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RAPID DEVELOPMENT FOR KENYA'S
SMALL FARMS

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The paper presents the results of two years of field experimentation in the SRDP Extension Pilot Project. It thus briefly describes some of the results obtained, the objectives, the problem to which the tested strategy addresses itself, the step-by-step description of the strategy in how-to-do-it fashion and the benefits to be expected.

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The strategy also accelerates the income- and employment-generating agricultural innovations in less progressive farmers in small-holder areas, through integrating the services provided by extension field officers (the 577 (over) and the staff of Cooperative Societies Union (CSU)).

A tested method to accelerate the adoption of income- and employment-generating agricultural innovations by less progressive farmers in small-holder areas.

The project has achieved its aims except in the respect that the repayment of the loan is still too low to enable the farmer to repay the loan. Continued experimentation will focus on that problem.

Information on a strategy developed and tested under the auspices of SRDP and in co-operation with: MOA's Training Division (PTO Central and Wambugu FTC); MOA's Farm Management Division (Head of Division and PLFMO Central); MOA's field officers in Central Province (PDA, DAO Nyeri, AAO Tetu and AA's and JAA's in Tetu); the MFP (Regional and Physical Planning Unit and PPO Central); AFC; the DO/Area Co-ordinator and Chiefs and Subchiefs in Tetu; the Nyeri Co-operative Union and the IAS, University of Nairobi.

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ABSTRACT

The paper presents the results of two years of field experimentation in the Tetu SRDP Extension Pilot Project. It thus briefly describes some of the results obtained, the objectives, the problem to which the tested strategy addresses itself, the step-by-step description of the strategy in how-to-do-it fashion and the benefits to be expected.

The strategy aims at accelerating the inflow of food-, employment-, and income generating agricultural innovations to less-progressive farmers in small-holder areas, through integrating the services provided by extension field workers, the FTC (training), the AFC (credit) and the stockist or Cooperative Union (inputs).

The project has achieved its aims except in one respect: the repayment ratio for the unsecured crop loan so far obtained (78%) is still too low to warrant mass replication. Continued experimentation will focus on that problem.

WHAT FARMERS SAY:

"THE WHOLE PROGRAMME IS VERY GOOD. BUT IF YOU KNOW SOMETHING THAT CAN MAKE IT EVEN BETTER, WE SHALL BE MOST GRATEFUL".

"I AM VERY PLEASED BECAUSE FOR THE FIRST TIME IN MANY YEARS I AM GOING TO EAT SOMETHING FROM THIS PIECE OF LAND".

"THIS IS REAL UHURU'S FRUITS. I DO FEEL THAT THE GOVERNMENT NOW KNOWS THAT WE DO EXIST".

"IT IS NOW APPARENT THAT WE WON'T BUY FOOD THIS YEAR. WE HAVE ALWAYS BROUGHT FOOD".

"I AM A PEASANT, A SIMPLE PERSON OF NO IMPORTANCE, BUT I NO LONGER FEEL FORGOTTEN BY THE GOVERNMENT".

"WE WANT TO PROGRESS, BUT WE NEITHER KNOW HOW NOR DO WE HAVE THE MEANS. BUT IF GIVEN A CHANCE, I THINK THIS PROGRAMME PROVES WE CAN DO SOMETHING ALTHOUGH WE ARE NOT EDUCATED".

1. INTRODUCTION

"Sofar, we had not seen the fruits of Uhuru, but now we have eaten them". That is what small-holders told us after participating in the programme described herein. And a programme which is capable of eliciting such remarks may be of interest to a wider public. Therefore, we hereby present a very brief description of objectives, relevance and operation of the programme in how-to-do-it fashion, so that busy policy makers and politicians can consider it^{@)}.

In the test runs, a total of 798 below-average farmers were trained in hybrid maize growing in a total of 19 3-day FTC courses. Virtually all (97%) of these farmers accepted a 1 acre seasonal unsecured crop loan, administered by AFC, and planted the hybrid maize for the first time in their life (farmers were selected for never having planted the crop). So far, only the farmers of the first set of courses have harvested. More than three-quarters (78%) of them voluntarily repaid the unsecured crop loan which is a better repayment ratio than the national average for secured GMR crop loans. Nearly all of the repayers accepted a second loan. Apart from the 798 farmers trained, an estimated 2000 others adopted hybrid maize as a result of diffusion effects. Notwithstanding these very favourable results, the repayment ratio of 78% so far achieved, is too low to warrant mass replication. Experimentation to seek methods which guarantee better repayment rates has been initiated.

2. THE PROBLEM

The small-holder areas (with average farm sizes of below 7 acres) in Central, Nyanza and Western Provinces alone account for 55% of Kenya's rural population. The population in these areas is growing very fast. ILO estimates that by 1985, 700,000 extra rural families will have to find a livelihood within the existing small-holder areas (now inhabited by about 2.4 million rural households), because only limited numbers can be settled or given employment elsewhere. Since a vast migration out of the small-holder areas is currently taking place, the need to settle more families in them poses a great challenge to Kenya's ability to provide food, income and employment on small farms. The need to find a livelihood for 700,000 extra families in the small-holder areas means that average farm sizes will decrease as small farms are further split up among the sons of farm owners.

@) a detailed account of the research, experimentation and evaluation which led to the strategy presented here will be published shortly: N. Roling, F. Chege and J. Ascroft: "Innovation for Kenya's small farms: a strategy for equitable rural development" IDS, University of Nairobi.

At present the small-holder areas have not participated proportionally in Kenya's development. Meanwhile, great inequities are rapidly developing between more-and less-progressive farmers within them.

An urgent and great effort is thus necessary to provide increased food supplies, incomes and employment to Kenya's small-holders in general and the less-progressive ones in particular.

One method for improving food, incomes and employment is the introduction of agricultural innovations, such as grade cattle, coffee, tea, pyrethrum, hybrid maize, passion fruit, white Mexican beans, pigs, layers, etc. Many of these already form the backbone of whatever prosperity there is in small-holder areas. But more and improved innovations will have to be introduced rapidly to intensify and diversify the future small-holder farm (which will by then probably be no larger than 4 to 5 acres on the average).

It is only when Kenya's industrial capacity is developed that policy can start aiming at larger and more economical farm units. The present tendency to already do so is premature.

3. WHERE THE EXTENSION MACHINERY FAILS TO SOLVE THE PROBLEM

The present extension machinery, though making a valiant effort, is not eminently geared to the rapid development of Kenya's small-holder areas through the introduction of food-, income- and employment-generating innovations.

(1) Though Kenya has the best extension worker/farmer ratio in East Africa (1: about 500 farmers, as against 1:1500 in Tanzania and 1:1800 in Uganda), this vast machinery is ineffectively utilised for the rapid introduction of innovations. The main method used by the field staff is the individual farm visit which can at best ensure the slow diffusion of an innovation.

(2) FTC's, which could be effectively utilised for group-extension methods, are not able to recruit enough farmers to fill their classes and usually work at less than 50% capacity. Even then, the majority of FTC trainees are not farmers but officials, traders, etc.

(3) Government services, such as extension and credit provision, favour the large, progressive farmer and thus only aggravate inequity within small-holder areas. There is, for instance, no Government programme to provide

seasonal crop credit to farmers who have less than 15 acres of wheat or maize^{*}. As a result, 60% of small holders in Tetu, for instance, still have to buy maize every year, even though Tetu is one of the more developed areas.

(4) The successful and rapid introduction of a prosperity-increasing innovation requires the co-ordination and integration of various services, such as extension, training, credit and input provision, disease control, marketing, transport, and processing. The KTDA's success is based on the successful integration of these services. However, the regular Government machinery has disintegrated the essential services into various institutions, such as the Crop Division, the Training Division, the AFC, the Co-operative Unions (inputs), private processing companies, etc. This makes effective introduction of innovations difficult. Wheat is grown in areas which cannot be reached by combines to harvest the crop, and the introduction of macadamia nuts has so far led nowhere. Meanwhile, good possibilities for increasing incomes and employment in small-holder areas, such as Mexican beans, passion fruit (the factory is already there and works at 25% of its capacity), and stall feeding of cattle take inordinately long periods of time to benefit farmers, and especially those who have very small farms and are so-called less-progressives. For instance, hybrid maize was introduced in Tetu in 1964 but in 1970 only 30% of Tetu farmers had adopted it (especially progressive ones). By 1973, 60% of Tetu farmers still bought maize every year.

4. THE OBJECTIVE OF THE STRATEGY.

Given the problems enumerated above, the objective of the strategy is to accelerate the flow of food-, income- and employment-generating agricultural innovations to less-progressive farmers in Kenya's small-holder areas through a redeployment of existing Government resources and manpower.

5. OVERVIEW OF THE STRATEGY

The objective is to be achieved by providing farmers with a package of co-ordinated services aimed at facilitating the rapid adoption of a given innovation. The strategy consists of the following steps.

(1) The Subchief and JAA in a sublocation select and invite 25 to 30 farmers who are homogeneous in that (1) they lack the innovation which is to be promoted on their farm, (2) they lack other common innovations (which makes

* some IDA loans finance seasonal crops as part of a farm development or tractor loan.

them less-progressive), and (3) they are from one small, ecologically homogeneous area. For each group, the Subchief and JAA also select and invite 2 to 4 more progressive farmers, who have already adopted the innovation concerned, to act as "motivators".

(2) The farmers thus selected in two adjacent sublocations (i.e. a total of 50 to 60) are collected in their locality by the FTC bus and taken to the FTC.

(3) The farmers are trained (together with their JAA) at the FTC during a short course of up to 3 days, according to a curriculum which stresses (1) economic motivation to adopt the innovation, (2) all aspects of husbandry related to the innovation, and (3) details on the provision of credit, inputs, etc, which make adoption by a small scale farmer feasible.

(4) During the course, AFC provides the farmers with a credit voucher for a package of inputs necessary to implement the innovation a given scale (say one acre).

(5) The Co-operative Union or supplier provides the farmers with the inputs in exchange for the vouchers, from stores or factories located close to the localities of the farmers.

(6) Farmers adopt the innovation (use the inputs) and are assisted during this time by the JAA, who also follows up on other husbandry practices and disease control.

(7) After a given time (the harvest), AFC, with help of Administrative staff, collects loan repayments. Those who have repaid the loan receive a second loan so that the innovation continues to be used on borrowed capital.

6. BENEFITS

The following benefits can be expected from utilising the strategy:

(1) It provides a practical method for sharply accelerating the increase of incomes and employment on small farms and allows aiming services at less-progressive farmers. The land and labour resources they control are thereby put to better use for the nation's benefit.

(2) The strategy has a very high pay-off. A very high percent of the less-progressive farmers asked to come to the FTC actually show up. Nearly all of those who go through the course accept the loan and adopt the innovation. Nearly all those who have repaid accept the second loan.

(3) The strategy co-ordinates and integrates separate Government-and other services for purposes of achieving rapid agricultural development.

(4) The strategy allows effective use of the FTC's.

(5) The strategy insures a high diffusion effect because groups of farmers from one small area are trained simultaneously which introduces a substantial pressure for change in the area.

(6) The strategy allows providing the small farmer with an unsecured seasonal crop loan while guaranteing proper use of the loan and proper understanding of its conditions through training. The major incentive to repay the loan is the provision of a new loan after repayment. The default rate sofar experienced is no greater than the national average for secured loans*.

7. HOW TO DO IT.

7.1 Preparatory meeting.

Composition: PDA, PTO, DC, District Development Officer (DDO), DAO, FTC Principal, AFC Branch Manager, Union Manager**.

Agenda Items: Type of innovation to be promoted in view of market possibilities; input package needed for a farmer who wants to adopt the innovation; cost per input package; number of farmers aimed at; type of farmer aimed at; sublocations from which farmers are to be selected; timing of FTC courses; availability of inputs (especially genetic material); total funds needed for the loans.

Timing: before the submission of estimates.

7.2 Financing.

Include the total sum needed in the estimates. Last-minute sources of funds are: Crop development allocations and District Development Grants. Funds are to be placed in AFC's account so that AFC can administer credit provision and repayment. When asking for funds, don't say that funds will be used as a "grant" to AFC. Obscure rules do not permit this. Rather say: "The money will be utilized as a revolving fund which is administered by AFC". By starting small and asking for a new allocation every year, one can build up a large revolving fund for an area. A decision on how to finance this type of expenditure across a large number of Districts will probably have to be made centrally eventually.

* The credit system was developed by AFC and was also utilized in the Vihiga SRDP. However, in Vihiga, the loan was not coupled to training.

** Throughout section 7, we shall use the example of the Union as the provider of inputs. However, where there is no Union, the supplier (e.g. KFA) and his stockists can play the same role.

7.3 FTC teacher training

FTC teachers are usually AA's who have been taken from the field. Most of them have by now been trained in adult education techniques: motivation, audience participation, use of visual aids, and demonstration. Yet it may sometimes be necessary to provide such training.

Institution recommended: Institute of Adult Studies, University of Nairobi. Costs: around 30/- per day per person.

Duration: one week.

Timing: well in advance of the courses.

Note: once the teachers have been trained, the FTC is ready for a variety of courses on different innovations.

7.4 Action Planning meeting.

Composition: PDA, PTO, PLFMO, DC, DDO, DAO, FTC Principal, AFC Branch Manager, Union Manager, DO's, AAO's.

Aim: to achieve thorough agreement on goals and activities and to assign tasks and deadlines to officers.

Agenda Items: number of courses; course dates (keep courses as short as possible, leave one week between first and second courses for adjustments, don't forget difference between collection date and course starting date, plan for unallocated course at end of series of allocated courses); number of farmers (around 50 per course); criteria and procedure for farmer selection; timing of selection-meeting with Chiefs, Subchiefs, AA's and JAA's; curriculum development; details of credit provision; distribution of inputs; collection of repayments; allocation of duties and deadlines. DAO is responsible for implementing entire effort.

Optional topic: follow-up by JAA's. Follow-up will only be achieved with very strong support of DAO.

Time: soon after the estimates have been approved and when transfer of funds to AFC seems very likely.

7.5 Curriculum development.

A curriculum has a what and a how component. The what consists of the points to be covered in the curriculum. These must be provided by the technical experts (PCO, PLO) as well as the experts on credit (PLFMO, AFC). PTO must push

very hard to get these points written down. Writing a curriculum is an unfamiliar task.

When technical points are available, the draft curriculum can be developed which incorporates the how element, i.e., motivation at the beginning of the course (answer the question: why should farmer adopt the innovation by working out economics or letting farmers work out economics themselves), the timing of classroom work and practical work, the visual aids needed, etc. Draft curriculum should be written up in detail.

Person responsible: PTO.

The draft curriculum is to be discussed with FTC teachers. Their suggestions are incorporated. Final curriculum is mimeographed. Mimeographed curriculum provides indispensable basis for courses and ensures maintenance of quality.

Time: start curriculum development three months before courses.

7.6 AFC preparation.

AFC makes certain that funds have been received in AFC account. If not, it keeps trying. It checks with Union Branch Manager on final detailed pricing of input package and bargains for cheap package on behalf of farmers. Package should not cost more on the voucher than in local shops.

AFC prints application forms and vouchers, incorporating price of package, repayment date, date of last costless return of voucher, interest, other conditions (e.g. crop failure). These documents must allow space for ID or plot number and at least three of the farmer's names.

Time: to be completed before courses start.

7.7 Meeting Local officials.

Composition: DAO, DO, Principal FTC, AAO, AA's, JAA's, Chiefs and Sub-chiefs of localities involved.

Agenda Items: explanation of strategy and curriculum; conditions for participation; dates of courses and sublocations expected at each (this is crucial, ensure same dates on lists fieldstaff, FTC staff); number of farmers per sublocation; criteria for selecting farmers; need to select less progressive farmers and 2 - 4 progressive "motivators"; invite JAA's to courses; stress need to bring information to fill farmer's application form (plot number,

ID number, farmsize); arrange collection points at each sublocation; discuss method for inviting selected farmers (best: subchief calls meeting of selected farmers, explains project and invites farmers on the spot. This method allows use of group pressure. Do not mention that courses are for less-progressive, poor or backward farmers). Stress need for each sublocation to fill quota.

Optional topic: follow-up after course by JAA. Hear arguments of JAA against follow-up, reach compromise.

Time: 3 weeks before courses are to start, so as to allow subchiefs to inform farmers in time.

7.8 Meeting of Principal and FTC teachers.

Curriculum is now ready. But each period in curriculum must be allocated to a teacher. Also: divide tasks for making visual aids, collecting exhibits (such as jars with live weevils, sample bags of fertiliser, etc), finding demonstration plot (some crops may have to be uprooted in FTC farm for demonstration plot), jembe's, ropes, etc. Note: explanation of the credit package may have to be done by guest speaker (AFC branch manager or PLFMO).

Principal arranges to purchase sheets of newsprint and broad tipped felt pens for making wall charts.

Optional: If FTC has mimeograph machine and vote for duplicating paper: arrange for handouts of what is written on wall charts to be mimeographed for farmers in the vernacular. (Nearly all literates are literate in vernacular, fewer are literate in Swahili and English also). Farmers love the handouts which can partly substitute JAA follow-up.

Time: week before courses start.

7.9 Transport farmers.

FTC bus picks up farmers on arranged collection date from arranged collection points from adjacent sublocations. On trip out, bus drops participants from the previous course. Farmers need to be back at collection point well before dark. Count on a whole afternoon for transport of farmers when planning courses. This is why collection date is one day prior to start of courses. Always use collection dates in meetings with local officials and in planning courses.

7.10 Courses.

Courses follow curriculum in detail, but adjust depending on experience gained during course. Explain credit package early in course (first evening) and hand out application forms early in course. JAA assists his farmers in filling them. AFC branch-manager comes towards end of course and picks up application forms, processes them and hands out the vouchers. Farmers sign voucher first time upon receipt. AFC agrees with farmers about the Union store or factory they prefer for receiving their supplies.

Optional: If follow-up has been decided upon, JAA meets with his farmers at the end of the course to arrange dates on which he will meet farmers for first follow-up.

7.11 Co-ordination AFC and Union.

Immediately after course, AFC informs Union Manager which supplies are needed at which store(s). Union manager makes sure such supplies are available at store(s) mentioned or arranges transport to the store(s).

7.12 Distribution of supplies.

Farmers come to Union store and exchange their voucher for supplies, signing the voucher second time upon receipt supplies. Union Manager gives all the vouchers he receives to supplier and gets refunded through supplier. It is at this point that money in AFC account is spent, because AFC refunds the supplier (e.g. KFA) in return for the vouchers.

7.13 Follow-up by JAA.

JAA visits farmers in groups or individually to ensure that proper use is made of inputs, to monitor crop failure and to ensure proper husbandry and pest control.

7.14 Meeting on loan repayment.

Composition: DAO, AAO, AA's, JAA's, DO, Chiefs and Subchiefs, AFC Branch Manager.

Agenda Items: organisation and timing of repayment, type of follow-up to be used (here the Administration has vital role to play. The loans are unsecured and follow-up by Chief or Subchief is important weapon to get the 25% or so non-payers to come across^{*}.)

* in case of genuine crop failure, AFC can extend the loan for an extra year without extra interest.

Time: few weeks before repayment date.

7.15 The repayment exercise.

JAA's and Subchiefs arrange two dates with the farmers during which AFC Branch Manager will come to locality to collect repayment and hand out new vouchers. (Farmer can now take more than one voucher if he wants to expand his operation.)

Farmers who do not repay during the two meetings can come to AFC to repay on their own until a given date. After that, names of those who have not voluntarily repaid are given to Chief for follow-up.

8. WARNINGS.

(1) The strategy is deceptively simple but needs commitment on the part of the officials. If anything goes wrong, the trouble can always be traced to a malfunctioning of the Extension machinery or to an official. Do not waste time looking for problems among the farmers. They like the programme. It is essential to make one person (DAO) responsible for whole programme.

(2) The whole exercise can only accelerate the adoption of innovations. Transport, processing and marketing have to be ensured separately. IF THESE OTHER SERVICES ARE NOT PROVIDED SIMULTANEOUSLY, SERIOUS PROBLEMS CAN DEVELOP IF THE METHOD IS USED.

9. CHANGING THE METHOD FOR GREATER IMPACT.

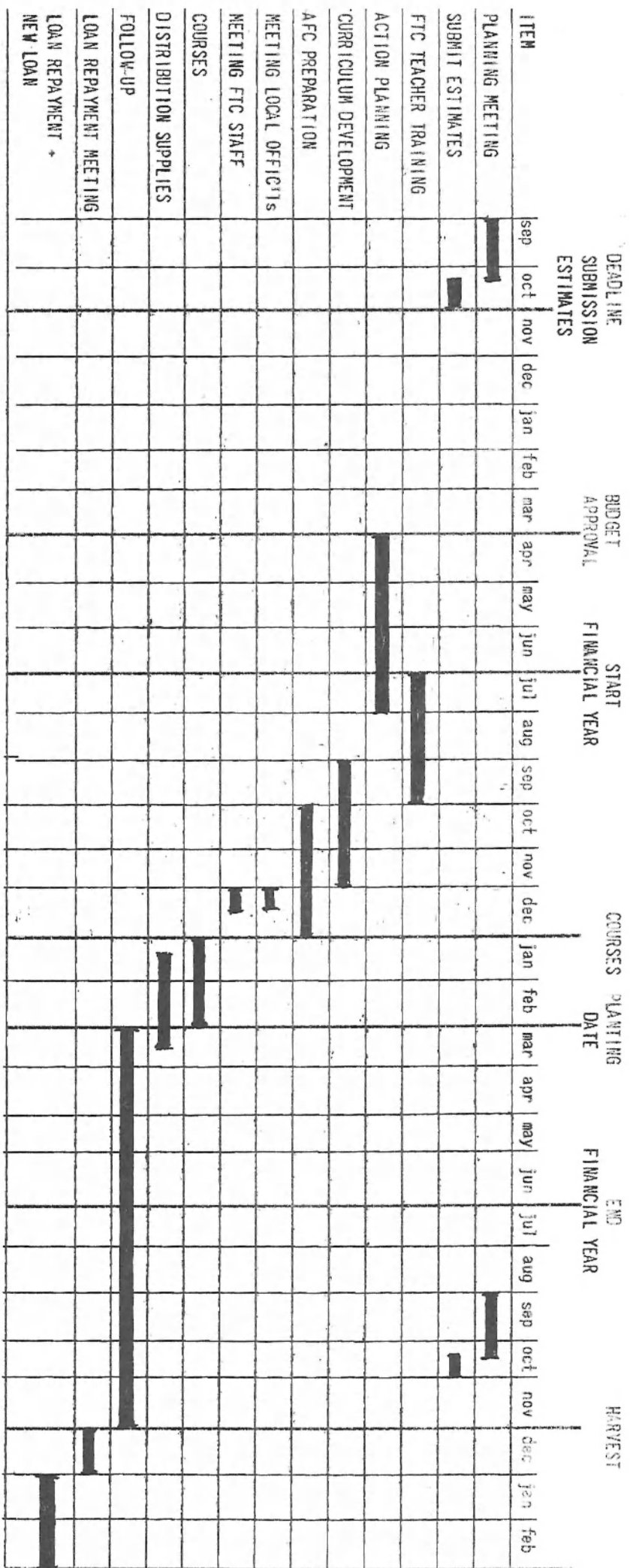
Especially with crop innovations, the effective time for holding courses is in the 2 months before the rains. This limits the number of farmers one can reach. In 2 months one can have 14 courses (leaving a week for adjustments) or around 700 farmers in 28 sublocations per year per FTC (assuming one growing season). Including diffusion effects, one cannot reach more than about 3000 farmers per year per FTC. Although a great improvement over current practice, one would want greater impact.

To achieve this, one could change the strategy slightly. Instead of the FTC training farmers directly, the FTC could train AA's to train farmers. That is, the field staff would now give the short courses in the field, in classrooms, church buildings, etc. The advantages of the method so far developed could be retained, while one could drop the course fees, expensive FTC bus farmer transport, and improve recruitment because more farmers would be able to come. The field staff would help farmers fill the application forms and take them to the AFC office. The AFC would come to the field later to hand out the vouchers to the participants.

The field staff would, of course, have to be strictly supervised and strongly assisted with ready-prepared visual aids, curricula, and basic information for their own teaching. Certain technical presentations could be provided on cheap cassette recorder tapes. All these requirements would be centrally provided which is entirely feasible once the Agricultural Information Center is expanded.

With this system, up to 500 farmers per location could easily be trained in the month before the rains. That would allow training 2000 farmers in Tetu alone, for instance, i.e., more than one sixth of all 12,000 Tetu farmers in a year.

A proposal to test this method in Tetu and Vihiga has been endorsed at a recent meeting in MOA. It was emphasized that an enterprise other than maize should be used as the trial innovation.



TIME PLANNING CHART FOR IMPLEMENTING THE STRATEGY *)

*) Assuming a planting date in March.

- For detailed implementation planning, one can use the Programming Charts and Annual Phasing Sheets developed for SRDP.
Consult MFP (Regional + Physical Planning Unit) or SRDP Area Coordinators.