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ABSTRACT

The underlying theme of this paper is the relevance of the "package program" approach for the development of peasant agriculture in Southern Africa, particularly where there are livestock and population pressures with a declining soil fertility situation. In Rhodesia, full-time short literacy courses were held in June and July 1970, as a means of improving the technical efficiency of savings clubs and as a possible starting point for a broad program of adult education, starting with agricultural development (see ED 044 596). The agricultural "package program" was organized as part of the literacy follow-up program, the participants being those who were members of savings clubs, but not necessarily those who had attended the literacy course, and who could grow one or one-half acre of maize. The four major steps of the crop production were: (1) land preparation, (2) planting, (3) post-planting operations, and (4) grain storage. Though still in its early phases, the advantages of a "package" type program are that members of the project receive specific advice, and they have access to the loan financing necessary to purchase recommended agricultural inputs, which are available locally at a cost less than that of other suppliers. The long-term aim is for the savings clubs to develop into full credit unions that can finance agricultural development by loans to members. (DB)

AN INTEGRATED APPROACH TO AGRICULTURAL EXTENSION

by

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Paper for presentation at the SARCCUS
Agricultural Extension Workshop,

Swaziland, 5th to 16th July, 1971.

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AN INTEGRATED APPROACH TO AGRICULTURAL EXTENSION

This first part of this paper is a consideration of some aspects of an integrated approach to agricultural extension with peasant farmers, and draws heavily on Indian experience during the past decade.

This leads on to an account of the initial phases of an integrated rural development programme in a Rhodesian Tribal Trust Land.

The underlying theme of this paper is the relevance of the 'package programme' approach for the development of peasant agriculture in Southern Africa, particularly where there are livestock and population pressures with a declining soil fertility situation.

This approach offers the possibility of relatively quick solutions and it is implicit that developmental agencies at various levels should review their organisation and activities and if necessary restructure these in a more intensive and integrated strategy for development.

SOME ASPECTS OF AN INTEGRATED APPROACH

The principle of interactions

Kellogg (1964) has pointed out that success in modern farming depends on capturing the great benefits of interactions among several inputs, not simply the additive results of single improvements. He describes this as the principle of interactions and estimates that the right combination of practices for the local kind of soil may give truly enormous increases of 100 to 600 per cent. This compares with the single, slogan-like programmes emphasising one or two practices which by themselves are likely to give only low returns.

Mosher (1966) cites the case of a village in West Java where farmers increased maize yields 600% by (1) using a new variety, (2) using recommended amounts and kinds of fertiliser, (3) changing the depth of planting the seeds, and (4) controlling insect pests.

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'Package of improved practices'

Malone (1966) describes the 'package of improved practices' idea as a comparatively simple way by which the peasant farmer can make a substantial step forward in raising yields and income. Requirements are generally simple and, with the help of credit, within the farmer's means.

Each crop or livestock project must have its own package of practicessuited to the needs of the particular crop or livestock and to local farming conditions. The content of each package should be worked out by specialists and should take into account the problems of the individual farmer.

Malone emphasises that the package of practices must be simple for the typical farmer to apply. It should not require special skills beyond the farmer's ability. It should not involve supplies or equipment that are not readily available, nor risks

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that a prudent farmer would hesitate to take. Use of the package should bring a substantial increase in yield and income if it is to be adopted by the majority of farmers.

Requirements for change: the package programme.

Johnson and Christensen (1963) list the three requisites for overcoming resistance to change as (a) knowledge, (b) incentives, (c) means (KIM).
They point out that the availability of supplies is linked to provision of credit and local storage and marketing facilities - including transportation. Because competent assistants are not available to work with all families on farm plans that include combinations of new technology they suggest making a start in the most promising villages - those where improvements seem feasible in the shortest time. When many of the villagers have adopted improved farming programmes it should then be possible to move assistance personnel to other villages. This intensive integrated approach to the development of peasant agriculture was adopted in India in the early 1960s.

Taylor et al (1965) describe how in India the Intensive Agriculture Districts Programme (IADF) resulted from the Report on "India's Food Crisis and Steps to Meet It" (1959).

The package programme was launched early in 1961 under the third five-year plan (1961-1966). Concentration of effort and resources is the key element focusing on food-grain production. This includes:-

- intensive technical guidance to cultivators in improving farm practices (particularly field demonstrations of packages of improved practices).

- making available for purchase unusually large supplies of fertiliser, improved seed and other production supplies.

- adequate credit for cultivators to buy needed supplies.

- emphasis on making supplies available within a short distance of the cultivators' villages well in advance of the time for their use.

- simple 'package of practices' plans as a basis for credit, for advance procurement of production supplies, and to [illegible] inputs.

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- simple 'package of practices' plans as a basis for credit, for advance procurement of production supplies, and to commit cultivators to specific improvements.

The four-point approach of IADP in the village is described by Malone (1968). It commenced with a promotion programme and enrolled as many farmers as possible at the start. Each farmer was offered a specific improvement programme built around packages of improved practices which were demonstrated in each village. Each farmer helped to make a simple improved production plan. Staff made sure that the inputs were available, and farmers were helped to obtain the credit called for in their plans.

Package programme experience: some lessons from India.

Ensminger (1962) lists five aspects of the package programme which need attention if progress is to be made:-

1. Planning and foresight - each district prepares its own annual plan of work and calendar of activities in the light of priority needs of the district. Plans focus upon essential items so as to limit the number of tasks which can be handled on an orderly and intensive basis in order to achieve concentration of work when and where needed.

drawn attention to the low productivity of over 90% of

2. Adequate orientation of officials and workers to the purposes and requirements of the programme. The patterns, preconceptions and routines of the older non-developmental operations do not and cannot fit agricultural developmental requirements. Adequate training of staff workers is also necessary.

3. Co-ordination of efforts is necessary at various official levels.

4. Personal participation of cultivators in rewards and shaping activities to their needs.

5. Sound research as the basis for recommendations of locally-adapted, improved and more profitable practices.

A package programme actually consists of two packages according to Johnson (1964).

(1) A locally adapted combination of improved production technologies, and,

(2) A combination of services to producers to provide management and technical skills, to provide adequate credit on reasonable terms, institute tenure improvement, provide necessary price assurance, and make available storage and marketing facilities.

He notes that linkage between knowledge, incentives and means is the essence of the package programme.

When discussing future expansion of the package programme concept in India, he suggests that perhaps the greatest obstacle will be in recruiting capable leadership (project directors in each district) and in training the required agricultural specialists and village workers (especially team functioning).

It appears that even after seven or eight years of experience and considerable achievements (Malone,1968) there are still outstanding obstacles in the accelerated development of peasant agriculture at which the package programme was specifically aimed.

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Dixit (1969) analysed the achievements of the 'package programme' in one block of a district in Uttar Pradash and listed the following problems and suggested solutions:-

Participation of farmers is unsatisfactory. Farmers do not have sufficient faith in staff who should relate to them as friends and helpers and not as government employees.

A general complaint is that the supply of seeds and fertilisers is not timely and adequate. Staff should acquaint farmers with sources of supply and assist farmers to procure them.

A number of farm plans are prepared on paper without the proper participation of and consultation with the farmer. It is suggested that the high work-load of the village level worker should be reduced, and that the farmer, the VLW, the specialist and a progressive farmer of the village should all actively participate in drawing up the plan.

...weeding, harrowing and early weeding recommended.

Credit should not be utilised for purposes other than those specified in the plans - this can be ensured by timely inspection by staff of the package programme.

Fragmented provision of advice and other services.

It is fundamental in the package programme approach to rural development that there should be close linkage between the provision of information and other services. However, this is often resisted particularly where the provision of credit and supplies are concerned.

Gaitskell (1966) suggests that there is a very strong feeling among many extension and community development workers that the provision of supplies and the provision and recovery of credit is something other people ought to do - not them. He points out that implementation is the only real safeguard for credit, i.e., supplies must be made available, they must be correctly applied and their cost recovered.

Some aspects of the credit problem include:-

- concentration of loans on richer types who can offer security in property.
- the difficulties of organising supplies and the high cost of supervision.
- the expense of supplying a large number of small seasonal loans and recovering them.
- private enterprise takes no initiative in organising supplies for poor people.

The point of view is frequently expressed that agricultural extensionists should be limited to a purely advisory function. (Batten (1967) has drawn attention to the 'directive' and 'non-directive' approaches and the factors affecting choice).

Virone (1969) for example, cautions against allowing the rural extensionist to handle credit, farm input distribution or other such functions in the community, for fear of distorting his image and damaging his advisory function. However, he makes clear that the extensionist should ensure that farmers in the community are aware and take advantage of credit, subsidies and other facilities available to other farmers in the country.

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His model for implementing a rural development programme includes:-

- initially a few simple technical innovations, leading to a large number of complex ones.

- each innovation will begin on a few farms and should spread to practically all farms in the neighbourhood.

- the extension worker acts as an intermediary between: a problem; the people concerned in the community; expertise in research, administration, commerce or industry; the most suitable solution for local conditions; and, adoption of the solution by the people concerned.

- innovations to be introduced should be applicable to the majority of farms in the community.

Virone's approach could be viewed as a cybernetical and more indirect approach to the concept of an integrated programme but depending heavily on the ability of the individual field worker to locate and co-ordinate the necessary components in a viable package which may change considerably from year to year.

This approach may be more suitable for areas where highly trained field workers are available and where there is a relatively well-developed infrastructure of agricultural services. It presupposes a level of mobility, technical competence, co-ordinating ability, initiative and responsibility which at present does not exist among the majority of agricultural field workers in less-developed areas.

However, these conditions could realistically apply to the district agricultural officer and Virone's model could form the basis for planning a rural development programme at this level. Operations at the field worker/farmer level could then be organised as simple package programmes.

It is relevant to record that during the 1960s several package-type extension programmes were successfully developed in Rhodesia for tribal agriculture. Cotton production in the rather isolated Gokwe area was based on an annual ten-point plan drawn up by Reid (the Group Officer) and his staff, following close consultation with cotton research specialists and working closely with the Co-operative Officer regarding input supplies, transport, marketing, credit, payouts and recovery of loan debts.

Equally interesting results in the animal husbandry field were achieved in a programme of fattening cattle for sale originated by Stubbs (Animal Husbandry Specialist) in the Victoria Province and which eventually spread to most Rhodesian tribal areas. This programme of fattening old oxen and cull cows included a realistic estimate of costs and returns, selection of beasts for fattening, facilities required, management and feeding advice, group arrangements for marketing and transport and information on veterinary and movement regulations.

SEKI TRIBAL TRUST LAND - THE INITIAL PHASES OF A PACKAGE PROGRAMME.

Introduction

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SEKI TRIBAL TRUST LAND - THE INITIAL PHASES OF A PACKAGE PROGRAMME.

Introduction

Early in 1970 the National Director of the Credit Union Movement in Rhodesia and the local parish priest in Seki TTL showed interest in short full-time literacy courses as a means of improving the technical efficiency of savings clubs. They also saw literacy training as a possible starting point for a broad programme of adult education, starting with agricultural development. Literacy courses were held for three of the savings clubs during June and July, 1970, and have been described by Smith (1970).

The area is about fifteen miles from Salisbury and falls into Natural Region II (Vincent and Thomas,1960) with an average annual rainfall of between 28 and 42 inches, although there may be dry spells during the rainy season which may affect crop yields in certain years. The soils (Natural Area IIB) are medium-grained sands derived from granite, and are of inherently low fertility but respond markedly to fertilisers and manure.

[illegible] suggest that much

The recommended farming system is intensive crop production supported by livestock. Vincent and Thomas (pp.62-64) suggest that the key to good soil management is the regular replacement of organic matter, and all crop residues should be returned to the land either direct or through the animal.

Male absenteeism is very high, most of the men are away from home working, mainly in Salisbury, and they return home only at weekends or less frequently.

Credit Unions in Rhodesia are essentially thrift and loan societies, the main objects of which are to promote the social and economic interests of members by encouraging thrift and then utilising the accumulated savings by giving loans to members for provident and productive purposes.

Educational and community development principles are particularly encouraged in the Rhodesian movement in addition to the normal 'technical' aspects of thrift and credit operations. Members are taught how to utilise their money to best advantage and are encouraged to adopt a co-operative approach to problem-solving for their mutual benefit. Each organisation is operated by voluntary officials who are selected by the members themselves.

The first step in establishing a credit union is the formation of a savings club. During this stage members learn the relatively simple procedures involved in running a savings club. They build up capital in the form of savings, and they develop a group spirit of responsibility, trust and confidence. A Savings Club which has developed to this point can then be registered as a Credit Union. Loans can then be granted to members and other projects undertaken.

Initially the Credit Union Movement was sponsored by the Catholic Church as a practical method of 'social action'. The main promoter is still the Catholic Church, although efforts are being made to broaden the sponsorship of the movement by involving other churches, voluntary organisations and trade unions.

In 1968 the National Co-ordinating Council for the Credit Union Movement was established to promote Credit Unions throughout Rhodesia by means of training, co-ordination and organisation.

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Initial attempts at agricultural development.

The development of savings clubs in Seki TTL is associated with the need to improve agricultural productivity in the area. In 1968 there was a poor harvest and a charitable organisation 'Christian Care' supplied maize meal for distribution through the parish priest as famine relief to about seventy needy families. It was felt by the priest that this should be just a temporary measure and that the real need was to improve crop production methods so that people could grow enough to feed themselves. Accordingly, towards the end of the year loans in kind of fertiliser top-dressing were made to thirty-one people. The loans were not entirely repaid but actual defaulters were few.

In March of the following year (1969) savings clubs were started at the three larger centres. Although there is open membership, in fact only parishioners are members, and these are mainly women. The time for starting savings clubs was

propitious because people had become aware of the need to have money available when required - in November for agricultural inputs and December/ January for school fees.

In 1969 the parish priest made the first endeavour to link agricultural development with the savings clubs. With the assistance of a small revolving development fund he bought lime, fertiliser, and seed in bulk for issue on loan to members of savings clubs. Members were encouraged to keep their savings intact and withdraw only for emergency needs, e.g., if a child was sent away from school for non-payment of fees.

Participants in the scheme had to pay cash for the seed and had to repay the loan for compound fertiliser before the fertiliser top-dressing was issued. However, exceptions were made im the case of the very poor. A few who had not repaid their debts by September/October, 1970, had to withdraw savings, to repay before they were allowed to participate in the project in 1970.

The 1969 project was limited to the bulk purchase of inputs and there was no attempt to provide technical training or advice on the use of these, or supervision to ensure that they were correctly used. In fact, about 15% of the inputs were wrongly sold to non-members of savings clubs by local school teachers who acted as distributors. It became clear that one of the main reasons for poor crop yields was a complete lack of foresight and planning.

The 'package programme' 1970 to 1971.

The agricultural 'package programme' was organised as part of the literacy follow-up programme, although participation was open to all members of savings clubs, and was not limited only to those who had received literacy training. In order to mount the agricultural programme the 'National Council' of the Credit Union Movement agreed to pay the salary of a field worker for an experimental period of twelve months.

Preliminary discussions with the local priest focused on the acute lack of preparation and availability of equipment and inputs at planting time as the critical bottleneck in improving African agricultural production in Rhodesia.

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Preliminary discussions with the local priest focused on the acute lack of preparation and availability of equipment and inputs at planting time as the critical bottleneck in improving African agricultural production in Rhodesia.

Under normal circumstances there is little agricultural activity until ploughing commences with the rains and at this time the oxen are in such poor condition that they cannot pull a small single furrow. A proportion of cultivators who do not own livestock have to borrow or hire draught animals to plough efficiently. Due to late ploughing the crops are planted late - often more than a month after suitable planting rains have fallen. Because of late and shallow ploughing only poor yields can be expected even if selected seed and fertiliser is used, and other recommended practices are followed.

As a result of shallow ploughing, erosion and lack of organic matter, the fertility of much of the soil has been depleted. Plowes (1963) has estimated that on the average type of granite sandveldt (which is common in many tribal areas) cultivation for more than four to five years without dressings of manure and fertiliser results in yields so low (e.g. maize yields ranging from ½ to 2 bags per acre) that they do not justify the time and effort of continued cultivation.

It appeared that local cultivators had little idea of the factors involved in improved crop production and a complete inability to plan ahead. (Hunt (1966) has drawn attention to the low productivity of over 90% of tribal cultivators).

In view of this and the experience gained from the 1969 project, it was decided to structure the 1970 project mainly around the operations and necessary agricultural inputs required before and at planting time, together with specific training and supervision.

Maize was selected as the crop for the project because it is suitable for the area and it is the basic subsistence food. Most cultivators in Seki do not grow enough for their own requirements and large quantities of maize meal are purchased from Salisbury.

It was decided to limit participants in the project with assistance to grow half an acre or one acre of maize using recommended practices. This restricted acreage was to avoid involving participants in unrealistic heavy financial commitments, to keep management problems within bounds (especially labour) and to give participants experience on a small scale and confidence that there were no ulterior motives in the project. It also meant that standard recommendations (based on a half-acre unit) could be prepared and thus avoid confusion.

Maize production was analysed into four major steps. Firstly growing the crop:-

1. Land preparation.
2. Planting.
3. Stalkborer control and fertiliser top-dressing; and a final step following harvesting the crop -
4. Grain storage.

With the assistance of specialists from the Department of Conservation and Extension and one of the interested fertiliser companies, each of these major steps has been carefully analysed into its component items and specific recommendations on each item have been prepared relevant to the local situation. The purchase and financing of inputs, the subject matter content of demonstrations held at the three centres, and written material (handouts) are entirely based on these recommendations. Demonstrations have taken place at the same time as the relevant inputs were distributed, i.e., a few weeks in advance of the time recommended for each operation.

The recommendations are briefly as follows:-

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The recommendations are briefly as follows:-

1. LAND PREPARATION.

   Manuring: available locally.
   Liming: (following a soil test) purchased.
   Ploughing: oxen - available locally or tractor - loan available.

2. PLANTING.

   Seed: (recommended hybrid variety) purchased.
   Fertiliser: (moderate rate of fertilisation) purchased.
   Correct plant spacing and time of planting emphasised.

3. POST-PLANTING OPERATIONS.

Weeding: harrowing and early weeding recommended.
Stalkborer control: (DDT): purchased.
Fertiliser top-dressing (Nitrogen): purchased.

4. GRAIN STORAGE.

Ant and termite damage to harvested cobs (soil treated with dieldrin): purchased.
Weevil damage (Malathion): purchased.
Vermin control: materials to improve granary available locally.

Participation is limited to members of savings clubs. Loans for ploughing were not granted unless the soil had been manured and limed. Fertiliser was not issued unless the recommended quantity of lime was applied. Fertiliser and seed were not issued after the first planting rains, and fertiliser top-dressing was not issued unless the crop was planted correctly.

This pressure has been applied to emphasise the necessity of prior preparation so as to take advantage of the first planting rains. It has been accepted by participants because of the very real material advantages gained, such as the local availability and low cost of purchased inputs.

Payment for inputs (ploughing, lime, fertiliser and chemicals) comes from a revolving development fund established with the aid of various charitable organisations, and under the control of the local priest who orders supplies in bulk. Local distribution and supervision of operations is under the control of the field worker. Participants can start to repay the loan as soon as desired, and individual savings are a guarantee that the loan is paid in full.

The total loan required to grow half an acre of maize is in the region of R$13.50 if tractor ploughing (the largest item) is included. Due to the fact that a proportion of the loans are repaid soon after the first inputs are supplied, a relatively small revolving fund is required. There are just over one hundred participants in the project and it is estimated that all inputs could be adequately financed on the limited scale described by a revolving development fund of R$1,000.

Weeding: harrowing and early weeding recommended.
Stalkborer control: (LDT): purchased.
Fertiliser top-dressing (Nitrogen): purchased.

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Ant and termite damage to harvested cobs (soil treated with dieldrin): purchased.
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SOME PRELIMINARY FINDINGS

Material Results

There were exceptionally good planting rains at the beginning of the 1970/1971 season and most of the participants planted the maize project field during the second week of November. Germination was good, and later visual inspection for nutrient deficiency symptoms indicated that the fertiliser recommendations were sound.

The recommended practices were undertaken adequately by most of the participants - although some of them delayed treatment for stalkborer control until damage to the crop was apparent. However, in a few areas there was quite severe crop damage by vermin (spring hares and buck) and by the parasite - witch weed (Striga asiatica).

In mid-December it was estimated that crops would average 15-20 bags to the acre. However, there were severe droughts in January and February, the rain petered out, and the crop was grown on a total rainfall of just over eighteen inches. Most other maize crops in the area, except for early planted plots around the homesteads and the crops of Master Farmers, generally did not produce cobs.

The following are the official rainfall figures for Seki TTL:-

	November	December	January	February	TOTAL
Inches:	11.71	2.08	3.41	1.18	18.38

Data on yields was collected from seventy-one respondents (making up 'experimental' and 'control' groups in the literacy follow-up study) from a total of 104 participants in the agricultural programme. All yield figures are given in 200 lb. bags of grain per acre.

The range of yields was from NIL (field abandoned because of crop damage by buck) to 24 bags.

The mean yield per acre from the maize project fields was 10.0 bags. This compares with the mean yield from other maize fields of 3.8 bags.

This latter figure seems rather high, and it should be pointed out that these other maize crops were grown mainly on plots around the homesteads. These plots have a higher fertility level than other more distant fields because they receive all the household rubbish and night soil (during the cropping season). A number of participants also applied some manure, fertiliser and top-dressing to these homestead plots.

It is also interesting to note that the maize project fields produced 356 bags of grain from 35½ acres whereas the other fields only produced 328 bags from 87 acres.

It was unfortunate that the first year of the package programme should be a poor season. However, it must be remembered that the aim was initially to provide subsistence, and the return to participants should be considered in relation to what it would cost to buy an equivalent amount of grain or mealie meal, i.e., the 'consumption' value.

The cost of grain in Seki brought in from a controlled area (European Farming Area) or purchased from the Grain

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The cost of grain in Seki brought in from a controlled area (European Farming Area) or purchased from the Grain Marketing Board would be at least R$4.25 for a 200 lb. bag. (It is unlikely that there will be any local maize surplus for sale). The lowest grade of mealie meal would cost at least R$5.00 for 198 lbs. and the majority of people would pay proportionately higher prices than this because they purchase from local African stores in small quantities.

Response to problems.

A feature of a package programme is that less obvious limiting factors rapidly become apparent together with an urgent need for solutions if the package programme is to remain viable.

Early in 1970 the National Director of the Credit Union Movement in Rhodesia and the local parish priest in Seki TTL

11.

For example, it soon became apparent that much greater emphasis must be placed on the use of oxen for deep winter ploughing while the soil is still moist by those people who own draught animals. This will save the cost of hiring a tractor for ploughing. Early ploughing has been emphasised during 1971 and the majority of participants have already (June) winter-ploughed most of their lands.

Early in the project it also became clear that many participants do not have sufficient manure even though they have adequate numbers of large livestock. This is due to the fact that animals are not generally kraaled at night once the crops have been harvested, but are allowed to wander in search of grazing. The problem of non-stock owners is more acute, they must hire draft power and collect as much organic matter as possible, including animal manure, to make compost. With this in view a demonstration on methods of improving soil organic matter was organised following crop harvesting in order to ensure that crop residues were not wasted.

This demonstration included:-

Kraal manure and compost (for farmers with cattle).
Compost (for farmers without cattle).
Ploughing in crop residues (for farmers with no cattle).
Green manuring (for more advanced farmers).

Another problem which had to be faced at harvest time was damage to the harvested cobs by harvester ants and termites which attacked cobs left to dry. This problem was solved by placing the cobs on a layer of dry grass on soil which had been treated with dieldrin dust. The grass was later composted.

Functions of the field worker.

The field worker has functioned in much more than an advisory capacity. His work has included checking and ensuring that various essentials are in fact available such as the availability of oxen for ploughing, and correct plough settings. He has also checked that the various operations such as manuring, liming and depth of ploughing were correctly undertaken. He has also been concerned in collating orders for supplies and issuing these and checking the credit-worthiness of participants against their deposits in the savings club.

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He has been subject to considerable social pressure on occasions from individuals who were not allowed to participate in the project but wanted supplies, i.e., those who had outstanding debts from 1969, those who had only recently joined a savings club and had insufficient deposits to cover loans, those who wished to participate at a late stage after planting was completed, and non-members of savings clubs who wished to pay cash for inputs.

One of the main problems of the field worker has been his inability to visit all participants as often as desirable to ensure that inputs were being used correctly.

However, the practical assistance as compared to a narrower 'advisory' approach is greatly appreciated by the participants and has been widely commented upon in the area.

and organisation.

Initial attempts at agricultural development.

A factor which has also made the project acceptable locally is that it is promoted by a voluntary/church agency in which the people themselves are already deeply involved, and is seen as having a purely 'helping' function with no ulterior motives. This is an important factor among rural people who are naturally suspicious of any kind of bureaucratic approach.

The need for a calendar of training and work.

De Wilde et al (1967) have commented on the paucity of agricultural development in the savannah regions of Africa and this underlines the need for timely and careful organisation of the package programme in order to take advantage of the relatively short rainy season. Experience at Seki suggests that the dry season must be utilised to the maximum for training and organisation so that appropriate knowledge and means are available locally when the agricultural season starts. Ideally there should be a carefully constructed training and work programme for each month of the year in which the majority of the rural population should be involved.

Demonstrations have generally been well attended with a total of between 100 to 200 people taking part at each demonstration. However, not all the participants have attended all the demonstrations and some poor practices, e.g., plant spacing and stalkborer control, can be attributed to this.

An important feature of recommendations at demonstrations is 'feasibility' or 'local applicability' rather than what may be considered ideal. The practice recommended must work (or be made to work) under the prevailing local conditions. For example, individual grain storage and the traditional type of granary using local materials is recommended rather than co-operative grain stores.

Good timing of demonstrations, supply of inputs, and farming operations is extremely important. An example of unfortunate timing was the government conservation programme which was operating in the area until the beginning of the rains. It was widely rumoured that cultivators who did not build contour ridges where required would not be allowed to plant crops in the 1970/1971 season. For a period of about six weeks many people hesitated whether to join the project and carry out early land preparation and ploughing or not.

Savings Clubs - a key to rural development.

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Savings Clubs - a key to rural development.

There are clear indications that savings clubs (with a revolving development fund) are key organisations for rural development involving the mass of unimproved cultivators in the tribal areas.

The savings clubs are unique in fulfilling three essential functions (cf. Gaitskell, 1966, and Virone, 1969):

1. They act as a local agency for the accumulation of small-scale savings. It appears that there is a continual trickle of cash coming into all but the most poverty-stricken of tribal families from: urban areas, crafts and sales of crops, vegetables, etc. Unless there is a local facility and the discipline of regular saving this money is wasted and is not available for agricultural and other essentials when required.

Under normal circumstances there is little agricultural activity until ploughing commences with the rains and at this time the oxen are in such poor condition that they cannot pull

2. They are a good basis for local group participation in and financial support for a package programme.

3. Members' savings are a guarantee of the proper use of supplies on credit and responsible loan repayment.

Possible future developments.

Although the project is still in its early phases, already the advantages of a 'package' type of programme are obvious. Members of the project receive specific advice, and they have access to the necessary loan finance to purchase the recommended agricultural inputs which are made available locally at a cost less than from other suppliers.

The long-term aim is for these savings clubs to develop into full credit unions and thus be able to finance agricultural development by means of loans to members. Until that time a revolving development fund will be necessary. Eventually the project should be entirely controlled and organised by the participants themselves, who should also pay the field workers' salaries if they are still required. Training has a vital role in order that this level of operations is achieved.

Already (1971) the Savings Club Committees are being trained to take over the local ordering and distribution of supplies. This will allow the field worker to devote more time to individual advisory work and credit supervision.

The recent introduction of a savings stamp and certificate procedure has reduced the amount of elementary book keeping previously required to a minimum. This has freed committee members for more productive work.

However, in the early stages a paternalistic element is considered unavoidable and a key factor is an interested and committed mentor (such as the parish priest) who is resident in the area.

The package programme for the 1971/1972 season involves the cultivation of one acre of maize (for subsistence and local sale), half an acre of ground nuts (for sale) and quarter of an acre of a small-grain millet or sorghum (insurance against drought).

An exploratory package programme in home economics, with improved nutrition as the core, is also to be started in [illegible] later in 1971.

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The package programme concept is being replicated (in some instances with modifications to suit local circumstances) with savings clubs in other tribal areas. The National Council of the Credit Union Movement is cautiously optimistic that despite administrative problems a carefully phased adoption of this approach is possible on a wide scale, and is a practical way of assisting the majority of peasant cultivators to move from a bare subsistence production to adequate self-sufficiency plus a surplus for cash needs during the next decade in Rhodesia.

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