wall, such as have been used in one region, are useful provided a sufficient number is used, but this tends to be expensive as the price of tar-barrels rise.

With regard to roofing too I am afraid that I have to end on a query. I think I can say without fear of contradiction that so far here we have discovered no satisfactory type of cheap roofing. Nonetheless there are several ways in which roofing can be improved. First of all, it can be made more secure by using a

good wall-plate, well secured to the binder-course which should be, but often is not, used on every type of building except swish. There is no objection to using aggor beams or in the North teak poles for this as well as for other roof-members. In fact, there is a decided advantage in using aggor when cheapness is important; apart from the lower cost of this material there is normally no need to creosote the members, as is necessary in the case of sawn timber. Aggor, it is true, attracts termites, but it also resists them owing to the peculiar construction of its fibres. Where sawn timber is used probably the best we can do is to stress the necessity for treating it with creosote or, better, Cuprinol when this is obtainable.

It is the roof-cladding which presents the greatest problem. All imported materials are costly, and there are also other objections to them. Corrugated iron is a very ugly form of roof, particularly after the galvanising has worn off and rust has set in; Corrugated aluminium, except for the improved types still being experimented with by the aluminium companies, gives out a distressing amount of glare, it also presents difficulties due to electronic action if it is in contact with iron. Asbestos sheets are more expensive than either of these and are liable to an excessive amount of breakage; in addition the practice of driving the roofing nails through the asbestos is liable, particularly in the case of matured sheets, to set up hair-cracks which may extend and cause the sheets to break and blow off in high wind.

In default of locally-produced cladding, however, we are compelled to resort to these costly materials. Can anything be done to produce a good roof-covering locally? Experiments have already been carried out in one region in the production of cheap tiles in a block-making machine. I understand that the se tiles have not proved entirely satisfactory, and that further experiments are being carried out. A tiled-roof is, of course, a heavy roof, and requires more than the usual amount of timber. As those of us from England know, it is also subject to many breakages, both during and after erection, and a high storm is always likely to remove some of the tiles. Its usefulness therefore remains to be proved, and until it can be proved there appears to be no alternative to the costly imported materials except thatch, which is not generally looked upon with favour. I cannot myself see why an improved thatch should not be a satisfactory roof-covering; in England the thatched roofs of Norfolk last for many years without requiring maintenance. The dangers of fire could be minimised by the use of chemical preparations, as could those of infestation by insects and larger vermin. It is true that much of the thatching in this country is of very poor quality, but there are certain types of thatching, those made from palm-fronds, for example, and the matting type used in Krachi, which are quite durable and weatherproof, although they take more labour to make. Thatch is certainly cooler than

corrugated iron, and there can be little conflict of opinion about their respective aesthetic values when the thatch is well-made. The main disadvantage I have found in good thatch is that one cannot collect water from it. For this I have no remedy to suggest. Unsatisfactory as I feel it to leave the question thus unresolved, I see no choice, unless the local tiles prove satisfactory, except that between thatch and expensive imported materials.

I said at the beginning of this paper that I would try to evaluate what progress had been made in village building techniques; except for the considerable progress made in popularizing the use of soil-cement and possibly rammed earth I cannot see that there has been much advance. The reason, I suggest, is lack of technical direction. As a department dealing with welfare in the rural areas, we must put a high priority on the improvement of village housing; as extension agents of government we must have technical guidance on what measures are practicable. I have in this paper, as a layman, suggested what I consider to be some of the necessary improvements. We can all, as laymen suggest to the technicians some measures of improvement, but it is upon them that the responsibility lies, to give us the final answers. With their guidance we can accomplish much: without it we cannot do much more than we have already done.

VILLAGE IMPROVEMENT SCHEMES IN THE NORTHERN
TERRITORIES
MR. W.L. SHIRER

The Development of an area can be only understood as it is viewed against the economic, social and educational background which prevails. The improvement or lack of improvement in the villages of the Northern Territories must be considered in relation to the climate, soil, natural resources, income and educational facilities of the people. Without going into too much detail I would like to state that the climate is unkind, the soil is poor, and there are few natural resources. As for education the area has been backward but there are signs of advance now. The first and only secondary school in the whole region was opened as late as 1951.

There are no village masons or carpenters to assist in the erection of buildings. In many parts the men do not know how to use a spade or shovel. A Foreman of Works recently reported that the shovels taken to one project were still unused and just as new as the day they were issued from the store a month before. The men working on the project could not use them so brought their short-handled hoes with which to move the earth. "In fact", he said, "they moved more earth with their hoes than most labourers move with a shovel". Nearly all masons and carpenters working for Public Works Department and private contractors come from Southern Togoland and Ashanti. All the Technical Instructors are Southerners except one who was a Physical Training Instructor changed to Technical Instructor. This lack of semi-skilled and skilled labour retards progress.

To erect any buildings it is necessary to hire skilled labour if we are to have a reasonably presentable structure. When the effort depends upon free communal labour and paid skilled labour, a building can become expensive due to the uncertainty and vagaries of the free labour supply.

£ for £ the cost of buildings is much greater in the North. This in a region which can least afford it. The price of cement in Accra is 8/6 a bag whilst in Tamale it is 16/6. Timber, according to the Works Foreman, Western Region is 4/9 a cubic foot, whereas in Tamale it is 14/- a cubic foot. Petrol is also dearer by 1/- per gallon.

In a region where there are no natural resources and the greater portion of the population merely exists as subsistence farmers there is no spare cash for village improvement apart from Government grants. The Raeburn Economic Report 1948 gave the average annual income as £18.0.0. to £22.0.0.

ROUGH ESTIMATES OF INCOME AND EXPENDITURE OF
NATIVE POPULATION OF THE NORTHERN TERRITORIES

1948

Income		Expenditure	
	£		£
1. From exports of farm and bush produce	1.0	9. On imports: Goods	0. 6
		10. Livestock	0. 1 ^b
2. Cash and goods brought back or remitted by labourers in the South	0.7	11. On transport	0. 5 ^c
3. Wages from: Govt. and N.A. service	0.2	12. Direct taxes	0.14
4. Other services	0.1 ^a	13. Balance, saved, lost, and unaccounted for	0.66
5. Total Cash	2.0	14. Total Cash	2.00
6. Subsistence and other products consumed in the N.T's. 15. 0 to	18.0	15. As item 6. 15.0 to	18. 0
7. Marketing services on these products 1.0 to	2.0	16. As item 7. 1.0 to	2. 0
8. Total 18. 0 to	22.0	17. Total 18.0 to	22. 0

There is little gainful employment in the North and young men go by thousands to work in the mines, cocoa farms and timber industry of the South. Raeburn estimated 242,400 Northerners working in the South. It is worth noting the number of domestics in the South who originate in the most populated tribal area of the whole of Gold Coast - - the Frafra. They, and their brothers in industry,

financially assist their Elders who remain at home. The land is insufficient for the tribe to maintain itself and all attempts at resettlement have failed. If all the Frafras in the South had remained at home famine would have taken a huge toll.

A more recent survey (1955) made by D. Masters in six representative areas gives an average of £93 income per person in one village of South Mamprusi and £20.8 per person in a village in Lawra District. Other areas averaged £14, £15.

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The following summary of revenue of four prominent Local Councils along with expenditure on capital Works for 1954/55 (A) indicates the income level of Northern Local Councils. These Local Councils are in a stronger financial position than those Local Councils off the main trade routes. Many market women and Cocoa farmers in the South have incomes which exceed the incomes of these Local Councils.

Local Council	Direct personal tax rate 55/56				R E V E N U E - 1954/55						E X P E N D I T U R E		
	District	Local	Cattle	Bicycle	Direct tax	Fees and licences	Ferries	Grants-in-aid	Re-imbursement by Govt.	Total	Works Staff	Capital Works	Capital Works recurrent
Damongo	-	10/-	3/-	5/-	831.19/-	241.12.6	1915.--.	2966.3.4	180.--.	6137.94	50.--.	2009.3.8	9.7.--.
Yendi	10/-	2/-	2/-	5/-	462.10/-	2172.3.--	1.17.6	8021.7.6	Nil Miscls. 291.11.6	10919.9.6	-	202.15.6	1939.8.4
Nalerigu	5/-	3/-	3/-	5/-	1759.19.10	2015.19.2 Courts 109.15.--	70.--.	3612.6.2	980.--. Miscls. 128.6.8	8676.6.0	-	2675.7.6	1080.18.6
Navrongo	10/-	1/-	2/-	6/-	656.15.--	879.4.2 Courts 92.5.	Nil	3770.--.	1120.--. Miscls. 41.10.7	6359.5.9	-	3250.--.	1341.6.10

Note: There are other Grants-in-aid from Central Government, e.g. all primary schools are built by Government funds.

Village improvements during the past few years have been financed by the grants-in-aid issued by Government under the Community Development programme. The Local Council Development Committees have had the responsibility of determining how the money should be spent. In many cases the members brought forward few or no suggestions and the task lay upon the Government Agent as Chairman of the Committee to put proposals before the committee.

The Committees were beginning to function quite well and had learned the purpose of the fund when Government decided to abolish the grant-in-aid and to channel future assistance through Local Councils.

The work done in the past has been most beneficial. The following types of projects have been undertaken:-

- (1) Feeder Roads.
- (2) Bridges, Culverts and spillways.
- (3) Market stalls.
- (4) Wells.
- (5) Dams (some with irrigation areas below the dam). In co-operation with Department of Rural Water Development.
- (6) Dry season gardens.
- (7) Introduction of rice as a cash crop
- (8) Cattle kraals and use of farm yard manure.
- (9) Contour ploughing
- (10) Tree planting - fruit and firewood trees - in co-operation with the Forestry Department.
- (11) Latrines.
- (12) Clinics, general, child and Leprosy control.
- (13) Primary schools - In co-operation with Education Department.
- (14) Teachers' Houses.
- (15) Staff Quarters.
- (16) Teaching the use of pise de Terre, rammed-earth or Stabilized earth construction.

} In co-
 } opera-
 } tion with
 } Depart-
 } ment of
 } Agriculture.

Literacy classes have been held in four language areas, e.g. Kassena, Mamprusi, Dagomba and Dagarti. A most valuable feature of this programme has been the advanced literacy classes held at the Rural Training Centre, Tamale. The procedure has been as follows:-

Members of classes in the villages have been informed that all of those who succeed in obtaining a literacy certificate may attend a course of advanced study at the Rural Training Centre. This has served as an incentive.

After Literacy Day in a tribal area (language groups dictate staff requirements for each Rural Training Centre course) those who voluntarily come forward are transported from a central point to the Rural Training Centre at Departmental expense. At the Centre they are fed well-balanced meals at the Department's expense. The average cost per person per day is 2/-.

2 1/2 /.....The course

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The course of study which occupies half of each day covers advanced vernacular reading and writing, arithmetic, lectures on the various extension aims of technical Departments, e.g. Animal Health, Agriculture, Forestry, Medical, Sanitation and Local Government.

A portion of each day is assigned to projects at the Centre with the view of teaching the new-literates new building techniques - e.g. rammed or stabilized earth construction. In this way the men learn by doing and the Rural Training Centre obtains an additional building.

Sports, dramas and cinema shows in the late afternoons and evenings afford relaxation and pleasure and teach team spirit.

At the conclusion of the course which lasts one month the Literacy Certificates are endorsed and returned to the student. Departmental Transport return the students to the original central point in their own area.

The above method has been used repeatedly with great success. Lack of staff for the Rural Training Centre priority given to the School building programme this year hinders us from conducting courses this dry season.

In my opinion the work which will benefit the Region most and in the long-run produce more village improvement of all categories is the work we do in co-operation with the Agriculture, Animal Health, Forestry, Education and Rural Water Development Departments. By raising the standard of living, giving cash crops, water and firewood we will provide additional income part of which will be used to improve housing, roads, markets, etc. At the moment, not less than 75 $\frac{1}{2}$ % of all capital works is a grant-in-aid from the Central Government. The Local Councils should produce more funds for their own improvements. I should like to illustrate this by describing a project which if multiplied a thousand fold would completely change the economy of the North.

In 1951 when our first group of Mass Education Assistants was about to leave the Rural Training Centre for field work we decided the first effort should be made well off the beaten track. There, unobserved, we wanted our men to cut their teeth. The preliminary survey was undertaken by the Community Development Officer and a few of his new staff. The general area for the Dagomba team was a triangle Ziong-Nanton-Tampiong. The survey revealed the greatest needs to be (1) Water and (2) Communications - roads.

The people of Tampiong and surrounding villages walked as much as eight miles to obtain water in the height of the dry season. In the

rainy season the amount of water was so great that they and their market were cut off for as much as six months from Tamale by a swamp west of their town.

The survey revealed that the people had no plans whatsoever of improving their economic situation so the survey team asked the Chief, Elders and people what they would suggest should be done in order to assist them to earn more money. They had no idea, so the team suggested a new crop and better methods of cultivating old crops. The people of Tampiong were more receptive to these suggestions than the other two towns.

The Community Development Officer promised the people to see if experts of the Agriculture Department and Rural Water Development would come and make a survey. The Assistant Directors, first, and subsequently other Senior Officers of these Departments liberally gave of their time and advice; and finally, of equipment and staff to bring the project to a successful conclusion.

The Assistant Director of Rural Water Development agreed to change from the original plan of putting a 100 yard square excavated tank on the side of a slope to a scheme of excavating the very bottom of the swamp and making an earthen dam across the valley with the top of the dam leveled to form an all year road-way. The people of the town and the Community Development Officer promised to construct a spillway and diversion channel to the specifications of the Engineers of the Department of Rural Water Development. The Local Council Development Committee promised the required cement for the project.

The Assistant Director of Agriculture and his senior staff thought the swamp below the dam would make a good rice field. They promised to do the necessary surveying for ploughing, and harrowing. The people agreed to stump the area and remove the stones; put up the necessary bunds, plant, cultivate, and harvest the rice. The Community Development Officer promised, with Local Community Development Committee financial assistance, to put a 6" pipe and valve through the wall of the dam so that water from the dam might be used to irrigate the rice.

The people of the village built a rest house to accommodate Senior Officers if it were found necessary for them to remain overnight during the construction of the dam and rice scheme. The Government Agent supplied cement for floors and timber for doors. Communal labour was not a problem as the people realized the benefit which was to accrue to them - especially in reference to the water. The rice field work was shared amongst those families which were to have the rice at harvest. Some families were not at all interested in a new crop.

The whole scheme was completed during the dry season of 1951-1952. The dam is one of the best of its kind in the North. The spillway has proved to be adequate even for such unusually heavy rainfall seasons as this last one. Eight and one half acres of rice were planted, harvested and the crop sold. The participants were extremely pleased when each received his portion of cash. Their experience gave the lie to all the evil propaganda spread around by opponents of the scheme. Some of the lies were, "The white man is using this as a trick to obtain your land", or, "The chief will make you work hard and take all of the cash" or, "You do not know anything about growing rice. Your fathers never planted it. Why should you?"

The Fisheries Department brought various kinds of fish and stocked the dam. Some eat the mosquito larvae, others eat the snails which are hosts to the Bilharzia worms. Now there is fish in the dam, whilst during the rains teal fly in by hundreds and live in the reeds. The young boys snare the teal and thus have an addition to their diet. During the dry season gardens of tomatoes, spinach and ochre can be seen in the fields near the irrigation valve.

Each succeeding year the rice farmers have paid the Agriculture Department the sum of £2.10/- per acre for ploughing and harrowing. Last year a new area was set out to rice so that the acreage has more than doubled in this town. The demand is for further extension.

Another development in this town has been in getting the chief to accept contour ploughing for one of his farms near his compound. The Agriculture Department made the survey lines for eight acres on a slope. The Community Development Officer with the aid of a Ferguson Tractor and Staff of Union Trading Company had the area ploughed. About 30 tons of manure gathered by the chief's young men from all parts of the town were spread on certain fields, while other fields were left without manure to give a lesson by comparison. Wide grass strips between fields on the contour were left uncultivated to take care of run-off of water and to avoid erosion. "This wasteful use of land", as the chief called it, was the hardest item of the project for him to accept. Now after the second year he understands and appreciates these grass strips. His crops last year were the best he has ever had. He is very enthusiastic.

The chief and people are extremely keen to have a school and would provide all of the labour free. The District Council which controls the allocation of school money and determines where and when schools shall be built have listed the town for a school in the indefinite future.

What has now become a major and special activity of the Department in this Region is the erection of primary schools for Local Councils with funds provided by the Education Department.

A campaign of propaganda geared to educating the villagers on the value of schools has been carried on by the Staff of the Department in several areas. Vernacular posters on the subject have been produced by the Tamale branch of Vernacular Literature Bureau. Dramas, puppet shows, discussion groups have all had a part in the campaign to show why children should go to school and why a community should take part in erecting its own school building.

We have now been offered as many schools as we can hope to cope with this coming year. The successfully deal with the demands more Works Supervisors and Technical Instructors are required. The following is a summary of the programme to date:-

February, 1955 - £1,500 made available by Department of Education to erect a workshop, buy timber for seasoning and purchase of small equipment. By the end of the financial year 31st March, 1955, the workshop was practically complete, timber was on hand but not the full quantity desired. A revote of £222. 0. 2d. has been used to bring up the timber stock to a safe margin.

February, 1955 - £1,250 was given by the Department of Education toward an experimental effort in school building - 3 classrooms office and store at Pong-Tamale. The amount of communal labour was disappointing. The Dagombas did nothing. The labour which came forward were employees of the Animal Health station who worked late afternoons and Saturdays.

Busunu School - a one-room extension. This school served as a training project for the staff of this Department. The project served its purpose for us in providing practical experience for our staff.

Demon (Dagomba East) and Doba (Navrongo) are two classroom schools, with office and store. The labour is paid.

Gbedema (Builisa) one-room addition. Here communal labour has made all of the block and assisted artisans (paid) in erecting the walls.

Fielmon (Tumu) two -room, office and store. Here the people worked with a will and made all of the block required in record time. The walls are not up to plate level. This is the best effort to date.

There are five more schools with communal labour promised on our list. Work of making block has begun at three of them. There are four more schools likely to come up before this paper is read.

As we prove the Local Councils that more can be obtained for their money by using the services of the Department I expect more work of this nature turned our way.

Several other buildings, such as clinics, markets and latrines which we have erected at great saving to Local Councils have done much to convince them that we can do excellent work with reasonable speed.

Navrongo area serves to illustrate how the Department in co-operation with others attempts to improve a community.

In the same year that the Tampiong scheme was being launched the Kassena team in Navrongo was specializing in wells. If a man and his family or a group of families dug a well, found water, gathered stone and sand a member of the team would come and assist in lining the well and putting on a concrete top and apron. The Local Community Development Committee provided the cement.

The next step was to teach each household which owned such a well to plant fruit trees nearby and most important a dry season garden. The Mass Education Officer, Mr. Salaam, taught them how to plant their millet as a fence around the garden site and when harvest time come not to cut down the stalks but only the head. Then by taking other stalks from other parts of the field weave these amongst the standing stalks thus forming a fence to keep out fowls and animals. It works remarkably well.

The following year saw the revival of rice farming in the same area. The original scheme had been abandoned due to a number of misunderstandings. The next year, in co-operation with the Department of Agriculture many kraals were built by using stabilized earth and the making of manure introduced. The whole programme from the sinking of the first well to the present gardens, kraals, manure-making contributes to a better standard of living and a greater income.

I should like to mention here that the greatest achievement in any programme such as those mentioned above, is not the completion of the actual project itself, as much as it is the changing the pattern of thinking and working of a community. If we can succeed in getting a group of people to change from a divided listless community to one with vision and desire to work together to solve a community problem then the actual project is merely a laboratory to see how their ideas work out. The successful completion of one project leaves them with a desire to tackle another. There is no limit to which such a community may set its sights.

Present projects include the schools already mentioned, a child clinic, at least two general clinics, three leprosy clinics, police quarters, two neighbourhood centres, several markets, a teacher's house, roads, culverts, wells, etc.

For the future I should like to see if men with Agriculture experience could be sent out under the Haverford College - Ford Foundation plan to work with us and the Agriculture Department in rice extension schemes in Tamale and Lawra Districts. The usefulness of this crop has now caught the imagination of young men and the demands for help are greater than can be met.

The acreage now under cultivation in co-operation with the Agriculture Department has multiplied greatly. But this is not all. There are scores of acres of rice planted independently and which fall far short of what they should be. Even the fields planted with the aid of Agriculture Department and ourselves are not up to standard. The rice farmers require more instruction. There is also great need in the Region for vocational training so that we may have village masons and carpenters. But the significant thing is that community effort is now recognized in most areas as the logical approach to the many existing problems and success in any particular instance leads to new needs to be satisfied.

The distances in the North are so great that our Department transport cannot cope with the needs of the Region. It is 250 miles to Lawra from Tamale. I strongly recommend that each Mass Education Officer in charge of a District should have a 25-cwt. lorry to move personnel and equipment about.

The Rural Training Centre, Tamale, should have staff to keep it fully occupied. There should also be two subsidiary Rural Training Centre with staff - one in the North-East and the other in the North-West.

AGRICULTURAL EXTENSION WORK IN THE NORTHERN TERRITORIES
MR. J. A. A. SALAAM

The Northern Territories of the Gold Coast cover an area of 34,303 with a population of just over a million, is made up of 8 District Council areas and some 20 tribes, all of them at different stages of development. The vegetation is Savana forest of varying density with closed fringing forest along the banks of the many rivers and streams. The climate is characterized by a distinct division into dry and wet season: the dry season lasting from November to April and the wet season from mid-April till October. Over a majority of the area the annual rain fall is between 45 and 60 ins., practically all falling during the rainy season.

Although local industries of various kinds are practised throughout the whole area, the prevailing economy is subsistence economy and the Census returns for 1948 shows that 90% of the men engage in farming. The crops include rice, millet, guinea corn, maize, yams, groundnuts, potatoes,

and a large variety of vegetables. Large numbers of cattle, sheep, goats and poultry are reared and many exported to the South annually. The chief implement has been the hoe and the method of farming shifting cultivation.

With the population increasing and land growing scarce, a better way of farming had to be found and it was during the early thirties that the Department of Agriculture started experiments in mixed Farming. Agricultural Stations and many demonstration farms were established in many parts of the country. Kraals were built, farmyard manure made, crops planted on rotation basis, bullocks trained and used in ploughing and the plough introduced. Here chiefs, elders and farmers were encouraged to visit to see what was being done. They were advised and encouraged to buy ploughs, buy bullocks and have them trained, and to make manure.

There was a period of intensive propaganda in showing the advantages of mixed farming as opposed to the old method.

Like all new ideas among a peasant community, especially that which affected their age-old methods of doing things, the idea spread slowly, but caught on and at present there are many mixed Farmers.

The set-up at present is that each agricultural district has an agricultural officer at an agricultural station. In each agricultural district there are several demonstration farms now run by local authority personnel under the general supervision of the agricultural officer.

Below the agricultural officer are the agricultural assistants, agricultural instructors and demonstrators. The agricultural assistants are government junior officers who work at the Agricultural Stations, supervise the Agricultural Instructors and demonstrators, do district extension work in Mixed farming, Rice schemes and vegetable gardening.

The Agricultural Instructors are local authority employees and work either in the demonstration farms or among a group of villages. The itinerant demonstrators are also local authority employees and work under the Agricultural Instructors. They train bullocks, teach people to use the plough and see that the kraals are in good order and manure is being made in the proper way.

It will be observed that the Agricultural Assistants but especially the Agricultural Instructors and the demonstrators who do the actual extension work among the people.

In the Northern Territories the Agricultural Instructors are trained for 2 years at the Central Agricultural Station, Nyankpala, after completion

31/....of their

of their Middle School course. They are posted to their local authority areas, where they are either attached to Demonstration farms or given charge of a number of villages, advising, encouraging and helping the people with their farm work and problems, especially in the matter of making manure and practising Mixed Farming, explaining the department's policy and dealing with other matters pertaining to farming practice. It will be seen that the Instructors are very important as they form vanguard of the department's extension personnel; and the success or failure of the Scheme depends to a great extent on them. As such they must be mature and have certain qualities.

Unfortunately, the type and quality of the Instructors at present are not of the type to do any extension work effectively, and I have known Agriculture Officers who have complained bitterly about their Instructors.

Mr. M.L. Winson in "Farmers of the World" writes - "Extension means better homes and better farms to feed, clothe and strengthen the nation". Elsewhere, it is defined as helping rural families apply science to the day to day routine of farming, home-making and other aspects of rural living. It will be observed that the extension worker does things which affect almost all phases of life of the community.

In spite of the work of these State-centred agencies, there are many unpaid local leaders who assist extension workers in stimulating rural people to make greater use of their resources. In the British Colonies, the Agricultural Department does this work.

Between 1898 and 1911 the foundation of Extension Service of the United States Department of Agriculture was laid, and it sought to awaken the rural people by means of demonstrations on their farms and in their homes, and communities. There are also the State Agricultural Colleges and the State Agricultural Experimental Stations which have to do with extension work in the United States of America. The Colleges through their research and extension services have taken education to the people and have done a great for the people.

The extension worker is of keen importance in this. After the necessary experiments and trials, the new idea has to be put across and this is generally not going to be taken easily and lightly by the peasant for a variety of reasons - fear and suspicion, superstition, desire to preserve old life, vested interest, apathy, ignorance. Hence the need for such a person who should live and work among the people, interest himself in their problems, identify himself with them; and gain their confidence. He has to study their way of life generally and work among the people with an attitude of friendship and humility towards them.

INTER-DEPARTMENTAL CO-OPERATION AND CO-ORDINATION:

As far as this section of our department is concerned we are Jack-of-all trade and master of none. You cannot specifically lay down the jobs we do, though our previous Director has simplified this by saying that we are the extension arm of other Government Departments and, as such, aid them to do some of their work more effectively.

It is only by proper inter-departmental co-operation and co-ordination can we make any great impression. There is no doubt that there has been much talk of inter-departmental co-operation and co-ordination at high level, but it seems from my experience that the idea has not permeated to the lower ranks. Even at higher level, some people have had to accept this idea because they had no choice. There is such a thing as departmental jealousy and perhaps that is one of the obstacles.

I feel that all Government departments and officers should work together as a team at all levels and not in departmental water tight compartments.

One cannot run away from the fact that there has not been sufficient co-operation between us and the Agricultural Department, for this reason the Senior Staff conference of the Departments of Agriculture and Forestry and ourselves held at Tamale early this year was of the greatest importance. If the ideas we exchanged and the ideals we set as our goal could be achieved (and these are not beyond achievement) our activities will increase and expand. A note on the importance of co-operation was counted in the Foreward of "Advance" for April, 1955. "Already in one part of the country, a new system has been proved and introduced, the use of the plough drawn by bullocks whose manure is used to maintain the fertility of the ground. A system of improved rice farming new to this country has also been introduced. Both these systems greatly increase the wealth of the farmer.

It is here we meet a difficulty if we walk alone. For unless a farmer knows what to do with wealth, he is not interested in our new methods and we make little progress. It is here that the country derives such great benefit from the activities of the Department of Social Welfare and Community Development for they co-ordinate and encourage and develop the other aspects of community life making the community a balanced whole. Thus the farmer is shown the benefits to be gained by wealth - the new roads, the improved water supply and the dispensary. It is with the assistance of the Mass Education teams that the most rapid progress in the various fields of our extension work has been made. So you can understand why the Department of Agriculture

is happy to take this opportunity of hoping that the Department of Social Welfare and Community Development can extend its activities and of wishing it continued success".

There is no doubt that in the South, the cocoa campaign is showing what can happen if departments co-operate.

In Kenya District Teams, made up of leading officials and un-officials meet together to discuss matters of policy and ways and means of getting things done. Similar meeting together of officers working in the North reduce friction and lead to concerted action.

Against this background, I wish us to examine some of the things we do and our problems.

KADZELO RICE SCHEME:

Kadzelo is a section of a village in the Dederero-Tankara Land Planning area. The soil there had been very badly used and impoverished by poor farming methods and over-cultivation. The Soil Conservation Section of the Department of Agriculture went to work there some 8 years ago to improve the soil. Many dams were dug, contour bunds made with machinery, and special grass grown. A rice scheme of some 8 acres was made for the people. In the first year the Department did almost everything for the people and the yield was heavy and every one was happy. In the second year the people were asked to run the scheme themselves with advice from the Department's Staff. More people were to be brought from elsewhere to share in the scheme. The people objected.

The farmers were ordered to clean the farms at a most inconvenient time and after much difficulty the work was done. When it was sowing time, the people were told they would be taught a better method; the seedlings would be nursed before transplanting. To this the people stood firm and refused to do anything. There was a conference with the officers. They would not listen to the people's argument, but ordered "Either you do it the way we want you to do it, OR.....". The people were as stubborn and retorted "We will not; we were growing rice long before you came, you can remove your machines and bunds away". Shocked and infuriated at this affront, the officers trooped back to their cars swearing to have nothing to do with the people and their rice scheme. That year the scheme failed and the officers thought the people had been taught a lesson. The following year I was posted to that area and was told among other things, to revive the rice scheme. I set some of my Mass Education Assistants at work and went to work myself. We discovered that there were 27 people working the 8-acre Scheme: about $1/3$ ($\frac{1}{3}$) acre per person, and objected to the number being increased

by outsiders. Furthermore we found that they never nurse and transplant their seedlings because the seedlings needed to be transplanted at a time when they would be most busy on their main crop (millet and Guinea Corn) farms and no force could get them off their farms then. Their objections were reasonable and we served as an intermediary between them and the Agricultural Department and they had a very good yield that year. The following year (1954) I was away and a new Agricultural Officer with different ideas came in just when I was leaving and started the trouble all over again. He first gave them sterile seeds (not deliberately) and when weeds grew instead of rice seedlings he tried to force them to leave their other more urgent farm work to weed before he gave them seeds again!

I think there is a world of difference in the response one will get in the strong-arm "do it as I tell you or....." method and our human approach, that is the reason why we are more successful in our dealings with the people generally.

An important part of our work is to teach the people to be self-reliant by getting near them, understanding their problems and leading them gradually to think out solutions to their problems, and that is what we try to do.

VEGETABLE GARDENS:

In the Navrongo area we help people to dig wells. When these are dug, we encourage them to make dry season vegetable gardens round them, and to put up a fence to protect the vegetables from cattle, sheep and goats. The people either nurse seeds got from the Agricultural Department or buy seedlings from them. These dry season gardens are a very important feature of the Paga-Kadzelo area and are popular. The people have been working hard and improving their diet and at the same time making money.

A few miles away in the same area, the Agriculture Department laid on a vegetable garden; ploughed and marked the garden, fenced it with barbed wire, supplied the gardeners with watering cans etc. and seedlings. There are considerable implications in the difference between getting the people to work on their own for themselves and doing the work for them.

EASTERN DAGOMBA:

In Demon, we have, together with the Department of Agriculture laid on a rice scheme, and also helped the people build kraals for their cattle and manure making. In Western Dagomba the Tampiong rice scheme success is too well-known for me to repeat here.

KRAAL BUILDING AND MANURE MAKING CAMPAIGN AT KADZELO:

One of the essentials of mixed farming is manure making, and the Agricultural Department asked us to help them with kraal building and manure making at Kadzelo. I may mention that there has been resident here an Agricultural instructor for many years, and there were no mixed farmers among the villagers.

Various groups of people were met and by the use of posters, puppet shows, drama, cinema show and discussions the whole idea was put across. Individuals were contacted and the response was encouraging. The Agricultural Department provided cement and transport and our staff helped the people building the kraals in rammed earth.

There has been a similar kraal building campaign in the Eastern Dagomba and Nanumba areas, and there, like the Kadzelo area, there has been difficulty in getting the instructors to get the farmers to prepare bedding and use the kraal properly. We have had to step in to get the farmers to make proper use of the kraals.

The difference in the approach is the crucial factor in these projects. We approach the problem from the human angle, we find out the way in which we can convey the idea to them in the most interesting manner, and at the same time showing that we are working with them for their own interest. We listen to their point of view, argue and discuss with them in a friendly manner. We then try to persuade and convince them and not force them into doing what we want them to do.

The alternative approach of angle; "this method has been tried and found to be very good, practise it", creates suspicion and stimulates people to obstinate resistance.

The main emphasis in the North is on mixed farming and rice farming. Many people are coming to the realization of the benefits derived from the proper practice of mixed farming, and the widespread cultivation of rice and the good price for it in the market has made it a cash crop of great importance. To these must be added the conservation of natural resources, land, water and forests, and the drive to increase food production and cash crops. The various District Councils have Loan Schemes whereby farmers recommended by the Agricultural Officer can be given loans in the form of ploughs, bullocks and carts and the loans are repaid by annual instalments.

Up in Kusasi, a great experiment has succeeded in the establishment and satisfactory working of the Kusasi Agricultural Development Co-operative Society, which helps members to buy ploughs, bullocks, chains and carts. It buys and markets the groundnuts for members. The Society buys the groundnuts of members during harvest time

at the current price. The groundnuts are stored by the Society and sold by tender when groundnuts are most scarce and expensive. After deducting overhead and transport expenses the balance is placed in the owner's credit.

Another Co-operative Society is being formed in the Navrongo area.

There is no doubt that as more people take up more efficient methods of farming there will be more foodstuffs available thereby allowing greater quantities to be sent to the markets, thus bringing in more money. This will call for training in how to make the best use of the extra money earned.

The general aim of government is to improve Village life and the health and the general well-being of the people. This can be achieved through the more economic utilization of available natural resources and through the adoption of modern methods of farming and animal husbandry. Thus economic development is valued as a necessary foundation for social betterment, and in practice, social betterment or welfare is defined very largely in terms of materials progress in providing more and better schools, hospitals, houses etc.

Agricultural extension work is primarily the work of Agricultural Department, but the nature of our work is such that (and I have shown that with proper co-operation on the part of the Agricultural Department), we can do a lot to enhance, indeed accelerate, the progress of the peasant (rural) communities.

We live and work with the people and approach them with all the sympathy and understanding that create good-will, and therefore, good response. They trust us and have great confidence in us.

Our main task will be, as has been, apart from undertaking definite campaigns such as kraal building and manure making, we should, as we have, in the course of our work, whether it be literacy classes, project work such as well digging, kraal making, road building, latrine building, or at discussions, cinema shows, games etc. try to bring across the subject in a simple interesting way. We cannot ignore personal contacts of individuals or families in their homes. We cannot help making use of local cases of success, because the people can see the differences and these can be impressive, for seeing is believing. Thus a few years ago, much publicity was given to Ayi, a successful mixed farmer in Navrongo. There were posters of him at work on his farm and at home with captions in the Vernacular and English; there were articles about him in the Gold Coast Bulletin and the Vernacular newspaper etc. He was a wealthy and happy member of the community. He attributed his wealth and happiness to his success as a practical mixed farmer.

Who does not want to be wealthy and happy? There are films such as "Fusseni's Cash Crop", "Musa the Mixed Farmer", and a new one "Awuni's vegetables", all putting across new ideas or emphasizing good old ones.

I have mentioned demonstration farms which I said were very popular in the early days of the introduction of mixed farming.

I am not so sure if they still are. In some cases, despite all the manure applied, rotation of crops and the use of the plough, they are a poor contrast to the farms nearby of ordinary farmers using age-old methods!

Our primary problem is lack of continuity and properly planned follow-up. We move from place to place and we have a lot of other things to do. In the United States when the extension workers and Demonstration teams have moved away, the follow-up is carried on by voluntary leaders among the communities, thus continuity is maintained. Our people have yet to know what voluntary service to the Community means. What happened in Greece before the advent of Hitler's invasion was that the community agriculturalists were responsible for not more than 5 to 6 villages; they lived with the people they served, and interested themselves in all phases of village betterment, and did not confine themselves solely to the question of agricultural improvement; they maintained a sympathetic and understanding relationship with the peasants and they promoted only those practices which were well-established for the locality. By this method the new extension system moved forward into constructive effort.

This is the role that we have to play, and are indeed playing though as yet on a smaller scale.

There is without doubt that in many of these schemes the personality of one or two people makes all the difference for better or for worse. That is why, little headway has been made at Kadzelo with mixed farming because the people would practically have nothing to do with the instructor. Instead they came to mass education assistants asking them to arrange for loans of ploughs and bullocks, seed rice and vegetables.

It would be advantageous for courses to be organized locally in each district where we operate for our mass education assistants and the agricultural staff at which the question of co-ordination and co-operation will be stressed.

I remember the case of an agricultural instructor in whose area we were building kraals, encouraging the farmers to make manure etc. accusing us of trying to keep him out of his job. It was not until I had explained to him that more kraals and much manure meant more mixed farmers and more mixed

farmers meant more, rather than less, work for him!

Until this idea of inter-dependence is understood much effort will be wasted.

LOCAL GOVERNMENT CAMPAIGNS
MR. A.I.K. QUAINOO

The Mass Education and Community Development section of our Department is developing more and more into an extension service for other Departments of Government. That this should be so is inevitable, since the Department has gained and developed that special technique of reaching down to the village at ground root level. Thus it was that a few months ago, the Department was asked by the Ministry of Local Government to undertake a special country-wide extension campaign on its behalf. The theme of the Campaign was "The necessity for the payment of rates if sound Local Government was to be established"; in other words that sound Local Government was impossible without payment of rates. It was to bring home to everybody in the Gold Coast the need to pay the rates imposed by their Councils and so enable the Councils to provide the Local Services and improvements required by the people.

In order to run this campaign successful which was new to nearly all members of staff, it was necessary to train Staff and to re-orientate them. They needed to know, all about the Local Government set-up; the principles of Local Government and the machinery of Government; the needs of the Council areas and their financial positions. It was necessary for them to know the local councillors and to learn how to co-operate with them to the best advantage. To these ends training courses were run in those Regions where the Campaign was to be conducted. (The Western, Eastern, Accra and the Trans-Volta/Togoland Regions).

These Courses were joint efforts by the Ministry of Local Government, the Regional Organisations and the Department of Social Welfare and Community Development.

In general, the officers of the Ministry of Local Government provided background information, leaving it to the officers of the regional organisation, in the course of their lectures and in seminars to provide particular information about Councils in the respective regions. The Department of Social Welfare and Community Development had the special function of teaching the students the techniques and methods of successfully "putting across" the knowledge of Local Authority problems which would be acquired.

Things studied were:-

SUBJECT	PERIOD (HRS.)	LECTURERS:
1. The Relation of the present Local Government system to Native Authority System.	1	Ministry
2. The need for a sound Local Government System.	1	Regional Organisation.
3. The Meaning of Local Government	2	Ministry
4. The Structure of Local Government in the Gold Coast.	11	Ministry & Regional Organisation.
5. How Local Councils are established	2	Ministry.
6. and Function of Local Authorities and their limitation	2	Ministry & Regional Organisation.
7. <u>Revenue of Local Authorities:</u>	4	Ministry & Regional Organisation.
a) Present sources, Legal powers to impose basic and special rates.		
b) Method of collection of rates.		
c) Regional difficulties over collection		
d) Possible introduction of a property rating system and its difficulties.		
8. <u>Expenditure of Local Authorities:</u>	5	Ministry & Regional Organisation.
a) Preparation of Estimates - main principles only.		
b) The Finance and Staff Committee		
c) Authority for Expenditure		

SUBJECT	PERIOD (HRS.)	LECTURES
d) Method of making expenditure		
e) Main types of expenditure		
9. <u>Meetings Procedure of L/Authorities:</u>	2	Ministry & Regional Organisation.
a) Calling of Meetings - attendance by public at a meetings.		
b) Procedure at meetings - method of making decisions and making up decisions.		
10. Officers and Staff of L/Authorities	1	Ministry.
11. Responsibilities of L/Authorities for maintenance of Traditional Authorities.	1	Regional Organisation.
12. Problems of Operation of Local Authorities.	1	Reg. Organisation.
13. Visual Aids - their preparation and use:-		
a) Charts and Posters	2	Social Welfare & C.D.
b) Discussion Sheets and hand-outs	4	
c) Simple Village Drama	12	
d) Cinema	2	
14. Student Lectures - Practice talks by Students on the theme of the Campaign and use of techniques for getting across the message.		
15. Campaign Procedure.	1	Social Welfare & C.D.

Each period was divided into two sections. The first half was taken by instructors who introduced the subject for discussion, linking it with previous lectures and opening avenues for discussions. The second half of

the period was opened to discussion led by the instructor with as many contributions from the members of the class as possible. Afternoons were occupied in seminars and group discussions, properly planned, the class being required to discuss, criticize and investigate the work done during the morning periods.

All work had to be reduced to very simple terms and to be as practical as possible.

The problems discussed by Staff during the Course were:

Lack of knowledge of Local Government machinery. The average man in the village did not understand why Local Councils existed at all, nor why he must pay money to "Clerks" in the towns who "Chopped" all the money.

Councillors did not appear to know their villages - the area, the people, their troubles.

Lack of adequate propaganda and publicity reaching down to the village level on the need for money by Councils and the use to which such funds are put.

Lack of contact between the people and their Councils.

Resentment to Council and Council Staff caused by attitude and behaviour of some Councillors and Council officials.

Rate collectors with fixed salaries, whether they collected anything or not. The Campaign period was, in most cases, the first time when the rate collector actually went round and had money collected. Examples were found of rate collectors who could not care less.

The mis-use of Council funds by irresponsible Councillors and officers.

Lack of development projects and other amenities which people could see as a result of what has been done with their money.

At the end of the Staff Course, meetings were held with clerks of councils and chairmen of staff and finance committees and the rate collectors at district headquarters. At these meetings, with the government agents as chairmen, community development officers explained the campaign procedure, were given local information in respect of the Councils, and opened discussions on the part that would be played by clerks of councils and councillors and rate collectors. At this meeting also the Community Development Officer found out:-

All the Local Council Areas and their Headquarters.

All the preparation that Councils had made for the collection of rates in their areas.

The amount to be paid by each person, and the effective dates of collection.

The wards where collection was - a) Best
b) Poor.

The wards in the Council areas, their respective Councillors and their addresses.

The Campaign:

After the training course a Broadcast Talk was given by the Minister to open the Campaign. Copies of this broadcast were made available in the vernaculars for wide and free distribution.

This talk was followed up by departmental officers going out into the field in teams. One-Day Schools were held with councillors, chiefs and elders and other notables present; these were followed by public rallies.

Every single village in the Council area was visited, ward by ward. The teams were generally accompanied by the councillor of the ward and, where desirable, by the rate collector who was armed with his receipt book, ready to accept rates if people were stimulated to pay their rates on the spot. In some cases, the rate collector came at a later date after the ground had been prepared by the mass education team. In a few cases, the presence of the rate collectors brought trouble. This was traced down to the character and behaviour of the collectors in past times. Where the collector was a 'servant' he was accepted; where he was 'master of all he surveyed' it always invariably resulted in trouble. There were stories of collectors being beaten up.

Cinema vans went ahead of the team and showed films that stirred people and got them talking. Some villages started payment of their rates just after seeing the Cinema shows. Nobody before had ever explained to them in such lucid terms why "Lempo" was collected from them. In very many cases collection days were arranged when the village folk, headed by the Chief and elders, lined up to pay their rates. Others walked miles to council headquarters to pay to the treasurer direct, because they did not know who their collector was. Others expressed the wish to pay to the mass education people whom they knew, and not to council officials who were unknown. There also were examples where a few men declared that they had now understood why rates must be paid. They formerly refused to pay. Now they had come to pay not only for themselves, but for their wives too, and not only for the current year, but for all the years they had formerly refused to pay. One of these men paid £8 on the spot.

A village which formerly did not understand payment of rates and was unwilling to pay rallied round the rate collector after they had seen a simple Folk drama on "Unity is Strength", presented by a mass education team.

The campaign mounted up in intensity as publicity increased. Success in 'easy' villages spread very quickly around; it bred success in doubting villages and helped to break down some opposition.

Mass education workers were invited by villages which thought they were being by-passed. Councillors caught the spirit and were encouraged to come out more openly into their wards, seeking every opportunity to give us help. Money flowed in into Council chests at an unprecedented pace. Where before there was £8, now it was £400; £4,000 became £18,000; £600 became £1,700; £100 became £1,500 - on the whole the rate of collection of money was very much improved.

The campaign was so successful that there cropped up a case where two unscrupulous young men took advantage of the wave of enthusiasm and the popularity of the campaign and collected money for themselves. They posed as collectors and collected money in advance of the arrival of the team. The villagers were astonished when the real collector appeared at a later time and asked for payments. They rushed into their houses and brought their "receipts" out. On these receipts were written "who was the mother of Jesus". No signature, nothing. The culprits had never been traced.

There were difficulties, and these particularly in the big towns. In one town the people declared that they understood the need for payment of rates; they were willing to pay, but they would not pay until a nominal roll must be prepared and put up for public inspection, because they were sure that "natives" did not pay while "strangers" always paid, that the councillors stopped misusing and misappropriating Council funds, that a refund into chest must be made by councillors who had been surcharged.

Money which ratepayers paid out of their hard-earned wages, they said, must be properly used by the Council for the benefit of all, and not find its way into irresponsible councillors' pockets by funny ways.

There were other objections - mainly for political reasons, chieftaincy disputes, lack of amenities in Council areas, objection to the personality of the rate collector and or the councillor himself.

Assessing the results of the campaign is a difficult job. The immediate result was very satisfactory. More money was collected than ever before; in some cases the collection in the 3 months of the campaign exceeded by far the total collected during the previous year. The campaign also brought the councillors more into contact with the people.

Councillors knew their wards better, understood their people and their troubles better. The people also understood their responsibilities better and much was learnt by councillors, council officials and people about the place of the Council in relation to public services. The other, non-apparent result, is what happens in the future when there are no campaigns. Has the ordinary man and woman got the message of this campaign so much ingrained in him or her in the three months of the campaign that he or she will pay his or her rate easily without a campaign in the future as during the campaign in the past?

HEALTH EDUCATION IN TRANS-VOLTA/TOGOLAND
DURING 1955
MISS T. SPENS

During 1955 various experiments in education have been carried out in the Trans-Volta/Togoland Region, in addition to normal health activities, in which several Government Departments have been concerned. Health training has also been given to voluntary leaders. At Regional level there has been close co-operation between officers of the Ministry of Health (including the Medical Officer i/c Medical Field Units, Trans-Volta/Togoland and the Health Superintendent) the Asst. Director of Education, the Community Development Officer and a representative of the Red Cross. This paper give an account of these activities and of certain general issues which, as a result of experience gained, appear to be important.

Early in the year the Ministry of Health circulated a list of priorities for health measures throughout the country which was as follows:-

- (i) Water supply - dangers of faecal contamination, etc.
- (ii) Night soil disposal - construction of latrines, etc.
- (iii) Refuse disposal.
- (iv) Personal hygiene.
- (v) Foodhygiene.
- (vi) Mosquito control.
- (vii) Housing - ventilation rat-proofing etc.
- (viii) Nutrition.
- (ix) Maternal and child welfare.
- (x) General principles - village layouts, etc.

It was emphasised that the subjects were not necessarily shown in strict order of priority. For example, maternal and child welfare was of special importance as the family unit was in the centre of all health improvement schemes. In addition, adaptations would be necessary to suit local circumstances. In T.V.T. the seven main endemic diseases are yaws, leprosy, bilharzia, guinea worm, malaria, onchocerciasis and trypanosomiasis. In framing health teaching priorities these have been borne in mind, as also have requests from Medical Officers in charge of hospitals. Another consideration has been the fact that full advantage is not yet being taken of available health and medical services.

In all health education activities the aim has been to give information to individuals and communities in such a way that they themselves will realise the need for health measures and act accordingly.

During 1955 health education activities in the Region have included the following:-

- (i) Health teaching, as part of their normal duties, by qualified staff of the Ministry of Health.
- (ii) Health teaching to school children, as part of the school syllabus, by school teachers. Extra-Curricular activities by Junior Red Cross Links.
- (iii) Health teaching in the rural areas by members of the Department of Social Welfare and Community Development.
- (iv) Two major Health Campaigns undertaken jointly by staff of the Medical Field Units and Community Development Department.
- (v) Special courses of health instruction for voluntary village leaders.

Health teaching by qualified staff of the Ministry of Health

Clearly the contribution of first importance in this field is that which can be made by the professional health workers such as doctors, nurses, health visitors, midwives and dispensers in their relationship with individual patients and, especially where home visits are undertaken, with the family and community. In addition it is the duty of specially trained health staff including the Health Superintendent, Health Inspectors and Sanitary Overseers, and the Superintendent and staff of the Kpandu Health Centre, to spread a knowledge of preventive health measures amongst the people of the towns and villages for which they are responsible. The staff of the Medical Field Units are also required to give preventive teaching when they survey and treat the seven endemic diseases with which they are concerned.

The qualified health workers are the key-stone of health education in the Region but encouragement is given to the supplementary efforts of non-professional workers for reasons which include the following:-

- (i) Owing to local beliefs concerning the cause of sickness, and to the long distances to be travelled, there is still a reluctance on the part of many to approach qualified medical staff.
- (ii) The number of qualified health staff is limited and they cannot as yet, be in close touch with all communities.

(iii) It has been found that the concentrated campaign method is helpful (provided that a suitable follow-up is arranged) when a change in deep-rooted beliefs is necessary before new practices can be expected. To be effective a team is needed and, if the campaign is lasting for more than a short period, its members must be paid and disciplined staff. They must also be carefully trained. But it would be wasteful, in present circumstances, to staff the team entirely with qualified health workers for the very simple teaching which is required.

(iv) Where a change in traditional practice is necessary new teaching will often have a better chance of acceptance by the people if it comes to them through the natural leaders of opinion in the village. These informal teachers also have the advantage of being able to give guidance on health matters at appropriate moments in village everyday life, when interest is naturally aroused, rather than on special occasions.

Health teaching to school children

All schools are required to include teaching in hygiene within their syllabus. No health education is more important than the work of the school teacher in training children to have hygienic habits, for which they understand the reason, and if he does this successfully the need for elementary health teaching amongst adults will be considerably lessened in future.

Ideally, of course, this is a joint task for parent and teacher. But in present circumstances a frequent complaint by the teachers is that the child finds little support at home for the new ways he has learnt at school and often no possibility of putting them into practice. Even schools and their compounds do not always give practical expression to the teaching in the hygiene class. Both these problems are receiving attention. It is hoped that the teaching amongst adults, mentioned later in this paper, will supplement the work of the teacher and efforts are being made to ensure that all schools afford a healthy environment for the children, including the provision of adequate latrines and facilities for washing hands.

To enliven health teaching and to encourage the idea of service to others a number of schools has started Junior Red Cross Links during the year. This activity is entirely voluntary, both on the part of teachers and of pupils, and reference is made to the training of teachers as Red Cross leaders in a later section. Red Cross members are expected to practise simple rules of health,

to help in bringing better health to the communities in which they live and to serve other people particularly the sick and suffering. A popular activity is the production of health plays which are then performed in the village.

Health teaching by members of the Department of Social Welfare and Community Development

The staff of this Department endeavour to foster and assist the efforts of rural communities to achieve better living and consequently are concerned with the raising of standards of health.

During the year elementary training has been given to many of the staff including the Red Cross Practical Hygiene course to all women staff, and to all staff taking part in Health Campaigns. Some members of staff have also passed the Red Cross examinations in Practical First Aid or Practical Child Welfare. The limited extent of their health knowledge, and the importance of not exceeding it when teaching, is stressed in the training of these workers.

Health teaching activities by Community Development staff includes:-

- (i) Informal teaching and discussion in the villages.
- (ii) General teaching, including health teaching, according to an agreed syllabus to women's groups. The syllabus was drawn up by the Department and the health teaching it contains was submitted to the appropriate authority for approval. Whenever possible a qualified health worker is invited to talk to the women's groups.
- (iii) Health Campaigns (see following section)

Health Campaigns undertaken jointly by staff of the Medical Field Units and Community Development Dept.

At the request of the Medical Officer i/c Medical Field Units two major campaigns, financed by the Ministry of Health have been held during the year:

- (i) May - July 1955 (inclusive) Campaign in Tongu District against yaws, bilharzia and guinea worm.
- (ii) Nov. 1955-Jan. 1956 " Campaign in Krachi District against yaws, leprosy, tropical ulcers and scabies.

Campaign teams consist of six members: one member of the M.F.U. (who is a trained microscopist) and five Community Development staff including a woman).

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In both campaigns two teams have operated covering in all 24 villages; each team spending a week at a time in twelve villages.

Health Campaigns in this Region are essentially a joint operation.

The objectives of the campaign and the area to be covered are defined by the Medical Officer i/c Medical Field Units who gives special instruction to the teams in the diseases against which the campaign is being made. The Red Cross representative trains the team in general hygiene and assists the Community Development Officer in the planning of visual aids and the form the campaign should take. The exact teaching to be given by the staff is very carefully worked out and finally approved by the Medical Officer i/c Medical Field Units.

Each campaign has included an illustrated lesson on the causes of disease in general (to which reference is made in a later section) an exhibition on the cause and control of the specific diseases, and an "action meeting" of the whole Community at which decisions are taken on necessary action. The aim is not merely to achieve essential health measures in the village (e.g. an adequate supply of latrines) but rather to give the villagers the necessary knowledge so that they themselves demand these and are prepared to work for them. In the "action meeting" in the present campaign against yaws, leprosy, tropical ulcers and scabies the first requirement suggested by the villagers has, in every case and without prompting, been the provision of pit latrines to eliminate flies. The Community Development Officer has then made available, immediately, tools for use by communal labour. Other decisions as, for example, that the women should receive instruction on the cooking of balanced meals, are also made and immediately followed up.

In the Tongu Campaign 85 satisfactory pit latrines were under construction or completed at the end of the campaign. In the Krachi Campaign, where teaching methods and follow-up were improved as a result of experience, a faster pace has been set. In one month 44 latrines were started by communal labour and many of them completed. (This is an average of 5.5 latrines per village visited but the number of latrines, and the number of drop holes in each, naturally varies according to the population of each village.) Red Cross certificates certifying that the holder has been "active in bringing better health" to his village have been presented to the most active diggers on completion of work during a final Health Day celebration held in the village.

An equally important objective has been the encouragement of villagers to go for clinic or hospital treatment when necessary as otherwise the mass treatment work of the Medical Field Units is rapidly undone. A definite increase in the number

of patients reporting for yaws treatment from the villages under reference in the Tongu District has been reported by Medical Field Unit clinics.

Special courses of health instruction for Voluntary Village Leaders

During the year the following residential courses have been held:

<u>No. of Courses held</u>	<u>Length</u>	<u>Type</u>	<u>No. trained</u>
4	1 month	Leaders of Women's Groups	94
1	1 week	Elderly Women (including traditional birth attendants) <u>Experimental</u>	23
2	1 week	School teachers and Junior Red Cross Leaders	57
1	2 weeks	Village First Aid Workers	22

In many villages there are weekly meetings of women's groups or clubs. In their initial stages as many of these as possible are visited weekly by women Community Development instructors. The group then sends its selected leaders to a 1 month course in homecraft, hygiene, sewing, child care and teaching practice. On their return these women assist the Community Development worker and, after the leaves, themselves teach the group with only occasional visits from Community Development staff. The women are encouraged to bring their young children to the courses as this provides an excellent opportunity for practical teaching in child care and, especially, in correct feeding of infants and toddlers. Community Development staff report that most of the women are setting a real example in their villages since their return. The nutrition teaching is particularly popular: one important chief recently expressed his delight at the excellent meals now being prepared by his wife!

Early in the year it was agreed by a Joint Committee of the Ministry of Health and Department of Social Welfare and Community Development that an experimental course should be held for "women known to be practising midwifery unofficially in the villages and other women of influence in the community". No stipulation was made that the women attending should be traditional birth attendants but quite naturally the villagers themselves mainly selected such women to attend. Instruction, according to a syllabus provided by the Ministry of Health, was given in maternal and child care by a Health Visitor and in cookery and the making of children's clothes by a member of the Community Development staff. Emphasis was on cleanliness,

the recognition of abnormal signs and the need to seek qualified help. During daily discussion periods local beliefs and practices were freely explained by the women and submitted to the Health Visitor for her comments. Towards the end of the course these explanations were often profaced by an admission to the effect "Before I did not understand; now I see why this is harmful."

The Kpandu Health Centre, to whom the Health Visitor belonged, reports that the women are bringing in cases for delivery since their return. They have also brought other patients, including lepers, for treatment. A Community Development worker who was present at a child care lesson to a woman's group in the area writes: "The Elderly Woman who attended the course in Kpandu assisted in this lesson and stressed the need to consult "doctors" (the local generic term for all qualified health workers) and not to give castor oil to children. She had helped in delivering six children since her return from Kpandu. The first one was rushed to Hohoe Hospital because she saw a danger sign which she was taught at the course. She said the doctor told her that nothing could have helped the child to live if she hadn't brought the mother in time".

Courses for school teachers and Junior Red Cross Leaders have been held each holidays and applications greatly exceed the number of vacancies. Instruction is given in hygiene and first aid (to Red Cross Practical Certificate standard) and in the organisation of Junior Red Cross Units. Many of the teachers have started units since their return and one District Education Officer reports, that in his area, standards of hygiene teaching have shown a distinct improvement in schools which have sent a teacher to a Red Cross Course.

A course for Red Cross First Aid Workers was held at the request of chiefs and elders in certain villages which were a long distance from the nearest dressing station. The candidates sat for the Red Cross Practical First Aid Certificate and the chief was notified if his candidate was successful. Arrangements have been made for a few simple drugs, approved by the Medical Officer, to be bought at special prices from the U.A.C. and provision for the purchase of these is the responsibility of the chief and elders; the First Aid Worker is not allowed himself to take any money whatsoever. The main emphasis in the course is the dressing of small sores and ulcers and the need to send all serious cases for professional treatment. The First Aid Workers who have been visited since their return appear to be doing good work but the need for adequate follow-up is a present problem. Non-residential First Aid courses have also been given in Ho including a more advanced course given by the Medical Officer, Ho.

All these voluntary leaders are given simple instruction in hygiene and probably their best contribution to the health of the community, as they are frequently reminded, will be in the

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personal example which they set in their daily lives.

SOME GENERAL ISSUES WHICH APPEAR IMPORTANT.

Consideration of local beliefs concerning sickness

The effectiveness of health teaching depends largely on the extent to which it takes into account existing beliefs, traditions and practices. Obviously if these are ignored any new teaching will have, at best, only superficial acceptance. Encouragement has been given to health campaign staff to consider relevant local beliefs and, with professional help, to distinguish between beliefs and practices which are likely to be harmful to health and others which may, to some extent, be supported by scientific knowledge or have no harmful effect. It is necessary to insist on this process as it is the natural inclination of many to ridicule all local beliefs as "foolish superstition" feeling, no doubt, that this is what is expected on a Government or Red Cross Course.

During the long vacation two students of the University College of the Gold Coast were employed, with funds provided by the Ministry of Health, on research into beliefs concerning sickness. One student lived in the Tongu District, the other in Krachi. The report of the latter was used when planning the Krachi Health Campaign later in the year.

Much more research is needed but meanwhile it is perhaps safe to generalise that health teaching has a greater chance of acceptance when it is realised by the teacher how indivisible, in the minds of many African villagers, are matters of religious belief and health practice. It is easier for him to acknowledge this when some simple understanding can be given that the African refusal to separate body-mind-spirit into different entities has upheld a truth to which western psychosomatic medicine is now returning.

"This we believe to be true and in those countries where the belief is widely held there is less preventable sickness" has seemed, in the villages, to be an approach to the germ theory of infection which has commanded more interested attention than "This we know. You too should accept it". Many causes of sickness are suggested at village meetings, if confidence has first been established, including witchcraft and the displeasure of offended gods or, particularly where Christians are present (and such a belief is endorsed elsewhere than in Africa) it may be described as the "will of God". The teacher may think it wiser to avoid such issues. But the fact remains that many African villagers, in an entirely logical way, base their methods of prevention and treatment of disease on their view of its cause and the one will not be altered without the other.

It is important that those engaged in health teaching (at whatever level) should think out as clearly as possible their own beliefs concerning sickness. Otherwise the training given to them may merely be absorbed withing the belief, commonly held, that the same sickness may be caused by either natural or supernatural means. An example of this came when at the end of her talk a Medical Officer was quite seriously asked whether the treatment for leprosy which came in the "ordinary" way was the same as when it was caused by evil spirits. Probably the ability to hold this dual belief must be expected in the villages for a long time to come. But the belief based on modern knowledge will obviously replace the other much more quickly if those who teach health are themselves fully convinced of its authority.

The undermining of beliefs without the provision of an acceptable substitute is a problem needing attention in health education as elsewhere. With this in mind, and once again in order to work through those who have authority in their own sphere, arrangements are being made with the willing co-operation of the Roman Catholic and Presbyterian authorities (who represent the two major Missions in the area) to hold discussions with their catechists in order that their teaching in matters concerning health and sickness may be sound both from the religious and the medical point of view. The catechists will be given simple instruction in hygiene by qualified instructors and in addition their own priests or ministers will discuss with them the Christian view of sickness and the will of God.

Standardisation of basic teaching to all groups

In order that the different village leaders may spread similar ideas to the various age-groups and sections in the village an attempt has been made to standardise essential basic teaching. All women's groups, all villages visited by the Health Campaign teams, and all residential courses have, for example, a similar lesson on the germ theory of infection. Germs are explained very simply as "seeds of sickness" and, with the help of a trained microscopist, villagers are encouraged to look through a microscope at specimens of parasites or bacteria (preferably moving) which have been collected in the village. This is considered an essential preliminary to all teaching concerning the preventable diseases. In communities where it is widely held that witches, offended gods or evil spirits may cause disease the rather tame statement that "dirt is dangerous" carries little conviction. Living enemies, too small to be seen by the naked eye, which exist and multiply especially in dirt of all kinds are much more likely to command respect.

Nutrition teaching on the requirements of a balanced diet has also been reduced to a basic minimum and a similar lesson and accompanying posters, are

given to staff and voluntary workers. The list of requirements for simple first aid (compiled by a Medical Officer) and the arrangements for their easy purchase have already been mentioned.

Every encouragement is given to health teachers to adapt their teaching according to local conditions but it is felt that more affective results are achieved if certain basic lessons are the same to all groups.

Maintenance of enthusiasm

Health education inevitably involves much repetition of the same teaching with often very little immediate result. It is not surprising if the teacher loses enthusiasm but if he does so his teaching will be ineffective and opportunities will be lost. The qualified health worker gains a realistic outlook during his training but undoubtedly he as well as unqualified staff and voluntary leaders benefit from occasional encouragement. A knowledge of other people's efforts in the same field helps to provide this.

A monthly Red Cross New Letter is sent to all school teachers, Community Development staff and voluntary workers who have gained a Red Cross Hygiene or First Aid certificate. Copies are also sent for information to the Health staff and Medical Field Unit. The purpose of the letter is to:

- (i) To give news of health activities of individuals and groups receiving the letter.
- (ii) To give, in very simple form, accurate information on health matters in order that those holding Red Cross certificates may keep their knowledge up to date.
- (iii) To give information, in an interesting way, about the everyday duties of the qualified health workers and their services to the community. (e.g. "A day in the life of a Sanitary Overseer".)

The News Letter is proving helpful in sustaining enthusiasm and in making the individual feel part of a larger whole. In an over-heard conversation between a teacher and a community development worker the teacher enquired with interest about a recent Health Campaign in which Medical Field Unit and Community Development staff had taken part, and the Community Development worker arranged with the teacher that his Junior Red Cross members should perform a health play in one of her villages. In letters to the compiler of the News Letter correspondents often include questions on health matters in connection with the work they are doing. Enquiries of general interest are answered in the News Letter; others are answered by individual letters. All medical information in the News Letter or in individual letters is either provided or checked by a Medical Officer.

A Voluntary Leader writing recently to the compiler of the News Letter ended his letter with the rather startling phrase "Yours in the National Health Struggle". Undoubtedly it is in this spirit, and with the closest co-operation between all concerned with health education, that unnecessary ill health and suffering will be overcome within this Region.

FUTURE PLANS

Experience in 1955 has pointed to one major need: Consolidation. Ignorance, apathy and traditional beliefs which are harmful to health have a tangle of roots running through all strata of the community. They cannot be overcome by the digging of a latrine here, a bore-hole there and a series of so-called health Days throughout the Region.

The professional health workers have, of course, a responsibility for the health of the whole Region. Equally, every school is required to give hygiene teaching to its pupils. But in the case of other workers, such as community development staff and voluntary workers, it has been found best to concentrate their supplementary efforts in health education within certain village for a definite period. The number of villages which can be covered is limited by the number of workers available. Inevitably many are omitted, for the time being, who urgently need help. But already it is clear that the village which has made appreciable improvements influences its neighbours very considerably and this example is probably worth more than teaching spread thinly over a wider area.

As the case for intensive teaching applies not only in health education but in all spheres where traditional attitudes and practices are involved, and as all kinds of development in the village are interdependent, the Department, of Social Welfare and Community Development within the Region has decided to concentrate its resources largely (although not entirely on a village Development Scheme operates in villages where a Women's Group meets regularly (as the readiness of the women to accept new ideas is considered essential for village advancement) and includes advice and help to enable the village to achieve, by communal effort, such improvements as it considers desirable in its standard of living. As these are likely to include improvements in economy, health, material surroundings and opportunities for culture and social life, the scheme is naturally undertaken in the closest co-operation with the various specialist Departments concerned.

In 1956 approximately 50 villages are covered by the Scheme. It is hoped that at the end of the year it will be possible to report all-round advance in these village which will substantially improve the health of the inhabitants and provide an impressive and attractive example for neighbouring villages.