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SOUTH PACIFIC AGRICULTURAL EXTENSION SURVEY - 1967

by

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FOREWORD

During 1967, the South Pacific Commission arranged for a survey of Agricultural Extension to be undertaken by Mr W. Cottrell-Dormer, formerly associated with the University of Queensland.

Reports have subsequently been published on a number of individual Territories visited by Mr Cottrell-Dormer, as under :-

Fiji	July 1968
British Solomon Islands Protectorate	November 1968
American Samoa	January 1969
Western Samoa	September 1969
Papua New Guinea	January 1970
French Polynesia	December 1972
New Caledonia	December 1972

A final Territorial Report in relation to the Condominium of the New Hebrides will shortly be distributed.

In addition Mr Cottrell-Dorner has written a consolidated report covering the whole of his survey. The Commission would have wished to publish the whole of this report, but because budgetary and technical problems make this difficult to undertake in a reasonable time, it has been concluded that the most satisfactory solution is to publish the final chapter of this consolidated report, containing Mr Cottrell-Dorner's conclusions and recommendations.

It should be mentioned that this section of Mr Cottrell-Dorner's report was available to the Second Conference of Directors of Agriculture and Livestock Production, held from 19 to 22 January 1973 in Noumea, which had a special discussion on agricultural extension policy. The Conference of Directors also made a number of recommendations in this field (Recommendations Nos. 13 to 17).

Alan Harris
Programme Director (Economic)

Introduction

The recommendations embodied in this Circular are based on observations made during the 1967 survey of agricultural extension, conducted at the request of the South Pacific Commission, and on the application of modern extension thinking to rural development in the region.

Recommendations are grouped under the following headings :

1. The need for re-orientation of agricultural extension approach in the region.
 2. The need for research pertaining to rural extension and development in the region.
 3. The co-ordination of rural extension.
 4. Some constraints to the effectiveness of Agricultural Extension Services.
 5. Recruitment and orientation of Area Agricultural Extension Agents (AAEA).
 6. Training needs of Area Agricultural Extension Agents for work with the people.
 7. Training needs relating to work of Area Agricultural Extension Team.
1. The need for the re-orientation of the agricultural extension approach in the region

Agricultural extension in the region has been oriented very largely to the rapid achievement of goals of economic production because of the understandable desire of each Administration to achieve economic viability for its Territory as soon as possible. However, the Administration's vision of a desirable economy for its Territory is derived from experience or knowledge of economic development principles and procedures which whilst perhaps appropriate to Western cultures are not necessarily immediately so to Pacific Island cultures. This tendency has been intensified by the fact that the great majority of professional and semi-professional agricultural extension agents in the region have received their basic training in the ambiance of Western culture. It is intensified also by the tendency of Agricultural Departments to judge the efficacy

of their Agricultural Extension Services by the number of trees or acres planted, rather than by the extent to which the people have been able to accept and blend an extension proposal to their advantage into their culture and social fabric. The need for agricultural extension to take these things into consideration was raised by Conroy at the South Pacific Commission's Agricultural Extension Conference held at Rabaul in November, 1961 (15) and embodied in its resolutions, and in a paper submitted by myself at the ANZAAS meeting in Brisbane in May of the same year.

RECOMMENDATION I

That Agricultural Extension Services in the region endeavour always to relate their extension and rural development programmes to the culture and social organisation of the people for whom they are intended.

2. The need for research pertaining to rural extension and development in the region

I consider Recommendation I above to be fundamental to the development of effective extension in the region. However, such a recommendation is somewhat pointless unless the Administrations, or their Extension Services, have the means, in the form of staff qualified by their training, to study rural socio-ecological systems and to devise and evaluate rural extension approaches and methods likely to favour the development of progressive attitudes amongst the people.

Suitable post-graduate training is available at the University of Queensland in its Diploma of Agricultural Extension Course, whose curriculum includes Educational Psychology, Social Psychology, Rural Sociology, Farm management, and Administrative Behaviour and Control.

There is also a place for the two new Universities in the region in the production of trained staff at the University level.

The establishment of the University of Papua New Guinea in 1965, was a major educational breakthrough. It provided the local inhabitants with an essential segment of their tertiary educational system in which their own sons and daughters can gain the knowledge, skills and insights which will enable them, with experience, to provide leadership in the development of the human and material resources of this, and perhaps other Territories. It will also enable local students

to undertake their undergraduate studies largely in the ambience of their own changing culture rather than against the background of a very different overseas culture, which could develop in them unfavourable attitudes towards their own people.

For various reasons it seems unlikely that a Faculty of Agriculture will be inaugurated in the reasonably near future. For a long time to come however, rural development must necessarily figure prominently in plans for the economic development of the Territory, requiring the three classic resources of land, labour and capital. The lack of a Faculty of Agriculture is no reason why the University should not play a major role in rural development by concerning itself closely with the development and provision of the knowledge, skills and orientation required for the proper use of these resources in three broad categories of disciplines, namely :

- Natural Science
- Social Science, and
- Management

producing in its alumni a systems orientation towards the development of rural man and his environment.

One of the most obvious characteristics of the developmental situation in Papua New Guinea is that every step in development is apt to run head-on into one or more segments of a complex of interdependent, interacting and long-established systems, which together constitute an overall socio-ecological system in any given area.

A socio-ecological system is maintained in a state of balance by adjustments within its constituent sub-systems as and when required. But if changes are introduced which require adjustments beyond the capacity of the people they may lead to chain reactions which can undermine confidence, and seriously impede progress, or divert their interests into retrograde or socially and politically undesirable channels.

Rural development programmes should not, therefore, focus too intently on the economic or any other specific sphere, but should aim to develop the people, their culture and their economy, without unduly upsetting the balance of the socio-ecological systems to which they belong. Hence it would seem to me that, for rural economic development

to progress smoothly and effectively, an elite cadre of well qualified and systems-oriented people must be produced to perform the functions of education and training, planning and supervision, and enquiry in socio-anthropological, economic, technical and other fields.

Local degree courses are urgently needed to produce graduates with the orientation and the intellectual and technical skills which, after gaining experience and seniority, will enable them to perform the above functions ; graduates who will not only possess the necessary technical skills but also the perception and insight to understand and "think" systems, to realise their importance in any development programme, and to foresee areas in which socio-ecological imbalance is likely to occur and how this could be avoided or corrected. In planning such courses the superordinate goal of the University should be to meet the needs of the emerging and developing country it was created to serve and, where necessary, it should be prepared and permitted to break away from the academic traditions of the West.

The answer could lie in the offering of courses leading to a Science Degree in Rural Development, or to a Degree in Rural Development Science - or some other suitable designation. Such a degree course would be of great value to many professionally inclined young people in this developing territory and especially for officers of the District Administration, Rural Development, Education, and Health Education Services, for all of whom the core curriculum should include studies in the social sciences.

Another way in which Universities could help would be by encouraging students working for honours or higher degrees in social science disciplines to choose research projects likely to contribute to the building up in the region of a fund of knowledge and experience upon which extension principles and theory relevant to local cultures can be developed. Work of this nature is at present going on in Papua New Guinea.

It is realised that it is difficult for the smaller Territories to find funds for the higher training of staff, or even, in some cases, to find staff members of sufficiently high educational level to undertake studies at a University. On the other hand they are probably the Territories in greatest need of help in upgrading their extension approach and methods. Where an Administration does not have a person suitable for higher training at University level, arrangements could perhaps be made for a selected officer of sufficient educational and professional calibre to be attached for a period to the Service of another Territory where training and research in modern extension is

being undertaken in a cultural environment similar to that of the Territory to which he belongs. This would not qualify the person for research but it would at least help him (or her) towards bringing about a modern orientation of the extension work of his own Territory on his return.

RECOMMENDATION II

That the attention of the Administrations be drawn to the need for research in the development of extension approaches and methods relevant to local cultures and to the need to make provision for the training and utilisation of staff for this purpose.

RECOMMENDATION III

That the attention of Universities in the region be drawn to the need for an elite cadre of professional people qualified to undertake research and provide leadership in extension and other aspects of rural development in the context of local cultures and of the desirability of providing courses to meet this need. This matter is so important that External Aid Agencies might be interested in helping to make its implementation possible.

RECOMMENDATION IV

That the attention of Universities in the region be drawn to the importance of extension to rural development in all Territories and to the valuable contribution honours and higher degree students could make, where appropriate to the direction of their studies, by orienting their social science research to projects likely to be helpful in the development of extension theory and method relevant to local cultures.

3. The co-ordination of rural extension

"Rural extension is the combined extension effort of various Government Departments and other agencies (rural administration, local government, education, public health, agriculture, co-operatives, church organisations, private enterprise, etc.) among the rural people in the cause of rural development." (Part I., para 4)

Rural extension programmes need to be co-ordinated, and this should be done at District level by inter-Departmental team work. An important role can be played at village level by the extension agent. So that the field staff of Departments concerned with rural extension can co-ordinate their programmes and activities, they should share a common philosophy towards an understanding of their common objective .

I have already pointed out that rural extension programmes should be linked with the value systems and social structure of the rural communities if they are to be consistent with the real aspirations of the people for whom they are intended and not unduly upset the balance of the socio-ecological systems to which they belong. It is at no time suggested that orthodox extension methods, based on diffusion and at present in common use by all Departments, be entirely cast aside, but that they be enriched, in accordance with the cultural levels of the groups or communities involved, with the principles and appropriate practices of social science in order that the above desiderata might be fulfilled. If this proposition be accepted, it follows that it is highly desirable that there should be a common core of in-service extension training for all Departments associated with rural extension to ensure a common approach to extension problems and to facilitate the integration and coordination of their extension activities. An elite cadre of qualified persons to assist with training and other aspects of programme-planning and implementation is essential for effective economic development.

In a developing country, modernisation cannot occur without cultural change. For an understanding of this phenomenon, rural extension must draw on social science. It seems important, therefore, that :-

1. There should be clear consensus amongst Administration Departments and Services engaged in various aspects of rural extension as to the role and functions of each and of its subsidiary organisations.
2. The people whose culture is being affected should be involved as closely as practicable in rural extension programme-planning.
3. Every effort should be made to integrate the rural extension programme of all agencies, especially at the District and community levels.

4. To facilitate full collaboration and integration as between the various programmes, supervising officers of all Departments should share a common viewpoint and approach. It is suggested that this could be achieved by common orientation courses in modern extension philosophy and method conducted at the District level by suitably qualified persons.

A point at which the co-ordination and integration of rural extension would seem to be of great importance, because of the early formation of long-lasting attitudes in the children, is the village primary school. Meaningful agricultural instruction should be included in the primary school syllabus, at least in the terminal years.

I am not an educationist but to me it would seem possible, with due consideration for the immaturity of the children, for an integrate programme to be planned, on the basis of pilot projects, which would be associated with the small-scale production by the children in their terminal year, and in accordance with modern methods, of one or more short term crops, e.g. vitamin and protein-rich vegetables, which could be sold locally or through the Division of Produce Marketing ; the cash return could be used to defray the costs of the venture and to satisfy some commonly felt aspiration of the class. Such a venture could be used to create learning situations of educational and attitude-forming value related to rural living in association with such items as :-

- social studies, natural science, numbers, economics, etc. ;
- the importance of diet to growth and to the maintenance of good health ;
- the importance of good health to success in agricultural and other ventures ;
- the development of leadership and team spirit in collective undertakings ;
- the learning and acceptance of basic agricultural, health and other technical principles ;
- the development of favourable attitudes towards gardening and other farm activities ;
- the preparation of meals with a balanced diet, and other aspects of domestic science of interest to girl pupils ;

- the value of farm produce as a source of cash income ;
- the organisation and maintenance of a simple co-operative-type organisation run on simple commercial lines ;
- the creation of local reference groups with good agricultural norms ;
- the capturing of parent interest in the school activities of their children ;

Government and other extension agencies could assist the teacher with resource personnel. Inter-school fairs, competitions and exhibitions could be organised to build up parent and community interest and to make the children feel that their work is worthwhile and of some importance.

All Administrations recognise the need for early agricultural instruction to be provided for children, the majority of whom must look to the land for their future livelihood and most are making earnest endeavours to meet this need.

It would seem important also that every effort be made to ensure that at the completion of this agriculturally biased primary education, provision be made for the more academically bright boys to qualify for admission to an agriculturally biased secondary education stream. Not only would this remove the possible psychological stigma that pupils in the terminal agricultural primary classes are perhaps rejects of the normal educational system, but also it would ensure a stream of favourably oriented students to fill the needs of both the public and private sectors of the economy for students and trainees at more advanced educational levels.

In Papua New Guinea I was fortunate in being invited to discuss the problem with a meeting of some 30 Headmasters, both expatriate and indigenous, of the Administration 'T' schools of the Gazelle Peninsula. There appeared to be consensus amongst them that agricultural teaching could not successfully be carried out unless there was assurance of the availability of :

- land ;
- suitably trained teachers ;

- continuity of long-term projects during vacations ;
- technical support and supervision of teachers ;
- close collaboration of local agricultural extension officers.

They were of the opinion that agricultural projects should be closely related to the local agricultural situation and preferably to one important economic crop. They should not be complicated by attempts to deal with a number of crops (or of different types of livestock). Examples given were:

- On the coast, building and operating a good hot air copra drier, making copra from nuts brought by pupils, marketing of dried copra.
- In the Highlands, production and sale of tea seedlings to farmers.
- Simple fertiliser trials with a local saleable vegetable, marketing of the vegetable ; sale of fertiliser to local farmers.

Only the older pupils should be involved in the practical aspects of the project ; the interest of younger pupils being restricted to simple basic principles. It was considered that many aspects of natural science, arithmetic, social studies, economics, co-operation, management etc. could be developed in conjunction with such projects. In addition, the cash incentive could be developed if those pupils who actually worked on the project could share, individually or collectively, in proceeds of sales...

From what has been said above it would seem that a great deal depends upon the teacher. It is better for a subject so important in the region as agriculture to be introduced competently and gradually in suitable schools, than incompetently everywhere at the stroke of a pen.

RECOMMENDATION V

That Administrations keep the matter of co-ordination and integration of rural extension programmes under constant review and take such other steps as may be desirable to ensure a commonness of philosophy and of purpose amongst their Extension Services.

RECOMMENDATION VI

That Agriculture be given full status as an academic subject in order that pupils electing to study that subject may not be placed at a disadvantage should they wish to proceed to secondary and tertiary education. This might help also to raise the status of agriculture in the public eye.

RECOMMENDATION VII

In view of the importance to agricultural extension, and rural development generally, in the region of the competent teaching of agriculture in rural primary schools, and of the experience which has been gained in this field since the 1967 S.P.C. Technical Meeting on Agricultural Education, it would be desirable for an inter-territorial meeting to be held at which views and experiences could be exchanged and the possibilities of Regional co-operation in agricultural teacher training and related areas could be discussed.

4. Some constraints to the effectiveness of Agricultural Extension Services

The most basic constraints are those relating to extension training and method evaluation, or, more specifically, the lack of personnel in most Services, other than in Papua New Guinea and in Fiji, themselves trained to undertake these functions at senior level. Even a small Extension Service should, if at all possible, have at least one extension agent who has successfully completed post-graduate extension training at University level. Personnel so trained are essential not only for the modern orientation of the extension approach and for research but also for the interpretation of evolving modern extension concepts and methodology to field staff. Without such personnel, extension workers in the field are likely to continue using inappropriate extension techniques and to stagnate, to scoff at new developments which they cannot or will not understand, to become encapsulated in a conservatism as rigid as that of some of the farmers they are supposed to help.

The efforts of the South Pacific Commission in arranging short courses, workshops, seminars, etc., with the help of visiting specialists help a great deal in modernising extension thinking and approach, and should be continued ; but to be of lasting value, they need the support within each Territory of locally based highly trained personnel, as in-service training must be a continuing process.

Extension training, both pre-service and in-service, requires modern texts and loose-leaf manuals adapted to the cultures and needs of the region and kept up-to-date. Extension is not the sole preserve of agriculture but is equally important to other fields of rural development. There should be scope for Regional co-operation in the preparation, production and revision of such material by the South Pacific Commission with the help of an inter-territorial Standing Committee on Rural Extension Training Manuals and Texts. Such material should be prepared at two educational levels, as was done in the short course in agricultural extension conducted in New Caledonia in January, 1969, by M.J. Dourthe on behalf of the S.P.C.

Having done all possible to make provision for staff training in extension, it is equally important that measures be taken to keep staff in touch with what is going on in the extension world in other parts of the region. Here again there is scope for inter-territorial co-operative effort. Each Administration might provide the S.P.C. with abstracts or summaries of papers, relating to extension philosophy, theories or methods, produced by any of its rural extension services. These could then be put together into a quarterly review, perhaps in the language of the original text, and sent in bulk to each Administration for distribution and circulation within its Territory. In making the last two suggestions I have in mind not only the training needs of extension staff, but also the desirability of discouraging the compartmentalisation of extension thinking and of fostering integration and co-ordination in rural extension.

Yet another area in which there is scope for inter-territorial co-operation would be in the periodical submission by each Administration to the S.P.C. of details of library accessions which had been found to be of value to extension staff for reference and study purposes. These could then be compiled by the S.P.C. into lists of desirable library acquisitions which could be issued from time to time to all Administrations.

RECOMMENDATION VIII

That the attention of Administrations be drawn to the need in all Territories, where at all possible, for at least a nucleus of extension staff, trained at post-graduate University level, to plan and maintain in-service and extension training programmes and to assist, as may be required, with pre-service extension instruction. Consideration could perhaps be given to the allocation of special scholarships for higher extension training.

RECOMMENDATION IX

That an Inter-Territorial Standing Committee on Rural Extension Training Manuals and Texts be set up and that with its assistance the South Pacific Commission prepare, and revise from time to time, modern extension training texts and loose-leaf manuals adapted to the cultures and needs of the region.

RECOMMENDATION X

That the South Pacific Commission, with the help of Administrations, bring out a quarterly review of abstracts and summaries of papers, relating to extension philosophy, theory or methods, produced by the various rural extension Services of the region, for bulk issue to Administrations.

RECOMMENDATION XI

That the South Pacific Commission, with the help of Administrations, bring out, for bulk distribution, an occasional list of library accessions found by the various rural extension Services to have been of value to their extension staff for reference or study purposes.

5. Recruitment and orientation of Area Agriculture Extension Agents (AAEA)

In order for "agriculture" to be attractive to young people as a professional career, it must offer wide and varied opportunities for advancement to those who have the necessary aptitude and are prepared to apply themselves to work and study. To indicate that such opportunities can be made to exist I have endeavoured to show, in Diagram I the principal functions of a Department of Agriculture in the region in the field of rural development.

Rural Development
(Agricultural)

Functional Organisation

Direction

Policy Objectives

Technical

Research
Planning
Information
Resource Personnel
In-service training

Educational

Research
Pre-service and
in-service training
Liaison with Dept.
of Education

Operational

Programming
Field operations
and administration
Information
In-service training
Farmer training

Extension

Research
Planning
Information
Training

Marketing

Research
Organisation
and control
Information
In-service
training

Economic

Research
Planning
Information
In-service
training

Rural Development

Field Staff

Diagram I: Ideal Model of functional
organisation of rural development
activities of a Department of
Agriculture in the Region.

I look upon the AAEA and his peers as the foundation upon which an agricultural extension, or rural development, service should be built. Ideally his (or her) pre-service training should make it possible, with in-service training, including special where necessary, for him to advance step by step to any position in the Department of Agriculture. This would be possible if a parallelism could be established between academic and agricultural training, as suggested in Diagram 2, so that a student or staff member could move across from one to the other should his aptitudes, interests and aspirations make this desirable as his ultimate goals become clearer to him and to the Administration. The in-service and extramural training and study programmes of the Departments of the Public Service Commissioner and of Education of Papua New Guinea are of special interest in this regard.

I feel that if too much emphasis is placed on practical training in agriculture (much of which could be given later "on-the-job") the rational professional development of Extension Services from the local ranks will be obstructed by an "underprivileged" class of field officers who, owing to the nature of their pre-service training, will be ineligible to proceed to higher studies leading to higher professional qualifications. Every effort should be made to avoid this happening, so that field officers who show sufficient promise can be encouraged, through scholarships or by other means, to undertake higher studies. In this way, not only will the professional level of the local Service and the status of agricultural training be raised but advantage will be taken of the officer's valuable field experience.

ACADEMICAGRICULTURE

<u>University</u>	Post graduate studies or courses
<u>University</u>	Degree and special courses
<u>Secondary</u> High School Forms IV - VI	Agricultural College High School with agriculture
<u>Secondary</u> High School Forms II and III	Agricultural Training Institute High School with agriculture
<u>Intermediate</u> High School Form I	High School with agriculture
<u>Primary</u> Terminal classes	Terminal classes with agriculture

Diagram 2 : Agricultural pre-service training should be so planned, or enriched, as not to debar bright students from professional advancement.

It will no doubt be objected that the above proposals are unrealistic in view of the present overall educational levels in the region. But this will not always be the case and I am but expressing my opinion and suggesting that the low status of agricultural education which at present prevails in many quarters will be maintained unless bright students can see that it offers attractive professional career opportunities. Some means must be found to ensure that they can keep pace, in their agricultural education, with students who have chosen to join the academic stream. For this reason, as also because of the very diverse functions of the agricultural extension agent in the field agricultural pre-service training to the diploma level should aim to produce a generalist rather than a specialist in agricultural extension

or any other discipline. On reaching the diploma level he (or she) should be eligible to move on to appropriate degree courses or to special courses at University level, in continuation of pre-service or during in-service training - and to choose in which of the spheres of activity, public or private, shown in Diagram 1. his interests lie. Students could be helped to crystallise their preferences by offering them employment in their long vacations as junior assistants in the Department of Agriculture. During this period they could spend a few days working in each of the principal sections of the Department. Whilst educational levels remain low, special efforts should be made to encourage and help promising students or staff to undertake higher studies.

Another objection is likely to be that "the present need is for practical agriculturists to go out and teach the farmers". But of what ultimate real value will these be to a Territory which must remain dependent upon short-term professional appointees from a different culture for their guidance and direction? It is better to pause for a year or two to make later promotion "from the ranks" possible by offering better career opportunities to bright students.

A third objection will be that the smaller Territories have neither the funds nor the facilities for providing pre-service training at the level which I envisage, or do not have enough secondary school students of the required level available to justify making any major changes. In such cases consideration should be given to providing scholarships for such students as are available, and are sufficiently bright, to attend a suitable high school or agricultural college or institution, as the case may be, in another Territory with a similar culture to its own. The important point is that every effort should be made to ensure that junior staff are coming on who have the educational background and aptitude to permit their being given professional training in due course. In order that existing educational institutions in the region might be able to make available sufficient places to meet the needs of the smaller Territories, the South Pacific Commission might be able to attract grants-in-aid for the building of a special wing and the provision of other requirements to provide for this need at approved institutions.

RECOMMENDATION XII

That Administrations should endeavour to ensure that the pre-service training available for potential local extension and other agricultural recruits does not render them ineligible for higher training and jeopardise their chances of professional advancement.

RECOMMENDATION XIII

That the attention of Administrations be drawn to the likely need for increasing the student capacity of suitable educational institutions in the region so that these could better be able to help the smaller Territories in the pre-service and in-service training of agricultural staff.

6. Training needs of the Area Agriculture Extension Agent (AAEA) for his work with the people

On recruitment the AAEA requires induction training to acquaint him (or her) with the philosophy, policy, methods and objectives of the Agricultural Service, to familiarise him with the programmes and work currently in progress in the area to which he is to be posted and to acquaint him with what is known of the terrain in which he will be working and of the people who live there and their agricultural activities. He must be made familiar with the administrative procedures of the Department, details of the nature of reports and returns required, of delegated powers and of powers of delegation, etc. He should also visit the Headquarters of other Departments engaged in rural extension and find out about their philosophy, objectives and programmes, particularly in regard to the area to which he is to be posted - and so on.

In-service training to teach him how best to apply his diploma education to local situations is of great importance. This is the point at which most Administrations fail, either because they do not have staff qualified to conduct extension training, or because those available are soon "snapped up", because of their higher qualifications, for senior administrative posts in which they have little or no opportunity to attend to the practical aspects of extension planning and in-service training. This matter has already been brought up in Recommendation VII, above, but is of such importance that I will go into it in greater detail.

There should be an officer highly qualified and experienced in modern agricultural extension whose functions, after becoming thoroughly familiar with the local situation, should be along the following lines :

1. The evaluation of extension methods at present in use and the determination of modifications required to bring them into line with modern concepts.
2. The in-service training of field extension staff, preferably in actual extension situations in their own sectors.
3. The preparation of a loose leaf extension manual for the training and guidance of local extension workers.
4. The conducting, for senior officers, of intensive short courses in modern extension philosophy and methodology.
5. The supervision and evaluation of extension programming and action.
6. Attending appropriate overseas conferences and taking such other measures as may be necessary to keep the Territory abreast of modern extension developments.

Extension is so vital to the successful implementation of national development plans that every effort should be made to ensure the adequate training and proper supervision of extension staff ; the lower the professional quality of this staff the lower will be the returns in achievement from funds spent on extension.

Not only must the AAEEA be given in-service training in extension and other fields, but his supervising officer must be given refresher training from time to time in order that he may keep abreast of the new concepts which his young diplomate assistants will increasingly be wanting to apply in their work with the people, and guide, encourage, and help them in their endeavours.

Throughout my discussion of the action potential and training needs of the AAEEA I have indicated that I wished to include the female as well as the male AAEEA. This is important as so little concern has been shown by Agricultural Extension Services in the past for the women of rural communities, despite the fact that not only do they constitute half

of the population, but in so many areas are intimately involved in agricultural activities and, covertly, if not always openly, exercise a powerful influence in decision-making. I look upon the female AAEA not as an "agricultural welfare officer" but as an equal partner or member of the District agricultural extension organisation, playing her full part in the implementation of rural development programmes. She should be given the same education and training as the male AAEA, with such variation only as may be desirable in the local culture to help her establish empathy with the rural women and maximise her influence amongst them. As this is often difficult for the male AAEA, especially the younger ones, to achieve, I am convinced, in the light of my own experience and of discussions with field staff in the various Territories, that every Agricultural Extension Service should have a proportion of female AAEA's in its organisation ; what that proportion should be must be determined by experience in pilot areas by the Administrations themselves.

RECOMMENDATION XIV

That the attention of Administrations be drawn to the general neglect, by Agricultural Extension Services in the region, of rural women and to the desirability of including women in extension training programmes at the diploma and higher levels.

7. Training needs relating to work of Area Agricultural Extension Team

At the area level the agricultural (or rural development) organisation should, where possible, be developed as a team comprised of the AAEA and his Field Assistants (FA) and their Fieldmen (FM) as suggested in Diagram 3. In that diagram I have also indicated one team consisting of a female AAEA with three female assistants to be attached to District or sub-District Headquarters and sent out to different areas according to the needs of the District agricultural extension programme. Numbers, in all cases will, of course, be governed by programme intensity or by availability of staff.

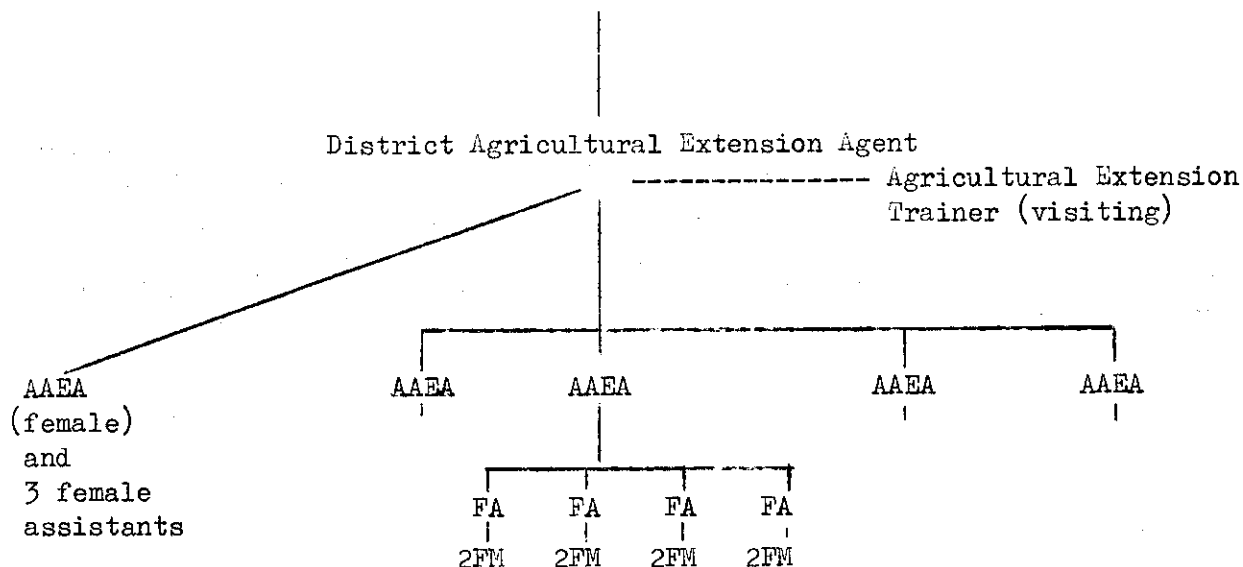


Diagram 3. : Ideal model of deployment of District agricultural extension field staff.

Training at the Field Assistant level lies between intermediate and upper secondary school classes and is essential, under present day conditions in most parts of the region, the FA's are still "the eyes and ears of the Service", because they are the staff members in most constant face to face contact with the farming people. It is essential that their educational level ensure for them a reasonable status amongst the farming people, and an ability to understand and profit by such on-the-job and in-service training as the AAEA is able to give them ; it should also, in my view, ensure that the way be open for those with the necessary aptitude to undertake further secondary studies or Diploma training if they have the opportunity. Most of the Territories visited had well equipped Agricultural Training Institutes at this level and offered good practical and theoretical courses, though, in my opinion, more thought should be given to linking them with the secondary education system. Those Territories which cannot afford this type of institution could perhaps concentrate on developing a good Agricultural High School ; alternatively they could perhaps arrange with other Territories of similar cultures to reserve places in their institutions for their trainees. The need for field staff at this level will decrease as overall educational levels rise and the sophistication of the farming people increases, but in most areas the need is likely to persist for some and perhaps many years to come, and even when they are no longer needed for staff training these institutions will still have their place in preparing young people for the farming life.

Fieldmen in most areas, are willing and intelligent men, in some cases influential, drawn from communities within the area and trained "on-the-job". In Papua New Guinea, not uncommonly, they are chosen from the output of the "Farmer Training Scheme" which is gradually helping many communities in that Territory in their difficult transition from traditional to progressive attitudes and farming behaviour and is well worthy of study by other Administrations. It is of value not only in this regard, but also in providing an important element of vocational training for that section of the school dropout interested in cash cropping; in producing semi-skilled workers at the Fieldman level for employment by the Administration, Local Government Councils and private enterprise; and in the development and support of accorded and task leadership in farming communities, which is of considerable value in rural development programmes. The "farmer training" approach to be adopted in any given Territory will depend upon the social structure and sophistication of its rural people; that of Papua New Guinea arose from a great need and from trial and error.

Finally, the work of the AAEA and his team will be greatly enhanced :-

- if he is given by his DAEA clear objectives, not necessarily quantitative targets, as his share of a District rural development programme ;
- if he organises the work of his area into locality projects determined together with the people of the locality ;
- if he encourages initiative, leadership and the acceptance of responsibility in his Field Assistants ;
- if his DAEA visits him and discusses his problems with him not too infrequently ;
- and if his DAEA is able to arrange for periodical visits by a competent Agricultural Extension Trainer to conduct appropriate short courses, workshops, seminars etc., for District agricultural extension staff and other interested persons.

RECOMMENDATION XV

That the attention of Administrations be drawn to the beneficial results being obtained in Papua New Guinea from its "Farmer Training Scheme" in order that, where this is not already being done, they might consider the introduction in their own Territories of schemes appropriate to their needs and circumstances.

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