EDUCATION AND TRAINING FOR AGRICULTURAL DEVELOPMENT: THE PLACE OF INSTITUTIONAL FARMER TRAINING

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INTRODUCTION

1. Agriculture, in most of the developing countries of the world, occupies a unique position in the life and future progress of their peoples. Not only are most of these countries primarily based upon an agricultural economy deriving a considerable portion of their foreign exchange earnings from agricultural exports, but they also depend upon agricultural production for their expanding food requirements and the raw materials of many local industrial processes. The great majority of the population in these countries are rural dwellers deriving their livelihood from farming and related rural occupations. Even the expansion of local industry and commerce are largely dependent upon a steady increase in the purchasing power of these rural people. In practical terms this means a rapid and sustained increase in the productivity of the agricultural sector. Thus, measures such as agricultural research, education and training, which are directly concerned with agricultural change and improvement, have a vital role to play in the whole process of rural improvement and national development.

2. This paper is concerned with institutional aspects of farmer training as one of the many factors which may contribute directly to farming improvement and through this to the whole process of development. It is based almost wholly upon experience gained over the past ten years or so in the English-speaking countries of East and Central Africa*. The systems of farmer training examined form essentially an integral part of the agricultural extension services. Indeed, the courses offered at

* Kenya, Tanzania, Uganda, Ethiopia, Malawi, Zambia, Lesotho, Botswana and Swaziland.

the Farmer Training Centres might be regarded as the spearhead of the work of extension services because they cater not only for practising farmers, farm women and local leaders of various kinds, but also they perform the vital function of bringing field workers up-to-date through in-service training courses. The work of the Farmer Training Centres must therefore be considered as one of the "inputs" contributing to agricultural change and development. Its effectiveness will, to a large extent, depend upon the provision of other essential inputs as, for example, improvement in land tenure systems, establishment of marketing and processing facilities, introduction of agricultural credit and the development of suitable co-operative organisations. Needed also are such essential things as improved supplies of seeds, fertilizers, farm equipment and other requisites. The "package" or integrated approach to agricultural improvement is becoming increasingly accepted. Farmer training provides one of the vital elements in such an approach.

3. Farmer training may also be regarded as part of the process of mobilizing the human resources of rural development. For too long agricultural improvement has been mainly conceived as a technical matter involving the adoption of new or improved methods of crop and animal production. Only comparatively recently has the importance of the human element in all processes of agricultural change gained increasing recognition. The subsistence cultivator and the community of which he is a member are essentially conservative in outlook and guided by tradition and tribal customs. Modern farming involves not only new techniques; it involves new concepts in the use and management of land and other resources. New attitudes to change and economic and social development have to be created and strengthened. This is essentially the field for education and training of many kinds and at different levels. Amongst the people as a whole, rural and urban dwellers, a climate of sympathetic understanding and support for many new aspects of development has to be created. For those engaged in farming and rural occupations an understanding of what a modern farming economy means and the essential measures needed to achieve the transition from subsistence towards this goal have to be patiently taught and demonstrated by all available means.

4. This, then, is the context in which the work of farmer training institutions is set. Their activities in education and training are intimately connected with others in the field of community development, youth organisations, co-operative societies, women's clubs and other work concerned with the

improvement of rural life and the rural family.

THE ROLE OF FARMER TRAINING INSTITUTIONS IN AGRICULTURAL DEVELOPMENT

5. As stated already, the work of farmer training institutions is essentially one aspect of agricultural development. It is complementary to that of the field extension services, co-operative organisations, farmers clubs and other activities. At what stage of agricultural development does residential farmer training become really useful and what particular advantages does it have in comparison with other forms of agricultural extension?

6. One of the main advantages of residential farmer training courses is that a group of farmers - 30, 60 or even 100 - leave their normal occupations for several days during which they can be given courses of instruction specifically geared to their particular needs and conditions. Classroom instruction can be illustrated by visual aids of many kinds. Practical work and demonstrations can be given on the institute farm. Study visits can be planned to nearby farms, experimental plots, processing plants and co-operatives. Those who attend share experiences and ideas and thus stimulate each other. Whilst the normal contact which these farmers have with the extension service is through occasional visits by their local agricultural assistant, at the Farmer Training Centre they will meet and receive instruction from more senior and experienced officers belonging to the agricultural services. The Centre is often a very pleasant place with good accommodation, catering and teaching facilities. Thus new ideas and improved techniques are taught and demonstrated in modern surroundings. All these factors, combined with the skill and friendliness of those who teach at the Centre, can have a very marked influence upon those who attend. Much, of course, will depend upon effective follow-up work after farmers return home as well as suitable demonstrations in the areas from which they come.

7. Many aspects of the change from subsistence agriculture to a modern farming economy have little to do with methods and techniques. They concern the social aspects of rural life and land use. Cattle, for example, are not looked upon primarily as economic assets in many societies. The ownership of large numbers of cattle confers prestige and they are still widely used for bride price. Customary land tenure and inheritance practices may militate strongly against the adoption of land

tenure and inheritance practices may militate strongly against the adoption of new systems of farming. Completely new concepts of management are usually involved in the change to a market economy. These and other matters can be taught and discussed freely in the informal atmosphere of the training institution. Thus a well organised Farmer Training Centre, adequately staffed and with good facilities for teaching and demonstration can be described as an instrument of change and progress. It can offer a focal point for discussion of many fundamental issues beyond the technical aspects of modern agriculture. It can provide a meeting place where research workers and senior extension staff can have the opportunity of meeting and discussion with groups of farmers, providing the essential two-way traffic of ideas and experience between research worker and farmer. In such ways the system of institutional farmer training offers immense possibilities even if, at present, these are not often realised in practice.

8. At what stage of agricultural development does the short course residential farmer training centre begin to operate really successfully? It is, in fact, rather difficult to justify the very considerable investment involved in setting up farmer training institutions when the patterns of agriculture are largely those of subsistence with some cash crop cultivation superimposed and agricultural extension work is principally concerned in effecting some simple improvements in traditional systems of crop cultivation and animal husbandry. In these circumstances the normal work of the field extension services may be all that is financially possible and justified. It is really when the pace of agricultural change and development begins to accelerate, when new and often costly crops and livestock are introduced, and cash investment in farm development are required, that the work of the farmer training institutions can really pay dividends. Take, for example, the establishment of hundreds, or even thousands, of smallholder tea enterprises. Here is a new crop requiring considerable financial outlay in establishment and the exercise of real skill in land preparation, crop establishment, training of young tea bushes, weed control, initial plucking and delivery of leaf to the factory. Instruction of this kind requires a much more intensive training than can be provided by the itinerant extension worker. Being closely related to seasonal operations it may be essential to teach large groups of farmers together. The introduction of exotic dairy cattle to small scale farmers provides another example where special training in essential management practices can very effectively be given through short courses at a properly equipped farmer training centre. It may therefore be

suggested that the stage when farming ceases to be an occupation and begins to assume the character of a business is the point at which institutional farmer training becomes a valuable supplement to the normal extension services. It is also at this stage when a demand for training begins to arise within the farming community itself. Whilst it could be argued that to put every farmer in a district through a one-week course of training would take 20 or 30 years to accomplish, it is equally valid to assume that those farmers who do attend courses are likely to be the more progressive and returning to their home areas in significant numbers after attending courses they can exercise an influence upon the whole community. It must not be forgotten, also, that it is at the stage of accelerating agricultural development that the field extension staff are most in need of regular in-service training and here again the farmers' training institution can make an invaluable contribution.

THE INSTITUTIONAL FRAMEWORK FOR FARMER TRAINING

9. Farmer Training Centres (or District Farm Institutes, as they are called in Uganda) can be quite expensive to establish as well as to maintain. To function properly they require properly qualified staff and adequate facilities. They must also fit within some organisational structure and receive both technical and financial support. These are all part of the investment in agricultural development. As such, it is extremely important that the fullest and most effective use should be made of this investment if it is to be technically and economically sound.

10. There are several aspects from which institutional types of farmer training can be viewed. The technical training work of these institutions is essentially part of the normal extension activities of the agricultural field services. From the viewpoint of the farm family, major aspects of home improvement, better care and nutrition of children, hygiene and the home vegetable garden all assume an importance and inevitably bring in wider interest and other agencies, official and non-official. Finally, the improvement of agriculture must be viewed within the broader context of rural development as a whole.

11. Thus it has happened in several countries that farmer training institutions, orginally established for very specific kinds of training directly related to the improvement of agriculture, have over the years enlarged their functions and now embrace many kinds of training including in-service training for field staff,

local leaders and others in a wide range of aspects concerned with farming, home and rural improvement. In Kenya, for example, where there are some 27 Farmer Training Centres, about a quarter of which are maintained by voluntary agencies, a number of the non-government centres have for some time been called Rural Training Centres which, in some respects, describes their function much more accurately. In Uganda, these institutions are called District Farm Institutes and several have "co-operative" wings attached to them.

12. In most cases, at present, the national Ministry of Agriculture is responsible for these farmer training institutions. However, there are now moves in several countries to broaden the basis of these district training institutions so that they can cater effectively for a wider range of training directly concerned with the improvement of rural life . The Kenya Government has now adopted a policy of establishing only combined training centres in the future. Each centre will have an administrative principal and staff operating central services such as catering, transport, etc., and there will be separate wings under the control of a technical officer of the ministry or department concerned. Kenya has also established a Board of Adult Education to co-ordinate all adult education by government and non-government agencies. Organisations of this character, embracing the education and training interests of all ministries concerned, can go a long way towards the avoidance of waste of resources through duplication and overlapping functions of different institutions.

ORIGIN AND DEVELOPMENT OF FARMER TRAINING INSTITUTIONS

13. It is believed that the first residential farmer training institution established in East Africa was the Teso District Ploughing School opened at Kumi, Teso District, Uganda, in 1910. During the 1920s and subsequent two decades, a need was felt in several countries for residential institutions where farmers could be given training in improved methods. In some cases, farmers and their wives were given training over a whole year. Elsewhere residential training was offered for young men who it was hoped would make farming their life's career. In at least one of these institutions each farm family or its equivalent operated a model small holding under supervision as well as attending classes and demonstrations. On the whole, the results of these residential training courses were disappointing. The numbers which could be catered for were small and the cost

relatively high. In practice, very few of those so trained went back into farming.

14. In the latter part of the 1950s several of the countries of East and Central Africa introduced an entirely new type of residential farmer training. Institutions, with a residential capacity varying from thirty to one hundred, were established with the idea of offering short course training for relatively large groups of practising farmers. In this manner institutions could give short intensive courses on selected aspects of improved agriculture to several hundred farmers in a year. Such courses proved to be popular and useful and were later extended to farmers' wives. Subsequently the range of courses was extended and subjects such as simple home economics, taught by trained women instructors, were added. These centres have also proved to be very useful for in-service training of field extension staff. Many of the earlier courses were of a general character but subsequently they have tended to concentrate upon special aspects of improved farming and related topics. The length of residential courses has varied from a few days up to three weeks. For farmers and their wives the ideal length of course seems to be one week. In some countries courses are entirely free; elsewhere a small fee towards the cost of maintenance is charged.

15. There are two main systems of farmer training institutions. The most common is that of the District Farm Institute or Farmer Training Centre. A single centre caters for the needs of an administrative area - the District. This system operates in Kenya and Uganda and in Botswana, Lesotho and Swaziland. Secondly, there is the system of Regional Training Centres, as at present employed in Tanzania, where each centre at present caters for a larger area than the District unit. Finally, there are countries which have developed a combination of both these types of institution. Malawi and Zambia have Regional Farm Institutes, built to a high standard and suitable for the training of staff at all levels and these are used for the training of local leaders and politicians as well as for farmer training to serve the immediate vicinity. At the district level both countries have a large number of 20/40 bed Farmer Training Centres of very simple, low cost construction. These centres are staffed by a single technical officer (certificate level trained) and a warden/storekeeper. All the instruction is undertaken by local officers, who need not reside at the centre, thus avoiding staff housing costs in the establishment of these institutions. The work of these Farmer Training

Centres is supervised and co-ordinated by a Regional Training Officer based at regional headquarters.

GENERAL CHARACTERISTICS OF FARMER TRAINING INSTITUTIONS

16. As already stated these institutions are commonly called Farmer Training Centres or District Farm Institutes and they come under the general control of Ministries of Agriculture. Although in some cases there are Regional Training Centres, often with rather wider and more sophisticated training functions, basically the common unit is that which serves the farm training needs of an administrative district and is, in practice, an integral part of the agricultural extension services. Both because of its functions and the need for the closest possible liaison with District Headquarters, where the agricultural and other technical services are based, it is of considerable importance that in siting these institutions they should be within easy reach of such headquarters. Not only will they need to make regular use of headquarters staff in connection with courses but the resident staff of the Farm Training Centres will probably be far happier if they are reasonably close to a headquarters community where educational, medical, social and other important amenities are available. If the training centre can, in addition, be adjacent to the district agricultural experiment station, this will be also a great advantage. There are, therefore, very sound reasons for giving much careful thought to the siting of new farmer training institutions which may well develop, in course of time, into district training centres with much wider functions.

17. In the countries of East and Central Africa there is a marked similarity of pattern in the facilities and lay-out of farmer training institutions. Basically they have an administrative block, residential accommodation, a central kitchen and dining hall, teaching facilities, and farm demonstration area. Residential accommodation usually takes the form of two dormitory blocks, one each for males and females, divided into twin-bed cubicles with appropriate facilities for washing, toilets, etc. In designing the central kitchen and dining room, it is most important to plan in such a manner that additions can be made later without the necessity for rebuilding. It may be worthwhile to construct a kitchen and store to cater for 100 even though the initial accommodation is only for 30/40 persons.

18. Teaching accommodation often consists of classroom units to take 25-30 persons. The most economical training unit is considered to be a 60-bed training centre and in this case it is found most practicable to have one central hall/classroom for 60 to 100 persons. This building is designed in such a way that it can be used as a classroom for 60, an assembly and cinema hall for up to 100, a conference centre, etc., with its projection room, store, toilets, instant daylight blackout and "expel-air" fans. Such a multi-purpose building can prove to be an invaluable asset. The administrative block is also important, providing suitable office accommodation for the Principal and staff, a proper place for the storage of equipment and supplies, and an office for the keeping of all records. As part of this building, or elsewhere, it is most important to have a place for a small carefully selected reference library for the use of teaching staff. They may also need a place where they can prepare visual aid material for use in the classes they teach.

19. The farm/demonstration area is probably the most important single aid to teaching. Those who attend courses are themselves practical farmers. They will be far more impressed by first-class demonstration of the results of good farming practice than they will by theoretical instruction in the classroom. In fact, as much instruction as possible should be undertaken outside the classroom on well planned and really impressive demonstrations of good husbandry. It is quite important that the demonstration holding should conform in general size with those of the surrounding area and the system of management, the crops grown and the livestock kept should represent what capable local farmers can themselves achieve. These units should be specifically designed and operated for teaching and demonstration purposes. Any revenue they earn or food they contribute to the training centre should be secondary and not primary objectives. The keeping of simple but accurate records is most important.

20. A farm classroom situated at a central point on the farm need only be a very simple, low cost structure. It requires a shady roof, supported by poles, and with one solid end wall. This wall is to take a blackboard and to form part of a lean-to store for equipment and teaching aids. Students make use of small 3-man benches and the floor space should be of a size capable of accommodating anything from a tractor to a dairy cow. In such a building a great range of practical demonstrations can be undertaken with protection from weather, maximum visibility and comfort for the students.

21. Some transport is essential for a medium to large training centre. Very good use can be made of a bus and light transport of related capacity. It may well be necessary to use the bus to collect and return groups of students from assembly points far from the centre. It can be invaluable for study tours to local farms and other activities of agricultural importance. The other transport is needed to obtain regular supplies for the centre and for many other essential tasks connected with its running.

22. Finally, it not infrequently happens that F.T.Cs are built close to a relatively large government farm. This farm may well be used partly to produce revenue as well as milk and other foodstuffs needed by the training centre. It is, in all probability, far larger than any local farms and more expensively capitalised in terms of buildings, fencing, water supplies and equipment. This farm should be well managed and run as far as possible as a normal commercial enterprise. From most aspects it is not suited for normal teaching and demonstration requirements and should not, therefore, be used in this way. It may well be a useful place for seed multiplication of improved crop varieties.

23. What do farmer training institutions, as described above, cost to establish and operate? This is a difficult question to answer satisfactorily. Naturally, much depends upon the standards to which the accommodation and facilities are built. In many cases the land for demonstration holdings and larger farms was already available or provided free of charge by local authorities. In a report on Farmer Training Centres in Kenya 1964, the capital investment involved in the establishment of F.T.C.s is quoted:- a 30-bed centre costs about £20,000, a 60-bed centre £35,000 and a 99-bed centre £45,000. The first 16 centres established in Kenya cost £425,000 of which over 40% came from non-government sources(1). A number of the centres established by non-government agencies in Kenya were designed on very economical lines: capital costs varying from £8,290 for an 80-bed centre in Western Kenya, where a number of old buildings were already available, to £30,000 for a 48-bed centre involving all new buildings(2). In Uganda, a 52-bed centre cost £40,000 and a 72-bed centre £70,000 both built to very good standards(3). Operating costs vary so greatly that it is rather dangerous to quote average figures. In some cases, fees charged largely cover the cost of food; elsewhere no fees are charged. A cost of shillings 10/- per student/day was quoted for Kenya in 1966 but shillings 20/- is probably a more realistic figure

today. Even so, costs will vary with the size and staff costs of the institutions, the percentage attendance at courses and the number of courses given each year.

STAFFING AND STAFF TRAINING

24. It hardly needs to be stated that the effectiveness of the work of farmer training institutions is almost entirely dependent upon the quality, ability, competence and enthusiasm of the teaching staff. Of special importance is the position of Principal since he is primarily responsible for the creation of a good team spirit amongst those who work at the centre. He also has an important public relations function in commending the work of the training centre to the people of the area served. It is clearly essential that those who teach at the centre should be mature, experienced and practical. Otherwise, there is not mucch prospect of their being able to gain the confidence of the farmers who attend courses. Staff of the right calibre and properly trained for this specialised type of work are therefore the critical factor affecting success or failure of the work of farmer training institutions.

25. Over the past ten to fifteen years these new institutions have grown up in significant numbers at a time when, with the departure of large numbers of expatriate staff following independence, there has been an unprecedented demand for local staff for a very wide range of technical duties. Farmer training institutions which are under government control have largely drawn their staff by secondment from the field extension services. Often, in fact, field extension staff have been posted to teaching assignments at farmer training institutions without having expressed any desire to undertake this kind of work and with no professional training in teaching. What is even more serious, however, is the general lack of continuity of management of these training centres through frequent change of principals. Records show that a significant number of farmer training centres have had four or five changes of principal in as many years. It is virtually impossible, in such circumstances, to build up and maintain high staff morale, good public relations and satisfactory technical efficiency. It is appreciated that during the initial phases of development many difficulties have been encountered over staff of these institutions. However, if they are to become a permanent and important feature of rural development many improvements in staffing will need to be effected.

26. In the first place, it is necessary to create and foster a specific professional cadre of agricultural educators and trainers. These people, men and women, must have appropriate technical qualifications, adequate field experience and proper professional training as teachers. They need to have a career structure and longer term prospects sufficient to attract persons of quality to this work and to retain their services in teaching for a reasonable length of time. It is clearly desirable that there should exist mechanisms allowing for staff interchange between teaching duties, field extension work and experimental station work. Finally, there needs to be established at Ministry headquarters an adequately staffed unit to administer effectively this growing number of agricultural training institutions and to give them the supervision and support they require.

27. Naturally, the level of professional training of the staff of farmer training institutions will vary in the same way as it does throughout the school system. For the position of principal or vice-principal the majority of present incumbents have undergone a 3-year course for the Diploma in Agriculture. Most of the instructors have undergone 2-year courses for the Certificate in Agriculture in local institutions. Few have had special professional training for this work and consideration is now being given in several countries as to how the situation may be improved. To do so will certainly take a considerable time. What is important, however, is to establish sound patterns for the future. Some countries are already aiming at staffing the larger institutions at principal level by university graduates. Uganda has a very interesting system whereby the Principals of the District Farm Institutes are men and the Vice-Principals women, the latter having undergone a 3-year training for the Diploma in Agriculture.

28. The common pattern of staffing of the larger institutions includes a Principal, Vice-Principal and 3 to 5 instructors, one of whom may be a woman teaching farmers' wives and responsible for simple home economics courses. A small administrative staff (clerk, storekeeper), catering staff, farm staff and drivers complete the list. As has been stated elsewhere a number of institutions obtain considerable assistance for course instruction through lectures and demonstrations provided by Technical officers belonging to district headquarters or who work in nearby research or experiment stations. Where agricultural development is proceeding rapidly and commercial firms and farmers' co-operatives are operating, these may be pleased to stage appropriate demonstrations and provide instruction in the use of

the products they sell. This can be a useful asset to course teaching provided that those who contribute in this way confine their contributions to technical matters.

COURSES AND COURSE CONTENT

29. Recent studies undertaken and reports published on farmer training institutions in the countries of eastern and central Africa indicate the very wide range of courses offered at Farmer Training Centres and District Farm Institutes. There has been a rather marked tendency for the number of inservice training courses for field staff engaged in a wide range of development activities to expand. This, in effect, amounts to training the trainers and as such means that the instructional work of these institutions can have a very important "multiplier" effect. In Kenya in 1967, for example, some 27 F.T.C.s were in operation (20 operated by the Ministry of Agriculture and Animal Husbandry, 1 by the Kenya Tea Development Authority and 6 by the Christian Council of Kenya). Of about 24,000 persons who attended short courses just over 17,000 were farmers and farmers' wives; the remainder were drawn from various rural development services. Within this latter group in-service courses were given for Agricultural and Veterinary field staff, Co-operative and Community Development staff, teachers, chiefs or sub-chiefs, 4-K Leaders (Young Farmers Clubs) and staff employed by the Coffee Board of Kenya. In the case of the 4-K Clubs of Kenya, of which there were 1,200 with a total membership of 35,000, some 821 leaders attended courses organised by F.T.C.s in 1967. This illustrates well what an important function such courses can perform. The range of courses for farmers, for rural women and for field services staff varies widely from country to country but the broad patterns of farmer and in-service training are similar.

30. Course content also shows very wide variations. Experience has tended to show that "general" courses embracing a wide range of topics tend to have little impact. Increasingly courses are being given on specific topics as, for example, "Farm Planning", "Rotation and Management of Arable Crops", "Establishment and Management of Tea", "Tobacco Production" and "Dairy Cattle". In each instance both in classroom teaching and practical demonstration, the basic principles can be emphasized and illustrated by examples in many different ways. The result of such well designed and well taught courses is that farmers return to their homes with a clear and practical understanding which they can proceed to put into practice. It is

hardly necessary to add that effective follow-up action by field extension staff is as important to successful results as the teaching at the training centre. Not infrequently, field extension workers accompany groups of farmers from their area to the courses given.

31. There is still very great scope for the improvement of course and curriculum planning, recruitment procedures, preparation of appropriate visual aids and effective demonstrations. The need for staff training has already been mentioned. Staff of farmer training institutions can also benefit enormously from the opportunity for periodic courses arranged on a national basis where they can meet others engaged in similar duties, exchange experience and ideas, and meet others responsible for agricultural research, extension services, youth activities and other aspects of rural development. With such needs in mind F.A.O. has organized regional training courses for principals and senior staff of farmer training institutions and is currently engaged, with the support of Danish Technical Assistance , in helping various Ministries of Agriculture in organizing national training courses for staff of farmer training institutions along with those responsible for regional and district extension services. These national courses have been much appreciated. On a longer term basis such needs offer a great opportunity to local university institutions to contribute to national development through the organisation of such courses.

EVALUATION OF THE WORK OF FARMER TRAINING INSTITUTIONS

32. A process of systematic evaluation of the effectiveness of individual courses and of farmer training in general is essential to improvement. Unfortunately little work has so far been undertaken in the area concerned though increasing attention is now being given to these vital aspects. This provides yet one more argument in support of the need for a well staffed agricultural education and training division at ministry headquarters. These processes of evaluation and, through this, the modification and improvement of courses and course content are important functions of such a unit. There is also a need for effective machinery at headquarters and field levels to ensure good co-operation and effective co-ordination of the various training interests represented at these farmer training institutions. No perfect formula exists for the achievement of these essential functions. What is needed is the willingness of all concerned to develop a satisfactory mechanism to ensure

the fullest and most effective use of the training opportunities offered by these institutions serving development needs at the district level.

SUMMARY AND CONCLUSION

33. This paper has attempted to describe the development and functions of the farmer training institutions established over the past 15 years in the English-speaking countries of East and Central Africa. Stress has been laid upon the over-riding importance of the human element in the whole process of agricultural, rural and national development. In view of this, education and training have key roles to play in the mobilization of human resources for rural development. Within this context, the work of farmer training institutions may be regarded as one of the essential "inputs" of agricultural change and development. Over the past decade, more than 60 farmer training institutions have been established in the area with which this paper is concerned. The various different approaches to this work present interesting contrasts and procide valuable experience. The character of these institutions is tending to change and their functions become broader. Catering initially for short course training of farmers they now undertake a great deal of in-service training of field extension and other staff working at district level. Courses for women have become an important feature of the work of these institutions and trained women staff are now a feature in many of them. Some indications are given of the capital costs of establishing farmer training centres and of other costs. The most important and critical factor in the success or otherwise of these institutions is staffing. Up to the present, most staff seconded to work at training centres have had no professional training for this specialised type of work. In spite of this some impressive results have been achieved. The greatest weakness so far has generally been lack of continuity in staffing. Efforts are now being made to rectify this situation but it is true to say that this type of work is still not very attractive from the career point of view. Much thought is now being devoted to methods of evaluating the effectiveness of institutional farmer training and to ways and means by which it can be improved.

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References

(1) F.A.O. Farmer Training in East Africa. Report of a Seminar held in Kenya at Egerton College, 21-30 March 1965. F.A.O., 1966.

(2) F.A.O. Farmer Training Institutions in East Africa. Report of a Training Centre held at the Animal Health and Industry Training Institute, Nairobi, Kenya, 8-27 November 1965. F.A.O., 1966.

(3) A.E.G. Markham. A Study of Farmer Training in some English Speaking Countries of Africa, F.A.O., Rome 1967.

Jon Moris. Farmer Training as a Strategy of Rural Development. Education, Employment and Rural Development. Report of the Kericho (Kenya) Conference Sept/Oct 1966. University College, Nairobi, 1967.

C.W. Barwell. Reports of the Ministry of Agriculture and Animal Husbandry, Republic of Kenya, on Farmer Training Centres. 1964, 1965, 1966, 1967.

(a) District Farm Institutes in Uganda at December 1966. F.A.O. Sub-Regional Office, Nairobi, 1967.

(b) A Survey of the District Farm Institutes in Uganda, July/August 1969. Mimeographed report. F.A.O. Office, Nairobi.