

AID 1020-25 (7-68)		SECURITY CLASSIFICATION		001 PROJECT NUMBER	
PROJECT APPRAISAL REPORT (PAR) (U-446) See M.O. 1026.1		UNCLASSIFIED		617-11-110-012	
002 PAR	MO.	DAY	YR.	003 U.S. OBLIGATION SPAN	
AS OF:	05	30	70	FY 63	THRU FY 73
008 COOPERATING COUNTRY - REGION - AID/W OFFICE			004 PROJECT TITLE		
Uganda Africa ESA			AGRICULTURAL EXTENSION		

A.I.D.
Reference Center
Room 1656 NS

006 FUNDING TABLE

AID DOLLAR FINANCING-OBLIGATIONS (\$000)	TOTAL	CON-TRACT (NON-ADD)	PERSONNEL SERVICES			PARTICIPANTS		COMMODITIES		OTHER COSTS	
			AID	PASA	CON-TRACT	DIR. PASA	CON-TRACT	DIR. PASA	CON-TRACT	DIR. PASA	CON-TRACT
CUMULATIVE NET THRU ACTUAL YEAR (FY 1970)	1739	16	546		14	541		280	2	356	
PROPOSED OPERATIONAL YEAR (FY 1971)	260		140			80		20		20	

CCC VALUE OF P.L. 480 COMMODITIES (\$000) → Thru Actual Year : **None** Operational Year Program : **None**

007 IMPLEMENTING AGENCY TABLE

If contractors or participating agencies are employed, enter the name and contract or PASA number of each in appropriate spaces below; in the case of voluntary agencies, enter name and registration number from M.O. 1551.1, Attachment A. Enter the appropriate descriptive code in columns b and c, using the coding guide provided below.

TYPE CODE b	TYPE CODE c	a. IMPLEMENTING AGENCY	TYPE CODE		d. CONTRACT/PASA/VOLAG NO.	e. LEAVE BLANK FOR AID/W USE
			b.	c.		
1. U.S. CONTRACTOR 2. LOCAL CONTRACTOR 3. THIRD COUNTRY CONTRACTOR 4. PARTICIPATING AGENCY 5. VOLUNTARY AGENCY 6. OTHER:	0. PARTICIPATING AGENCY 1. UNIVERSITY 2. NON-PROFIT INSTITUTION 3. ARCHITECTURAL & ENGINEERING 4. CONSTRUCTION 5. OTHER COMMERCIAL 6. INDIVIDUAL 7. OTHER:	1. Not Applicable				
		2.				
		3.				

PART I - PROJECT IMPACT

I-A. GENERAL NARRATIVE STATEMENT ON PROJECT EFFECTIVENESS, SIGNIFICANCE & EFFICIENCY.

This summary narrative should begin with a brief (one or two paragraph) statement of the principal events in the history of the project since the last PAR. Following this should come a concise narrative statement which evaluates the overall efficiency, effectiveness and significance of the project from the standpoint of:

- (1) overall performance and effectiveness of project implementation in achieving stated project targets;
- (2) the contribution to achievement of sector and goal plans;
- (3) anticipated results compared to costs, i.e., efficiency in resource utilization;
- (4) the continued relevance, importance and significance of the project to country development and/or the furtherance of U.S. objectives.

Include in the above outline, as necessary and appropriate, significant remedial actions undertaken or planned. The narrative can best be done after the rest of PART I is completed. It should integrate the partial analyses in I-B and I-C into an overall balanced appraisal of the project's impact. The narrative can refer to other sections of the PAR which are pertinent. If the evaluation in the previous PAR has not significantly changed, or if the project is too new to have achieved significant results, this Part should so state.

008 NARRATIVE FOR PART I-A (Continue on form AID 1020-25 | as necessary):

Prior to 1966 the Extension project was directed at providing assistance to the District Farm Institutes. The project consisted mainly of in-service training by the Extension Advisor, and supplying commodities, mostly visual aid and demonstration equipment. Two other activities included in the Extension project were the establishment and equipping of the Information and Visual Aids Center

MISSION DIRECTOR APPROVAL →	SIGNATURE <i>Will Muller</i>	DATE 6/3/70
Prepared by:	UNCLASSIFIED	Clearances: F&A/RAOttley

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PAR CONTINUATION SHEET

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008 NARRATIVE FOR PART I-A (cont.)

and the initiation of the Young Farmers of Uganda program. Technical guidance and advice from the technicians responsible for implementing these activities were coordinated at the USAID Food & Agriculture Office. The advisor for visual aids and information was phased out after one tour 1964-65 and the Rural Youth Advisor position was discontinued in May 1968 after two tours of duty covering the years 1964-68. In both cases staff had been trained to carry on the activity without further assistance from advisors.

Programing of the Rural Youth and Information activities continued under the Extension project after the advisory positions were phased out and some commodities and participant training were provided. Advisory activities for the three sub-projects were the responsibility of the National Extension Advisor and Project Manager.

After working intensively with District Farm Institutes (D.F.I.s), 1964-1966, it was evident that advice and assistance in Extension Management and Supervision was urgently needed for the extension field staff. A project was launched in 1966 to give intensive training to all the staff and field officers concerned. The field staff had very few trained Agricultural Assistants (AAs) who were well qualified to advise farmers. This resulted in a program of a very diluted nature reaching only a few so-called progressive farmers. The situation called for more concentrated effort to get results. With the staff limitations in mind a trial was run in 1967 with 16 communities in 16 different districts to see what results intensive extension education would produce. A summary of this trial exercise covering one year is attached labeled Appendix No. 1.

A proposal was made at the end of the trial run to expand the activity to every county with one Miruka (Political sub division of county) designated Extension Saturation Project (E.S.P.) Unit. The term "Saturation" is used to indicate the objective of the project which is to provide all of the extension education to the designated Miruka that it can readily absorb. In other words the Miruka consisting of about 500 farm families is to be saturated with extension activities. *

The proposal was presented to AID/W and the GOU Department of Agriculture and drafted into the Project Agreement and a PROP was prepared which required USAID to provide four additional extension advisors, participant training for extension supervisors and supplies and equipment for farm demonstrations. The GOU staff requirements were to be supplied initially by reallocating work time of existing extension officers. Each Agricultural Assistant (AA) having an E.S.P. Miruka was to devote at least 50% of his time to extension education in the E.S.P. Unit. This would give a theoretical staff/farmer ratio of approximately 1 A.A. to 1,000 farm families. By adding County A.A.O. and district specialist time spent on the E.S.P. Unit, the ratio of staff to farms could come to 1/500.

* See Appendix I first paragraph for detailed description.

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008 NARRATIVE FOR PART I-A (cont.)

The project proposal was accepted by both governments and officially got under way at the beginning of 1968 with the ordering of commodities and sending participants to the United States for training. Two Extension Advisors arrived in September 1968 but the full scale field action did not get started until January 7, 1969 when the other two Extension Advisors arrived. Early in 1969 E.S.P. Units were selected, staff was trained locally at D.F.I.s and programs were planned for each Miruka Unit.

PROJECT OBJECTIVES

The E.S.P. was designed to overcome some specific problems which were limiting progress and agricultural development. The major extension problems are: (1) shortage of trained staff to do extension education in the sub-counties. (2) Progressive farmers find quite a number of social pressures working against them. (3) Lack of farm management knowledge prevented farmers from expanding or intensifying their operations.

With these problems in mind the E.S.P. was designed to accomplish these objectives:

1. Increase the efficiency of the majority of farmers in the E.S.P. Units.
2. Increase yields and overall productivity of the farmers.
3. Change the attitude of the people toward progressive farming and relieve social pressures which hold back progress.
4. Improve the staff efficiency by involving them in an effective extension program.
5. To gain information and find the most effective type of extension program to use in Uganda.

PROJECT DESIGN

E.S.P. Units were selected in areas where ~~the presence of~~ a capable A.A. was presently posted. The Miruka, which comprises a unit, was to have about 500 farm families or tax payers who were willing to be included. The only other stipulation with respect to Miruka selection was that there had to be sufficient potential for human and agricultural resource development to provide a reasonable expectation that an intensive extension effort would produce results.

With this criteria in mind 115 E.S.P. Units were started in 92 of the 105 counties in Uganda. Some counties had more than one unit and some counties did not have any, which we would expect when using these criteria for selection. This distribution of units provided E.S.P. experience for nearly all of the approximately 120 Assistant Agriculture Officers in charge of counties or parts of counties throughout the country.

In each E.S.P. Unit a calendar of work was prepared based on problems and a program of work was prepared for the county. The work in the E.S.P. Unit was to stress the following activities:

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008 NARRATIVE FOR PART I-A (cont.)

1. Result demonstrations
2. Method demonstrations
3. Group organization and activity
4. Farm planning
5. Farm management
6. Labor saving devices or machines
7. Walking tours for farmers
8. Demonstration mass media and visual aids
9. Introduction of new crops, recommended varieties and livestock

The above named items are mostly new to the extension effort in Uganda, which has usually consisted of farm visits plus a few meetings and method demonstrations.

The National Extension Advisor, who is the Project Manager, provided the technical guidance for the project, and also supervised the area Extension Advisors. The Asst. Commissioner for Agriculture (Extension) is administratively responsible for the E.S.P. program and communicates with the field staff through the Regional and District Agriculture Officers. All administrative and policy communications to the G.O.U. staff are sent over the signature of the authorized officer in the Department of Agriculture. This procedure keeps all G.O.U. officers fully informed and gives the necessary authority to the communications.

Technical information is passed directly from advisors to G.O.U. staff and vice versa with respect to the E.S.P. activities. After the project was initiated the G.O.U. found they could supply an A.A.O. to every district to work exclusively on the E.S.P. so these were assigned in early 1969. This provides an E.S.P. assistant in every district to help the extension advisors and follow up on their work in the districts. These E.S.P. Officers have been given specific responsibilities for reporting, teaching farm management, doing farm planning and also working with farm record keepers. They do not directly supervise county A.A.O.s but act as backstop specialists for the E.S.P. projects.

A report form which shows the volume and variety of activities has been put to use and related to a point system which reduces each month's activities to one figure which can be used for comparative purposes. (See Appendix II attached) The point system can be used as a self-appraisal guide by each E.S.P. Unit to determine Saturation progress.

A method of recording and reporting adoption of improved practices and crop production increases has been used to see how the program has affected the farmers and measure the changes they have made. The figures in Appendix III are calculated by multiplying the number of acres on which farmers adopted a given practice by the average increase in yield calculated from result demonstrations.

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008 NARRATIVE FOR PART I-A (cont.)PROJECT EFFECTIVENESS

The project has operated on schedule since it started, except for some delay in the arrival of the Extension Advisors. Commodity purchases moved along at a reasonable rate and items arriving late for the current production season are used for the next season's crops. Participants for the supervisory positions have been selected and training is going on schedule. Two have completed their formal training and are now receiving in-service training at their post.

The schedule of programmed activities does not tell the full story of results. This is essentially an educational project for staff and for farmers. Education efforts in one year will not show complete results immediately. Some results are expected during the current year but the biggest harvest should come the second year and later years. The results which have been attributed to the first year's work are shown in Appendix III.

Sector goals

Some of the Second Five-Year Plan (1966-1971) goals for Uganda as they relate to the agricultural sector are listed below:

1. Double the monetary income per capita (1964 prices) from the 1966 level of about £25 to £50 annually by 1981.
2. Assure an equitable distribution of wealth and services, such as medical treatment, and equality of opportunity, especially in education.
3. Diversification of production.
4. Increase monetary output by 7.2% annually and monetary income per capita by 25%.
5. Increase the number of cash crop farmers and reduce subsistence production to less than 14% from 25% of GNP by 1981.
6. Increase farm acreage and increase farm yields. The objectives of the Extension Saturation Project mentioned previously fit in well with the agricultural sector 5-year plan goals. The accomplishment of E.S.P. objectives will contribute strongly to the achievement by the G.O.U. of agricultural sector goals.

Cost/Benefit Analysis

The annual estimated USAID cost from 1969 to 1972 (4 years) is \$250,000 and \$1,500,000 G.O.U. cost, to support all of the Uganda extension education activities. Of the total G.O.U. agricultural budget a direct contribution of about 6-2/3% or \$100,000 equivalent of G.O.U. funds goes for the E.S.P. About \$150,000 of the annual AID Extension Project funds go to E.S.P., leaving \$100,000 to support other extension activities. The balance of both G.O.U. and AID funding, (the equivalent of \$1,500,000) goes for financing the other extension activities and institutions including general extension, District Farm Institutes (D.F.I.s), Young Farmers, GOU socialists, Information & Visual Aids Center, etc.

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006 NARRATIVE FOR PART I-A (cont.)

(\$000)

Source of Funds	General Extension	Approximate Annual Cost of Extension Project & ESPs Share	
		E.S.P. Cost	Total Ext. Project
AID	100	150	250
GOU	1,400	100	1,500
Total	1,500	250	1,750

The project was scheduled to run for 5 years (1968-72) at which time the USAID contributions were to cease and GOU was to continue to support the activity until the entire country is adequately staffed and all areas are saturated annually with extension education. The cost for extension activities which the GOU will eventually have to assume will probably be the equivalent of \$2 or \$2½ million annually. This would mean an annual cost of \$2.00 (14 shillings) per farm holding or less than Shs. 2/= per capita for the country as a whole. With about 90% of the population depending on agriculture for their living this seems to be quite a reasonable investment in Agricultural Education for farmers.

During the year in which education takes place the monetary gains are not expected because the knowledge put to use in the future does not give immediate results. Result demonstrations to convince farmers an improved practice will benefit them normally can only be used on subsequent crop years. Many farmers require considerable time before they are ready to adopt certain improved practices. In spite of this noticeable gains have been made and are tabulated in Appendix IV.

In addition to the monetary value there are social values which are real but hard to evaluate. Both the social and monetary values will increase in the years to come as the project gathers momentum and education is given time to bear fruit.

A baseline survey was made in 1969 by a professionally organized team to establish bench marks or starting points for later evaluation of the E.S.P. Another survey will be made in three years' time near the close of the project to assess more accurately the benefits derived from the project and provide a basis for future planning in agricultural extension.

Since only part of agricultural extension funds go to the E.S.P., evaluation will include the other agricultural extension activities as well.

Young Farmers Project

One of the most successful activities in the extension project is the Young Farmers of Uganda Societies. Organized first in 1964, membership has now grown to over 33,000. Appendix V shows some statistics on membership by counties as of December 1969. The

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008 NARRATIVE FOR PART I-A (cont.)

project work of these young farm folk has increased both farm production and farm income. The boys and girls in the Young Farmers societies earn from a few shillings to several hundred shillings annually. Some of the Young Farmers are now operating their own farms and others are paying their school fees by project work. Enthusiasm for the work and membership is continuing to increase rapidly. U. S. assistance beginning in FY 1964 was instrumental in getting the societies started and functioning successfully on nearly a self-sufficient basis. Guidance and support from agricultural extension personnel continues.

Information and Visual Aids Center

The production of mass media educational material and visual aids became possible for the Agricultural Department with the establishment with USAID assistance of the Information and Visual Aids Center in 1964. This service has built up a staff and is now producing publications, posters, charts, color slide sets, cinema film, news letters, exhibits, etc., to support and service the extension staff and the Ministry of Agriculture.

Audio Visual Vans are operated in each region and contact thousands of farm people bringing them agriculture information over loud speakers, by film and color slides. Total USAID assistance to this activity from 1964-1970 has amounted to about \$150,000 in personnel services, construction, commodities, participant training and other costs.

District Farm Institutes

One of the most effective extension activities is the District Farm Institute (D.F.I.) which brings farmers together for short courses in agriculture. The number of D.F.I.s operating at the beginning of the USAID extension project was eight. The number had increased to 15 by 1969 and 18 will be operating in 1970. Appendix VI gives a summary of the D.F.I. activity through 1968. Appendix VII gives attendance for 1969. U.S. advisory assistance to the D.F.I.s was largely discontinued in 1969 in order to concentrate USAID technician time on E.S.P. activities. It will be necessary to continue training of D.F.I. staff and give supervision to Institutes on a regular basis. This has been provided for and a man has been trained in the U.S.A. and is ready to take over the job.

According to surveys farmers have increased their rate of improved practice adoption at the rate of 6 per farm during the first year after attending a course at the D.F.I. An average of over 1,000 farmers attend courses at each D.F.I. every year. This means that 18,000 - 20,000 farmers will be able to attend D.F.I. courses in 1970 and each year thereafter.

The quality of teaching and the courses offered have improved over the past five years. More visual aids are used, lesson plans are prepared, more specialized courses are offered and the farm demonstrations are now directed at teaching farmers by practical work.

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003 NARRATIVE FOR PART I-A (cont.)Relation to Development Goals

The extension project has and will continue to contribute heavily toward developmental goals. One of these is to increase cotton production. The E.S.P. has demonstrated how the use of fertilizer, proper spacing and early planting can make cotton growing profitable. Result demonstrations have proved to the farmer that the improved practices pay when introduced on his own farm.

Another goal has been to reduce Robusta coffee acreage. The E.S.P. program has been demonstrating that through improved practices land can be taken out of coffee to grow other crops and still produce enough coffee to meet the production goal. The goal for Arabica coffee is to increase acreage only in high-altitude areas which are well suited for its production. E.S.P. objectives of increasing income per acre can be achieved with Arabica coffee production at the higher altitudes.

Groundnut production is to be increased. The E.S.P. units have concentrated on demonstrations to teach the value of improved varieties, row planting, use of fertilizer and spraying for insects to increase production of groundnuts, and many others.

All of the E.S.P. and extension efforts follow the lines of government planning and policy. The program plans drawn up for each E.S.P. Unit have taken into account the 5-year plan goals from the beginning of the project.

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PART I-B - PROJECT EFFECTIVENESS

009

I-B-1 - OUTPUT REPORT AND FORECAST - (See detailed instructions)

1. CODE NO. AID/W USE ONLY	2. This section is designed to record progress toward the achievement of each project output target which was scheduled in the PIP, Part II. Where progress toward a target is significantly greater or less than scheduled, describe reason(s) beneath the target.	ACTUAL AND PLANNED OUTPUTS (ALL DATA CUMULATIVE)				6. PROJECTED TOTAL FOR PROJECT LIFE
		3 ACTUAL CUM. TO DATE FY 1969	4. AS OF PRIOR JUNE 30 1970		5. PLANNED BY NEXT JUNE 30 1971	
			a. PLANNED	b. ACTUAL		
	<u>Number of Staff Trained in U.S.</u>					
	Non degree Adm	3	0	0	0	3
	Degree Extension Education and Supervision	0	3	3	5	6
	M.Sc. & B.Sc. Subject Matter Specialists	19	21	20	21	22
	M.Sc. & B.Sc. Information	3	5	5	7	8
	B.Sc. Extension Education	4	4	4	4	7
	Non degree Extension Education Young Farmers Union	13	19	19	19	19
	<u>Staff on-the-job Training by Extension Advisors</u>					
	Diploma and Graduate	152	175	200	325	1,087
	Certificate and non-trained assistants	560	700	800	1,000	4,560
	<u>Staff given on-the-job Training by Rural Youth Advisor</u>					
	Diploma and Graduate	155				315
	Certificate and non-trained assistants	495				995
	Volunteer Leaders - non paid	347				947
	Numbers of Young Farmers Clubs Organized	400	600	935	1,100	1,500
	Number of Young Farmers Receiving Training	13,000	17,000	30,000	27,000	35,000
	<u>Audio Visual Information Unit</u>					
	Information Unit constructed and equipped and operating	1	0	0	0	1
	Number of Audio Visual Vans equipped and operating	12	12	4	12	12
	Number of farmers trained at D.F.I.	20,000	23,000	26,000	33,000	103,000
	Number of E.S.P. Units in operation	14	100	126	100	100
	Value of Food and Fiber produced on E.S.P. Thousands Sh.	1,200	8,000	3,600	34,000	562,000
	Extension Advisors working	5	5	5	5	5
	Extension programs planned	35	50	85	75	100
	Extension subject matter specialist positions	8	12	15	15	20

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617-11-110-012**PART I-B - Continued**

010

B.2 - OVERALL ACHIEVEMENT OF PROJECT TARGETS

Place an "X" within the bracket on the following seven-point scale that represents your judgment of the overall progress towards project targets:

**PART I-C - PROJECT SIGNIFICANCE**

011

C.1 - RELATION TO SECTOR AND PROGRAM GOALS (See detailed instructions M.O. 1026.1)

This section is designed to indicate the potential and actual impact of the project on relevant sector and program goals. List the goals in col. b and rate potential and actual project impact in cols. c and d.

a. CODE NO. (AID/W USE ONLY)	SCALE FOR COLUMN c: 3= Very Important; 2= Important; 1= Secondary Importance SCALE FOR COLUMN d: 3= Superior/Outstanding; 2= Adequate/Satisfactory/Good; 1= Unsatisfactory/Marginal	c. POTENTIAL IMPACT ON EACH GOAL IF PROJECT ACHIEVES TARGETS	d. ACTUAL IMPACT ON GOAL TO DATE RELATIVE TO PROGRESS EXPECTED AT THIS STAGE
b. SECTOR AND PROGRAM GOALS (LIST ONLY THOSE ON WHICH THE PROJECT HAS A SIGNIFICANT EFFECT)			
	(1) To improve Extension Organisation procedures in 100 counties throughout Uganda	2	2
	(2) To improve the Rural Standard of living by increasing crop production through higher yields, better quality and the practice of efficient Farm Management	3	2
	(3) To improve farmers' attitudes and cooperation by stimulating group activities	2	3
	(4) To train staff in efficient extension methods and demonstrate the effect of a good extension program of work.	3	3

For goals where column c. is rated 3 or 2 and column d. is rated 1, explain in the space for narrative. The narrative should also indicate the extent to which the potential impacts rated 3 or 2 in column c. are dependent on factors external to the achievement of the project targets, i.e., is there a substantial risk of the anticipated impact being forestalled by factors not involved in the achievement of project targets. If possible and relevant, it also would be useful to mention in the narrative your reading of any current indicators that longer-term purposes, beyond scheduled project targets, are likely or unlikely to be achieved. Each explanatory note must be identified by the number of the entry (col. b) to which it pertains.

012 NARRATIVE FOR PART I-C.1 (Continue on form AID 1020-25 I):**UNCLASSIFIED**

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PART I-C - Continued

C.2 - GENERAL QUESTIONS

These questions concern developments since the prior PAR. For each question place "Y" for Yes, "N" for No, or "NA" for Not Applicable in the right hand column. For each question where "Y" is entered, explain briefly in the space below the table.	MARK IN THIS COL.
013 Have there been any significant, unusual or unanticipated results not covered so far in this PAR?	N
014 Have means, conditions or activities other than project measures had a substantial effect on project output or accomplishments?	N
015 Have any problems arisen as the result of advice or action or major contributions to the project by another donor?	N
016 If the answer to 014 or 015 is yes, or for any other reason, is the project now less necessary, unnecessary or subject to modification or earlier termination?	N
017 Have any important lessons, positive or negative, emerged which might have broad applicability?	N
018 Has this project revealed any requirement for research or new technical aids on which AID/W should take the initiative?	N
019 Do any aspects of the project lend themselves to publicity in newspapers, magazines, television or films in the United States?	Y
020 Has there been a lack of effective cooperating country media coverage? (Make sure AID/W has copies of existing coverage.)	Y
021 NARRATIVE FOR PART I-C.2 Identify each explanatory note by the number of the entry to which it pertains. (Continue on form AID 1020-25 I as necessary):	

019 - The change in attitude toward the extension service and practices adopted by farmers deserves more publicity than has been given. The full impact of the project will ~~be~~^{not} known until 1972 when results can be analyzed in quantitative terms. So far the organization of groups and demonstrations have had a positive effect on the attitude of the people toward change.

020 - The project is too new to attract much interest prior to achievement of measured results. When the first year's results are evaluated it will provide material for country-wide mass media information. One T.V. program featured the E.S.P. and the Agricultural Newsletters published by the Department of Agriculture which carried stories in two different issues. More newspaper publicity is needed on individual and group activities.

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PART II - IMPLEMENTATION REPORT

II-A - STATUS OF SCHEDULE

022 A-1 - INDIVIDUAL ACTIONS (See detailed instructions M.O. 1026.1). This is a listing of major actions or steps which were scheduled for physical start or continuing implementation in the reporting period as reflected in the Project Implementation Plan, Part I.

PIP ITEM NO.	MAJOR ACTIONS OR STEPS; CAUSES AND RESULTS OF DELAYS; REMEDIAL STEPS	(b) STATUS - PLACE AN "X" IN, ONE COLUMN		
		(1) BEHIND SCHEDULE	(2) ON SCHEDULE	(3) AHEAD OF SCHEDULE
	<u>Community Extension Saturation Activity</u>			
1	Advisors on duty		X	
2	Order commodities		X	
3	Commodities arrive and distributed		X	
4	Select and train participants		X	
5	Saturation communities selected		X	
6	Extension plans of work prepared for saturation communities. (short staffed and low priority)	X		
7	Work started in saturation communities			X
8	Staff xxx training course for saturation activity		X	
9	Regional staff training courses on program planning		X	
10	District staff training on program planning and Extension Methods		X	
11	Prepare and sign contract for quantitative and qualitative research project on effect of project on Uganda		X	
12	Evaluation of saturation activity and new plan of work		X	
	<u>Information Activity</u>			
1	Select participants		X	
2	Train participants		X	
3	Evaluate program and make recommendations		X	
	<u>District Farm Institutes</u>			
1	Order commodities		X	
2	Evaluate program and make recommendations		X	
3	Construct 3 D.F.I.s		X	
	<u>Young Farmers of Uganda Activity</u>			
1	Order commodities		X	
2	Evaluate program and make recommendations		X	

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PART II - Continued

023

II-A.2 - OVERALL TIMELINESS

In general, project implementation is (place an "X" in one block):

(a) On schedule

(b) Ahead of schedule

(c) Behind schedule

BLOCK (c): If marked, place an "X" in any of the blocks one thru eight that apply. This is limited to key aspects of implementation, e.g., timely delivery of commodities, return of participants to assume their project responsibilities, cooperating country funding, arrival of technicians.

(1) AID/W Program Approval

(2) Implementing Agency (Contractor/Participating Agency/Voluntary Agency)

(3) Technicians

(4) Participants

(5) Commodities (non-FFF)

(6) Cooperating Country

(7) Commodities (FFF)

(8) Other (specify):

II-B - RESOURCE INPUTS

This section appraises the effectiveness of U.S. resource inputs. There follow illustrative lists of factors, grouped under Implementing Agency, Participant Training and Commodities, that might influence the effectiveness of each of these types of project resources. In the blocks after only those factors which significantly affect project accomplishments, write the letter P if effect is positive or satisfactory, or the letter N if effect is negative or less than satisfactory.

1. FACTORS-IMPLEMENTING AGENCY (Contract/Participating Agency/Voluntary Agency)

024	IF NO IMPLEMENTING AGENCY IN THIS PROJECT. PLACE AN "X" IN THIS BLOCK:	X	032 Quality, comprehensiveness and can./or of required reports	
			033 Promptness of required reports	
025	Adequacy of technical knowledge		034 Adherence to work schedule	
026	Understanding of project purposes		035 Working relations with Americans	
027	Project planning and management		036 Working relations with cooperating country nationals	
028	Ability to adapt technical knowledge to local situation		037 Adaptation to local working and living environment	
029	Effective use of participant training element		038 Home office backstopping and substantive interest	
030	Ability to train and utilize local staff		039 Timely recruiting of qualified technicians	
031	Adherence to AID administrative and other requirements		040 Other (describe):	

2. FACTORS-PARTICIPANT TRAINING

041	IF NO PARTICIPANT ELEMENT IN PROJECT. PLACE AN "X" IN THIS BLOCK:		TRAINING UTILIZATION AND FOLLOW UP	P
	PREDEPARTURE	P	052 Appropriateness of original selection	
042	English language ability		053 Relevance of training for present project purposes	P
043	Availability of host country funding	P	054 Appropriateness of post-training placement	P
044	Host country operational considerations (e.g., selection procedures)	P	055 Utility of training regardless of changes in project	P
045	Technical/professional qualifications	P	056 Ability to get meritorious ideas accepted by supervisors	P
046	Quality of technical orientation	P	057 Adequacy of performance	P
047	Quality of general orientation	P	058 Continuance on project	P
048	Participants' collaboration in planning content of program	N	059 Availability of necessary facilities and equipment	P
049	Collaboration by participants' supervisors in planning training	P	060 Mission or contractor follow-up activity	P
050	Participants' availability for training	P	061 Other (describe):	
051	Other (describe):			

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617-11-110-012**PART II-B - Continued****3. FACTORS-COMMODITIES**

PLACE AN "X" IN APPROPRIATE BLOCK:	062 FFF	063 NON-FFF	064 NO COMMODITY ELEMENT			
					072 Control measures against damage and deterioration in shipment.	P
065 Timeliness of AID/W program approval (i.e., PIO/C, Transfer Authorization).				P	073 Control measures against deterioration in storage.	P
066 Quality of commodities, adherence to specifications, marking.				P	074 Readiness and availability of facilities.	P
067 Timeliness in procurement or reconditioning.				P	075 Appropriateness of use of commodities.	P
068 Timeliness of shipment to port of entry.				P	076 Maintenance and spares support.	N
069 Adequacy of port and inland storage facilities.				P	077 Adequacy of property records, accounting and controls.	P
070 Timeliness of shipment from port to site.				P	078 Other (Describe):	
071 Control measures against loss and theft.				P		

Indicate in a concise narrative statement (under the heading a. Overall Implementation Performance, below) your summary appraisal of the status of project implementation, covering both significant achievements and problem areas. This should include any comments about the adequacy of provision of direct hire technicians as well as an overall appraisal of the comments provided under the three headings (b, c & d) which follow. For projects which include a dollar input for generation of local currency to meet local cost requirements, indicate the status of that input (see Detailed Instructions).

Discuss separately (under separate headings b, c & d) the status of Implementing Agency Actions, Participants and Commodities. Where above listed factors are causing significant problems (marked N), describe briefly in the appropriate narrative section: (1) the cause and source of the problem, (2) the consequences of not correcting it, and (3) what corrective action has been taken, called for, or planned by the Mission. Identify each factor discussed by its number.

079 **NARRATIVE FOR PART II-B:** (After narrative section a. Overall Implementation Performance, below, follow, on form AID 1020-25 I as needed, with the following narrative section headings: b. Implementing Agency, c. Participants, d. Commodities. List all narrative section headings in order. For any headings which are not applicable, mark them as such and follow immediately below with the next narrative section heading.)

a. Overall Implementation Performance.

For narrative see Section III "Role of the Cooperating Country".

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PART III - ROLE OF THE COOPERATING COUNTRY

The following list of illustrative items are to be considered by the evaluator. In the block after only those items which significantly affect project effectiveness, write the letter P if the effect of the item is positive or satisfactory, or the letter N if the effect of the item is negative or less than satisfactory.

SPECIFIC OPERATIONAL FACTORS:

080 Coordination and cooperation within and between ministries.	P
081 Coordination and cooperation of LDC gov't. with public and private institutions and private enterprise.	P
082 Availability of reliable data for project planning, control and evaluation.	N
083 Competence and/or continuity in executive leadership of project.	P
084 Host country project funding.	N
085 Legislative changes relevant to project purposes.	P
086 Existence and adequacy of a project-related LDC organization.	P
087 Resolution of procedural and bureaucratic problems.	P
088 Availability of LDC physical resource inputs and/or supporting services and facilities.	N
089 Maintenance of facilities and equipment.	N
090 Resolution of tribal, class or caste problems.	P
091 Receptivity to change and innovation.	P
092 Political conditions specific to project.	P
093 Capacity to transform ideas into actions, i.e., ability to implement project plans.	P
094 Intent and/or capacity to sustain and expand the impact of the project after U.S. inputs are terminated.	P
095 Extent of LDC efforts to widen the dissemination of project benefits and services.	P
096 Utilization of trained manpower (e.g., participants, counterpart technicians) in project operations.	P
097 Enforcement of relevant procedures (e.g., newly established tax collection and audit system).	P
098 Other:	

HOST COUNTRY COUNTERPART TECHNICIAN FACTORS:

099 Level of technical education and/or technical experience.	P
100 Planning and management skills.	P
101 Amount of technician man years available.	P
102 Continuity of staff.	P
103 Willingness to work in rural areas.	P
104 Pay and allowances.	P
105 Other:	

In the space below for narrative provide a succinct discussion and overall appraisal of the quality of country performance related to this project, particularly over the past year. Consider important trends and prospects. See Detailed Instructions for an illustrative list of considerations to be covered.

For only those items marked N include brief statements covering the nature of the problem, its impact on the achievement of project targets (i.e., its importance) and the nature and cost of corrective action taken or planned. Identify each explanatory note.

106 NARRATIVE FOR PART III (Continue on form AID 1020-25 I):

1. Quantity & Quality of G.O.U. Support

With respect to project agreement provisions the G.O.U. has met all of them to the best of their ability. The provision of a first class Agriculture Assistant (AA) spending half of his time on each unit has been hard to comply with. The difficulty has been shortage of qualified staff and frequent lack of incentive for personnel to work conscientiously on the job. The A.A.s are operating in a sellers market so far as their jobs are concerned, but the job offers very little future for them in terms of advancement and salary. With very little supervision, promotions based mostly on time in service and training, with little emphasis on performance and no chance of promotion to a higher grade, most of the A.A.s have little incentive to be productive. To change this system would shake up the entire civil service of the country.

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106 NARRATIVE FOR PART III (cont.)

Not only does the A.A. frequently lack incentive to work but he get the poorest support of anyone in the whole organization. Being the man who contacts the farmer he should be well informed and well supplied with teaching material demonstration equipment, travel allowance, night allowance and whatever he needs to get the job done. Too often information and support stops at the Regional Agriculture Officer (R.A.O.s) office, the District Agriculture Officer (D.A.O.s) office or A.A.O.s office and never reaches the A.A.

In spite of these difficulties the educational program has made some progress in breaking these log jams. Most of the A.A.s and A.A.O.s have displayed a cooperative attitude and been responsive to suggestions made by the advisors.

On the point scale for program input it is reckoned that every E.S.P. unit should be able to rack up 1200 points per month without spending more than the agreed upon time. Since very few of the ESP units were able to reach the minimum points we must assume that the program was not nearly as effective as it could have been with a greater program input.

With respect to demonstration equipment, items available locally were to be supplied by the G.O.U. while imported items were supplied by USAID to begin with then phased out toward the end of the project.

Difficulty was experienced the first year in getting the locally obtainable items purchased by the Department of Agriculture. This was largely due to the fact that funds were not earmarked for this purpose. The Department's budget for the next fiscal year 1970/71 should correct this situation by voting money specifically for demonstration supplies and equipment. In spite of this difficulty most of the E.S.P. units were able to carry out a good demonstration program so far as variety and volume is concerned.

The quality of demonstrations was not good enough due largely to the lack of experience in this type of work. While training was given in the class room the lessons do not seem to be fully effective until put in operation by follow-up training on the job. While some problems are limiting the full potential for the project, we cannot expect high performance at least in the initial stages. At this point there is no question of the advisability of continuing and improving the project. It has every chance for a successful completion and should improve each year. G.O.U. support has exceeded that called for under the project agreement by providing 18 Assistant Agriculture Officers (A.A.O.s) exclusively for the E.S.P. project compared with the ten called for in the Pro.Ag. It is possible more personnel will be assigned as more A.A.s become available.

2. Political and Social Factors Affecting the Project

Previous to the establishment of the Extension Service "give me" attitude had developed among many farmers. This was fostered to a certain extent by motivated policies in the Ministry of Agriculture of providing grants, subsidies, soft loans, free services etc. to farmers. The emphasis on these aspects of the Department of Agriculture's program had tended to make farmers think that farming does not pay

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106 NARRATIVE FOR PART III (cont.)

without this kind of aid. It also makes farmers think that knowledge alone does not help much to raise the standard of living on the farm. One of the greatest obstacles to overcome is that of changing the "give me" attitude of the farmers. Unless and until farmers believe they can improve their standard of living quickest through their own efforts with increased knowledge they will not accomplish much. Government programs for agriculture which do not involve the farmer in a learning self-help process tend to discourage initiative and destroy incentive. Most governments fail to recognize this and politicians feel their popularity is based on how much government money they can make available to the farmers through some program or other. How much assistance actually gets to the ordinary farmers is sometimes overlooked as long as it gives the politician a talking point.

Probably the social custom or tradition which holds back progress more than any other is one which deals with attitudes toward money. When a person makes money he becomes the subject of much pressure from his relatives, friends and enemies. His friends and relatives will beg from him and use all sorts of social pressure to get money from him. His enemies will steal from him or do physical damage to his person or property in some cases.

These attitudes and action tend to discourage a person from working hard on the farm to make money. While these attitudes do exist throughout the country the degree of intensity is variable by community, by tribe and even by family.

Another social custom which holds back progress but is changing has had to do with livestock. The kind and number of livestock which have been kept and the use which was made of them was controlled more by traditions and custom than by economics. Some people are livestock keepers and some are not. Others keep certain kinds of livestock and not others regardless of income potential. Millions of tons of nutritious grass is burned each year because no use was made of it. This same grass could have produced thousands of tons of beef, mutton or milk had it been fed to livestock. One apparent reason for not making use of it for livestock feed is social custom or tradition.

Other social customs traditions which hold back rural progress are excessive use of alcohol, short working hours (2-4 per day), and time consumed in ceremonies and celebrations. Some of the customs like short working hours desire partly from climatic conditions.

3. Government of Uganda efforts to widen participations and benefits

As stated previously the Commissioner for Agriculture voluntarily appointed A.A.O.s to work exclusively on E.S.P. This was done to insure the success of the project and make up for the shortage of A.A. staff which the Department of Agriculture can do nothing about at present. It is being talked by Department of Agriculture staff that one A.A. for every county should be designated for E.S.P. exclusively. This would mean giving a very high priority to the E.S.P. if it is done next year when about 100 A.A.s will be leaving the Agricultural Colleges. At any rate there is every reason to expect the increase in A.A.s will be of great benefit to the E.S.P. and the extension work in general.

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106 NARRATIVE FOR PART III (cont.)

It is the objective of the project and the intention of the GOU to keep expanding E.S.P. as the staff of A.A.s grow until the entire country is saturated with extension activities.

4. Need and prospect for G.O.U. to strengthen their role

The Department of Agriculture G.O.U. could strengthen the effectiveness of the E.S.P.s by improved administration and increased local funding. Both are difficult because of limitations under which the Department of Agriculture operates. Funds are controlled by the Ministry of Finance and Planning. Whether agriculture could get more funds for staff support is difficult to determine. At any rate the Commissioner for Agriculture is fully aware of the need for funds to provide more adequate travel allowances and per diem for field staff as well as demonstration equipment and supplies and he is making every effort to provide them.

The matter of staff efficiency is one that has to be tackled from many angles. It will require a change in the civil service selection, salary and promotion system to improve work incentives. Then it will require a change in the entire educational system. To introduce thought and action stimulation rather than memorizing facts, as the major objective in education, will require retraining a lot of people.

5. Changes in scope or design for Project

While no actual changes in either the design or scope of the project are indicated, there are a number of problems which need solution in order to get the extension work on a more efficient basis. These problems are listed below along with the evidence that the problem does exist and some recommended solutions. This information, along with recommendations, has been presented to extension officials of Ministry of Agriculture and they have circulated selected portions to Ministry although this was not the interest of the USAID Project Manager.

Extension Field Staff
Problems and Recommendations

1. Many of the extension field staff do not demonstrate strong enough belief in the practices they recommend to farmers.

Observations leading to this conclusion:

- (a) Reluctance to put forth strong argument to farmers to support the recommendation.
- (b) Too infrequently follow recommended practices on their own farms.
- (c) Have difficulty in establishing good result demonstrations.
- (d) Method demonstrations are not up to a good standard.
- (e) Too frequently take the trouble to get the economic facts about the practices they recommend.
- (f) Frequently extension workers disagree with the recommended practices

Solution:

- (a) Make training more practical at Agricultural College

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- (b) Require farm experience before selecting trainees for college course.
- (c) Department of Agriculture farms should prove the value of recommended practice by keeping accurate performance records.
- (d) Install a more positive programme for training staff in supervisory techniques.
- (e) Make use of awards and penalties based on performance of workers.

2. Far too much staff time taken up with non-productive, non-educational activities.
Observations leading to this conclusion.

- (a) Too much time spent with visitors to the agriculture programme.
- (b) Overstaffing for particular jobs.
- (c) Too much time spent on social visiting during working hours.
- (d) Not enough time spent with farmers in the field.

Solution:

- (a) Tighten supervision
- (b) Improve staff organization
- (c) Involve fewer staff members and do less preparation for visitors.

3. Staff lacks mobility at A.A.O. and A.A. level.

- (a) Many A.A.O.s do not have cars and many A.A.s do not have motorcycles. Travelling by common carrier or bicycle wastes a lot of time.
- (b) Government vehicles spend a high percentage of time in the workshop and out of service.
- (c) Vehicles are out of service too much of time because of inadequate attention to maintenance. Accidents are also bound to happen and Uganda has a high road accident rate.

Solution:

- (a) Speed up car loan process through private automotive dealers financing.
- (b) Increase the number of Department of Agriculture vehicles in the district. Each district should have one landrover and one to three light pickups for use of the staff and for transporting demonstration equipment.
- (c) Start driver training at the Agricultural Colleges
- (d) Use private workshops or Special Development workshops for repair of government vehicles.
- (e) Encourage A.A.O.s to buy a motor-cycle until they can afford cars. Insist that they get bicycles if they can get neither a motor-cycle nor cars. Require A.A. to have a motor-cycle.

4. Insufficient GOU demonstration equipment and supplies.

Observations leading to conclusion.

- (a) Inadequate control at the district level on GOU equipment and supplies.
- (b) Publicity vote used very little for demonstration purposes.
- (c) Sometimes GOU equipment and supplies are kept in storage and not used.
- (d) Too many items are lost or not used efficiently.

Solutions:

- (a) Frequent checks by R.A.O.s and D.A.O.s on use and location of government equipment and supplies.

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- (b) Establish a vote (budget line) item for demonstration equipment and supplies that can only be used for that purpose.
- (c) Require every officer to turn over all equipment and supplies under his control before leaving the post on transfer or resignation.
5. Lack of information and reference material in the hands of the county staff.
- Observations leading to conclusion.

- (a) Insufficient copies of material produced to reach all the staff.
- (b) The man who needs information most is the Agriculture Assistant/Field Assistant (A.A./F.A.). He is the one who has the most frequent contact with farmers and is the least prepared academically and the least supported with reference material.
- (c) Too much time and stationery wasted on useless written material and not enough used on productive information.
- (d) Distribution of information through the Region and District Officers. County staff complain they don't get the information which is sent out.

Solutions:

- (a) Information office produce more copies of each publication and send more to districts.
- (b) D.A.O.s and R.A.O. make frequent checks on the written materials prepared in the districts to make sure it is worthwhile. Complain to head quarters if it is not, with constructive suggestions.
- (c) Information service publish more "how" to do it publications for staff and farmers.
- (d) Information service publishes list of available material and mail to every staff member (including A.A.s) once each year.
- (e) Specialist prepare more small leaflets for distribution through county staff.
- (f) Specialist make use of the Agricultural Newsletter to get vital information to the staff.
6. Most of the crops produced by the small farmers in Uganda have a low return for the amount of labor and management involved when analyzed ^{in strictly} economic terms.
- (a) Cost/labour income analysis shows a low return for both labour and the farmer's own management work on most crops grown by hand methods. This lack of adequate profit incentive for the farmer makes extension progress slow.
- (b) Extension staff have had inadequate practical preparation for handling the farm management aspect of extension teaching.
- (c) Historically extension workers have taught improved practices with insufficient stress on the economic and farm management aspect of the practices.
- (d) Records have been kept on Government Farms but summary and analysis have been inadequate. Therefore the records have not been put to best use.
- (e) The average A.A.O. seems to have insufficient knowledge of farm record keeping to do a good job of analysis or teaching.

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Solutions

- (a) Both labour efficiency and management efficiency on farms must be stepped up to improve the management and labour return from crops. This can only be done by teaching farm management and reducing the land labour requirements for doing farm jobs.
- (b) Training in supervision of farm labour by both small and large farmers must be stressed.
- (c) The use of mechanical equipment must be encouraged, starting with simpler, lower cost equipment.
- (d) Farmers must be taught how to use tractor hire and benefit from it.
- (e) Government farm records should be analyzed and made use of more effectively in teaching process.
- (f) Much heavier stress must be placed on teaching of practical farm management at the Agricultural Colleges.
- (g) DFI courses must continue to stress farm management at the farmer courses.

7. Previous to the establishment of the E.S.P. farmers had an attitude that the only way to help them was through grant, subsidy, loan or service. None of these types of assistance can be considered extension education. This means that far too many felt helpless to do anything on their own even with extension teaching.

Observations:

- (a) At nearly every meeting farmers asked for some kind of grant or subsidized material assistance.
- (b) Many officers thought they must give the farmers something to make their work appreciated.
- (c) Discussions with farmers tended to centre around what they can get for nothing rather than how they can learn more by their own efforts.

Solutions:

- (a) Farmer education is stressing first the objectives of various types of material assistance programmes and point out the limitations and through E.S.P. activities the above attitudes are being gradually changed.
- (b) Extension education is stressing the fact that a farmer's greatest opportunity for progress and a better living is through his own efforts. He must understand that knowledge put to practical use will bring him adequate reward. Until this attitude is generally adopted by farmers very little progress will take place.
- (c) This attitude must be encouraged in the schools, at the colleges and through all facets of education. It is not so much a matter of working hard as working wisely. What one gets gratis is not generally appreciated and is soon gone leaving him as he was before.

So far as the E.S.P. is concerned a summary of the change indicated for the coming year are shown in the following statement which was agreed to by the Extension Advisors while in conference March 6, 1970:

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"Evidence of both success and failure in E.S.P. has been accumulating from various sources for the past two years. It is now a good time to take a look at this evidence and see what direction future work should take. An evaluation was made of 4 of the original 1967 E.S.P.s by Mr. Vail and Mr. Watts of Makerere University, Department of Rural Economy:

"These surveys show that E.S.P. is successful when the responsible staff members (1) demonstrate a sincere interest and concern for the welfare of the farmers, (2) conduct and intelligent, intensive extension education programme (3) concentrate on promoting those innovations within the reach of the majority of farmers and have a favourable cost benefit ratio and (4) spends enough time and apply enough extension methods working with the rural people to influence their thinking.

"Even though we have these conditions given we still have some definite limitations on progress farmers will make".

Obstacles can be listed in order of importance as follows:

1. Availability of inputs from the standpoint of location, transport and reasonable price.
2. Farmers have little faith in their ability to progress by their own effort with increased knowledge only. Watts' questionnaire shows that farmers believe help should take the form of, higher prices, loans, farm implements, tractors, insecticides, rural welfare, new crops and fertilizers. In other words they are thinking of subsidies or grants when they mention these items. Apparently none of them mentioned education as a way to help. This attitude must be overcome before progress can advance very far. What they are really telling us in a round-about way is that progressive farming does not pay.
3. The viable practices we can offer farmers which have a favourable cost benefit ratio are improved cultural techniques requiring little cost input. Result demonstrations show that fertilizer use is only profitable for some of the important crops and some soil conditions. However, some kinds of pest control do not justify the cost benefit ratio. Tractor hire can eat up all the profit if not used wisely. Recommended varieties of seed do not consistently give a net gain. The best results are obtained from a combination of inputs.
4. Until farmers have learned to make wise use of capital, loans will be of no use.

Even with all the above quoted difficulties there are still plenty of practices which require no cost input that will give increased production.

The most profitable innovations are actually those which cost nothing but require knowledge and sometimes additional labour. Examples are now planting, timely planting, proper spacing, timely weeding, mulching and crop rotations.

Where these things were stressed the greatest rate of adoption took place. The evaluation surveys and result demonstrations done in the E.S.P. Units are providing valuable information for improving the extension programme in the future.

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Change indicated for E.S.P.

1. Full time A.A. for each E.S.P. as soon as staff is available. None now assigned full time. Plans are for 100 out of 120 in five years.
2. More stress on farm management.
3. More stress on high benefit practices.
4. More education on marketing.
5. Demonstrate and teach the value of knowledge in farming and the limitations of grants and subsidies.
6. Many of the recommendations require more labor or more skill. Farmer often does not feel the change is worth the additional effort. This means we also need to stress labor saving every way possible.
7. Organize small work groups and many more of them throughout the E.S.P. Unit. The evaluation done by Mr. Vail shows that this extension approach in one E.S.P. Unit produced effective results. More people are contacted, better demonstrations were done and more people saw them. Uganda farmers respond better when they work in groups. This is also an important factor in developing leadership and a channel through which effective education can be done.
8. Result demonstrations must be taken more seriously. There is too much evidence accumulating which shows one of two things; either the recommended practice will not do what it is supposed to or that the staff are unable to demonstrate it properly. We must find out which is true and correct it.
9. [^]Pick-up truck is needed for each Region to transport demonstration commodities and to serve emergency transport requirements.

While the papers presented above indicate problems to be overcome, they also provide the reason for having an E.S.P. in the first place. In other words, we do not propose to change the design or scope of the project but make it more efficient and effective if it is possible to do so.

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PART IV - PROGRAMMING IMPLICATIONS

IV-A - EFFECT ON PURPOSE AND DESIGN

Indicate in a brief narrative whether the Mission experience to date with this project and/or changing country circumstances call for some adjustment in project purposes or design, and why, and the approximate cost implications. Cover any of the following considerations or others that may be relevant. (See Detailed instructions for additional illustrative considerations.) Relevant experience or country situations that were described earlier can simply be referenced. The spelling out of specific changes should be left to the appropriate programming documents, but a brief indication of the type of change contemplated should be given here to clarify the need for change. For example, changes might be indicated if they would:

1. better achieve program/project purposes;
2. address more critical or higher priority purposes within a goal plan;
3. produce desired results at less cost;
4. give more assurance of lasting institutional development upon U.S. withdrawal.

107 NARRATIVE FOR PART IV-A (Continue on form AID 1020-25 I):

No major changes in programming are indicated at this time. It will probably be necessary to extend the project through FY 1973 in order to complete the targeted work. The program got started one year later than planned due to slow arrival of U.S. technicians. They did not arrive until the end of 1968. The Extension Advisors are the major key to the E.S.P. success and therefore need to be given the full two tours or 4 years in which to help accomplish targets, related to getting program well started. Some G.O.U. supervisors are back from training and will have an over lap with the Extension Advisor. The Region will be divided with the supervision actually assuming full responsibility for the area he covers.

It may be advisable to revise the project design to provide more time for the G.O.U. officers working on E.S.P. This would be advisable only in case it becomes possible to get A.A.s newly trained at Agr. Colleges to work exclusively on E.S.P. at the county level. This would probably mean redrafting the project plan to describe the responsibilities of G.O.U. officers assigned exclusively to E.S.P. and to indicate how the E.S.P. activities will be blended into the extension organization as a whole at the close of the project.

While other changes in action are indicated in Part III Block 106 item 5 they do not require any changes in programming.

IV-B - PROPOSED ACTION

108 This project should be (Place an "X" in appropriate block(s)):

1. Continued as presently scheduled in PIP.	X
2. Continued with minor changes in the PIP, made at Mission level (not requiring submission of an amended PIP to AID/W).	
3. Continued with significant changes in the PIP (but not sufficient to require a revised PROP). A formally revised PIP will follow.	
4. Extended beyond its present schedule to (Date): Mo. 6 Day 1 Yr. 1973 Explain in narrative, PROP will follow.	X
5. Substantively revised. PROP will follow.	
6. Evaluated in depth to determine its effectiveness, future scope, and duration.	
7. Discontinued earlier than presently scheduled. Date recommended for termination: Mo. Day Yr.	
8. Other. Explain in narrative.	

109 NARRATIVE FOR PART IV-B:

APPENDIX I

A PRELIMINARY REPORT ON THE SATURATION PROJECT RESULTS OF 1967 BY H. L. DUSENBERRY EXTENSION METHODS SPECIALIST

The saturation project was started late in 1966 and records were kept on the activities of the extension staff throughout 1967. The objective of the project was to saturate one community in each of 16 Districts with all of the extension education the community could readily absorb. This was more or less an experiment to find a more effective approach to extension programming and organization. In order to make the project a success it was necessary to have more than usual staff time spent in the selected communities and a first class programme of work carried on. The project was planned in such a way that it would require very little extra funds and no additional staff. It was however necessary that the Assistant Agricultural Officers and Agricultural Assistants responsible for these particular communities spend a higher percent of their time in the saturation projects than in other communities in their work areas.

A calendar of work was drafted for each community in late 1966 to be followed by the staff responsible for the saturation community. This was based on the county extension plan of work. The saturation project calendar of work differed from that for the county in the following respects:-

1. A number of result demonstrations were planned to be carried out on farmers' farms as an educational activity to convince farmers to adapt approved methods.
2. It emphasized organized activities for men, women and youth to a greater extent.
3. District Farm Institute courses were to be given for men, women and young farmers within the year.
4. An increase over normal for the number of educational meetings, method demonstrations and tours was planned.
5. Farm management instruction in a simple basic form was to be started in each of those communities.
6. Records of extension activities were to be kept and reported monthly.
7. At the end of the year a informal evaluation was to be made to find the reaction of the people in the community toward the project.

PROGRESS

In order to evaluate the project, the extension activities of the staff were summarized and a cross section of farmers interviewed to find out what they thought of the project and get some indications

of their response. Time and staff were not available to make a detailed survey of each farm but at this stage it was not felt to be necessary.

From the extension activity reports it was quite obvious that some of the programmes carried out were not sufficiently intensive to be considered a saturation project. This was to be expected since the availability of qualified staff is not sufficient in every district to provide first class Agricultural Assistants to do the job. This does not mean the project was a failure in these communities however since it provides a good comparison for evaluating the response in communities having different intensities of extension education.

FARMER INTERVIEWS

During the months of January and February, 1968, 85 farmers were interviewed in the 16 communities, 11 by Mr. Dusenberry, 3 by Mr. Whaples and 2 by both Mr. Dusenberry and Mr. Whaples.

At four places community meetings were held in connection with the interviews and about 700 people attended. Here it was possible to get group reaction as well as for individuals.

It will take some time to analyze all of these interviews and get a detailed analysis made. A brief summary of impressions gained from these interviews are as follows:-

1. Most of the farmers interviewed have improved from 1 - 5 practices during the year.
2. A majority felt crop yields in the community had increased because of the project.
3. In most cases new crops have been grown for food (mostly vegetables) and nutrition for the family has improved.
4. In a few cases new cash crops and livestock were grown for the first time.
5. A marked improvement in banana, coffee and cotton culture had taken place.
6. All were highly impressed by the result demonstrations and anxious to see more of them.
7. All felt the organized group activities had improved the community spirit and increased the rate of practice adaption.
8. All were thankful for the additional educational activities provided by the staff but a few thought there had not been much increase.
9. The community which has the most intensification with a well balanced extension programme was a famine relief area, the

year before. Several leaders made this comment, "If you leave this Agricultural Assistant with us we will never have to get famine relief again".

10. In another isolated community which has a history of indifference toward Department of Agriculture recommendation, the whole community outlook was changed. They formed a marketing group for bananas, organized the community and started progress as fast as possible on improved practices, particularly with respect to the bananas.
11. All of the farmers interviewed seem to understand what the saturation project is for, think it is a success and want it continued.
12. Row planting demonstration of crops to save labour and improve culture proved to be quite popular and a big increase is expected next year.
13. Labour saving equipment was successfully demonstrated in several communities but lack of demonstration equipment prevented full effort on this front.
14. In order to determine what concept the farmers had of farm management, this question was asked. If you were to get a loan of Shs. 2,000/- how would you use it? About 50% of the answers indicated a reasonably good use would be made of it to increase or intensify production in an economic way.
15. In general the social attitude and cooperativeness of the community was improved as evidenced by the ways they were working together in groups.

SATURATION PROJECT: EXTENSION EDUCATION ACTIVITY SUMMARY

DISTRICT	MEETINGS		METHOD DEMONSTRATIONS		FOURS		FARM VISITS	LOCAL LEADERS	RESULT DEMONSTRATIONS		D.F.I.		ORGANIZED EXTENSION GROUPS	
	NUMBER	ATTEND.	NUMBER	ATTEND.	NUMBER	ATTEND.			STARTED	COMPLETED	COURSES	ATTEND.	NUMBER	MEMBERSHIP
ACHOLI	18	455	15	290	4	103	600	22	16	6	2	31	3	365
ANKOLS	16	629	10	96	1	11	60	27	25	23	3	126	5	297
BUGISU	58	2,000	(250)	(1,870)	5	100	120	27	22	10	3	19	5	85
BUKEDI	32	756	84	386	3	89	570	60	70	50	5	114	3	58
BUNYORO	42	1,470	81	721	8	140	(3,181)	51	11	8	-	-	5	99
KARABOJA	9	526	4	86	3	48	153	10	6	5	1	16	2	52
KIGEZI	5	276	32	115	-	-	257	30	35	30	2	7	4	812
LANGO	4	490	5	706	1	76	550	29	6	6	2	46	3	110
MASAKA	17	344	57	205	-	-	83	17	59?	11	4	74	5	104
S. HENGO	24	602	13	203	3	48	253	21	15	9	5	53	4	141
LIUBENDE	15	329	10	215	-	-	332	13	7	1	2	26	2	35
TESO	32	901	5	55	2	100	577	18	6	5	1	28	8	146
TORO	12	386	39	780	6	177	294	18	15	9	3	96	4	104
W. NILE	16	246	13	219	4	71	306	8	1	0	3	58	1	8
BUSOGA	10	688	1	20	4	60	?	32	12	3	2	54	3	58
MPIGI	30	963	28	489	7	119	259	33	13	6	4	72	3	114

APPENDIX II

TABLE III-B

ACHOLI DISTRICT, NORTHERN REGION, TOTALS - 1969

Extension Saturation Project (ESP) Activities

District or ESP Parish	Meetings		Method Dem.		Tours		Farmers Contacted	Local Leaders	Result Demonstrations			D.F.I.	Org'd. Ext. Groups		Total Points
	FV 10 No.	FV 1 Att.	FV 10 No.	FV 2 Att.	FV 10 No.	FV 2 Att.	FV 5	FV 10	FV 10 Started	FV 20 Completed	FV 0 Running	FV 10 Att.	FV 20 No.	FV 2 M ^o ship	
Lukur, Agago	65	2161	130	1845	10	176	333	222	32	5	XXXX	28	28	1221	Av. 1769
+9 (Pts.)	650	2161	1300	3690	100	356	1665	2220	320	100	XXXX	280	560	2442	15,844
Lukur, Omoro	14	556	12	586	—	—	340	91	15	6	XXXX	2	16	634	Av. 809
+8 (Pts.)	140	556	120	1172	—	—	1700	910	150	120	XXXX	20	320	1268	6,476
Eal, Kilek	3	197	12	407	1	9	105	119	7	5	XXXX	—	6	480	Av. 830
+5 (Pts.)	30	197	120	814	10	18	525	1190	70	100	XXXX	—	120	960	4,254
Eal-Mit, Arua	19	611	30	496	1	22	250	96	14	8	XXXX	1	9	394	Av. 629
+9 (Pts.)	190	611	300	992	10	44	1250	960	140	160	XXXX	10	180	788	5,635
Eago, Chas	37	778	24	945	6	120	435	108	12	3	XXXX	2	10	267	Av. 970
+8 (Pts.)	370	778	240	1890	60	240	2175	1080	120	60	XXXX	20	200	534	7,767
Pobur, Lango	41	1333	28	729	4	32	272	131	14	4	XXXX	19	9	266	Av. 600
+9 (Pts.)	410	1333	280	1458	40	64	1360	1310	140	80	XXXX	190	180	532	7,370
TOTALS	179	5636	236	5008	22	361	1735		94	31	XXXX	52			Av. per ESP 970
(Pts.)	1790	5636	2360	10016	220	722	8675	7670	940	620	XXXX	520	1560	6524	TOTAL Pts. 47,253

(3) - This number indicates number of monthly reports submitted during the year.
 - Average number of points for Agago is questionable. Number of Method Dem. and Attendance questionable.

20 1945 - Dec 1969

DISTRICT	Number of E.S.P. Points	Number of Committees in District	Number of Tax payers in E.S.P. Units.	Programme activity Points earned Monthly Average per District.
Acholi	6	6	2,358	820
Lango	5	7	2,618	610
Madi	1	2	708	878
W. Nile	3	9	1,406	945
N. REGION	15	24	7,090	839
Masaka	11	5	7,844	755
Muhende	4	3	2,959	888
E. Mengo	6	5	3,970	619
W. Mengo	5	5	2,269	995
B. REGION	26	18	17,042	814
Bukedi	12	6	5,427	866
Busaoga	8	8	4,929	1,370
Bugisu	5	3	4,341	1,110
Karamoja	3	7	1,083	287
Sebei	3	2	2,379	816
Teso	8	8	2,687	703
E. REGION	39	34	20,846	959
Ankole	10	10	3,508	482
Bunyoro	8	6	3,630	824
Kigezi	6	6	2,770	1,584
Toro	10	7	4,730	388
W. REGION	34	29	14,638	819
TOTAL	116	105	59,616	

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ESTIMATED MONETARY VALUE OF INNOVATIONS FROM E.S.P.

Crop	Number of Farmers known to have adopted improved practices	Pounds of crop Increase due to Innovation	Ave. Market Price Per lb.	Value of increased crop production Shillings
Cotton	165	55,050	-/45	24,772/50
F. Millet	125	19,750	-/25	4,937/50
G. Nuts	50	5,000	-/30	1,500/00
Sorghum	20	16,000	-/20	3,200/00
Total	360	95,800		32,410/00

Additional Contacts @ 20/- x 3260 = 65,200/-
 Indirect contact at equal value = 101,610/-
 Total value to Farmers 201,220/-

BUGANDA REGION

ESTIMATED MONETARY VALUE OF E.S.P. INNOVATIONS

	Number of Farmers	Acres Innovation	Lbs. Increase	Price	Value of Increase
G. Nuts	311	74	29,748	-/30	8,924/40
Beans	265	65	27,430	-/40	10,972/00
Soya Beans	45	12	3,000	-/50	1,500/-
Barms	231	202	202,000	-/05	10,100/-
Coffee Weed Control	74	100	labour cost saving	100 P/A.	10,000/-
Cotton	31	16	144	45/-	64/80
Sw. Potato	24	10	labour saving soil conservation		
Vegetable	12	.3	New crop		
Maize	119	54	21,600	10/-	2,160/-
			of E.S.P.s reported		Shs. 43,721/20

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Est. Increase from Innovations Shs. 87,442/40
 Value of other contacts (20/- x 12,400) 248,000/00
 Indirect Contact 335,442/40
 Total Est. Benefit value 670,884/80

**COUNTRY WIDE PRODUCTION TRENDS
(MINISTRY OF AGRICULTURE STATISTICS)**

CROP	ACREAGE (000)			PRODUCTION THOUSANDS OF METRIC TONS		
	1966/67	1967/68	1968	67/68	68	+ OR -
Cotton (Lint)	1,425	1,368	1,606	62,661	76,584	+ 13,923
G. Nuts	319	419	445	107	116	+9
Field Peas	14	17	23	2	2	0
Maize	503	741	705	333	328	-5
Beans	402	542	667	156	170	+14
Cow Peas	224	436	458	61	64	+3
Pigeon Peas	142	174	220	27	27	0
Am Jim	269	192	217	17	23	+6
P. Millet	1,106	1,261	1,358	575	626	+51
Sorghum	514	575	567	263	254	-41
Sweet Potatoes	213	258	286	641	649	+8
Cassava	536	624	561	1,957	1,945	-12

It is unfortunate that figures for 1969 are not available for this report since they would be more meaningful in relation to the E.S.P. However the above figures do show a definite trend toward more Protein Production and less starch in the food crops. There has also been a great increase in cash crops namely cotton, tobacco, tea, sugar cane and vegetables. While the acreage of cotton went down in 1967 the yield went up and the acreage was up again in 1968.

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Appendix II

ENROLMENT RETURNS YOUNG FARMERS OF UGANDA END OF DECEMBER 1969.

REGION	DISTRICT	SOCIETIES		MEMBERS			VOLUNTEER LEADERS	
		END OF OCT.	END OF DEC.	END OF OCT.	END OF DEC.	AVERAGE NO. OF MEMBERS PER SOCIETY	NO. OF V/LEADERS END OF OCT.	NO. OF V/LEADERS END OF DEC.
BUGANDA	MUBENDE	63	66	1,983	2,067	31	125	127
	MASARA	65	65	1,853	1,853	28	153	150
	E.MENGO	50	53	1,525	1,908	36	118	125
	W.MENGO	37	40	1,055	1,105	28	101	109
	TOTALS & AVERAGES	215	224	6,416	6,933	31	497	511
EASTERN	BUKEDI	44	44	1,127	1,127	26	104	104
	BUSOGA	70	70	2,611	2,611	37	150	150
	TESO	63	65	1,930	1,995	31	167	167
	KARABOJA	15	15	535	535	36	17	17
	SEBETI	21	21	490	490	23	52	52
	BUGISU	37	41	989	1,090	27	89	101
	TOTALS & AVERAGES	250	256	7,682	7,848	31	579	591
NORTHERN	W. NILE	78	82	2,518	2,718	33	212	258
	ACHOLI	55	57	1,983	2,020	36	150	154
	LANGO	64	65	1,978	1,997	31	171	173
	MADI	41	42	1,313	1,313	31	75	75
	TOTALS & AVERAGES	238	246	7,792	8,056	33	608	660
WESTERN	KIGEZI	62	69	3,011	3,451	50	145	155
	ANKOLE	85	85	2,933	3,091	36	216	224
	TORO	52	56	1,993	2,281	41	159	180
	BUNYORO	51	62	1,664	1,684	27	106	114
	TOTALS & AVERAGES	250	272	9,601	10,507	39	626	673
	GRAND TOTALS & AVERAGES	953	998	31,491	33,344	33	2,310	2,435

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APPENDIX VI

DISTRICT FARM INSTITUTE REPORT

INTRODUCTION

COST ANALYSIS

FOOD COSTS

TOTAL COSTS PER STUDENT DAY

OPERATING COST

FARMING OPERATIONS

COURSES

MECHANIZATION

TRANSPORTATION

RECOMMENDATIONS

H. Dusenberry
June 1969

UGANDA DISTRICT FARM INSTITUTE
FIVE YEAR REPORT 1964 - 69
BY H.L. DOSENBERRY,
EXTENSION METHODS SPECIALIST
U.S.A.I.D./UGANDA
DEPARTMENT OF AGRICULTURE

INTRODUCTION

The purpose of this report is to bring together in one document pertinent data and information collected over the past five years and to make recommendation for future operations based on analysis of accumulated information.

The writer has spent considerable time during the past five years advising District Farm Institute Principals and training staff. In 1964 and 1965 full-time was devoted to this activity. The specialist time spent on D.F.I. activities was gradually reduced over the past three years as the major emphasis of his work was shifted to the field staff working on extension.

Each year District Farm Institute Annual Reports have been summarized and analysed to find ways in which the operation of these institutes could be made more efficient and more effective. Information from these reports has been transmitted to the Commissioner for Agriculture and his staff also discussed with the District Farm Institute Principals and their staff at periodic visits and at annual conferences.

Training conferences were held for Principals in 1964, 65, 66, 67, but not in 1968. One is planned for 1969 to be held in September. From 1960 up to 1964 eight District Farm Institutes were put in operation. Since then the number has gone up to 15. The last three are now completed but will not start taking in students until after June, 1969.

COST ANALYSIS

Food Cost

Cost per student day over the past three years ranged from Shs. 1.36 to 6.20. Most of the food cost fall in the range of Shs. 2.20 to 4.50. The later range of figures are reasonable but those above or below this range should require some justification: There seems to be a direct correlation between the percent of available time the D.F.I. was used and cost per day for food. High food cost go with low percentage of use. This is probably related to recruitment failures and wastage of food resulting. Another factor which affects the cost is the type of clientele. Some institutes have had to cater at a higher standard than others in order to provide the customary fare to the clientele.

High contractor prices have forced Principals to spend more money on food than if they were permitted to buy on the open market and direct from producers.

Total Cost per Student Day

There seems to be no correlation between total cost per student day and either number of beds, number of wings or size of farm. The total cost per student day is generally lower when the percent of use is high.

Cost range from as little as Shs. 4.95 up to 29.65 per student day over the past three years. The costs vary radically from year to year at most of the institutes and from one institute to another. This seems to point to the fact that management has a lot to do with costs.

Total Operating Cost

The four District Farm Institutes having three wings usually have the highest cost of operating. The average over all cost per year in round numbers for the past three years is:-

Type of Training	Average	High	Low
3 Wings (Agr., Coop and C.D.)	Shs. 131,400/-	193,500	86,500
2 Wings (Agriculture & Coop)	92,000/-	105,300	78,900
1 Wing (Agriculture only)	74,200/-	85,100	54,300

While the above costs show some rather large variations between institutes, it is entirely possible that the benefits and services rendered may be in direct proportions to the operating cost differences. This can only be determined by a close examination of the institute records and careful evaluation of the services rendered. The figures shown in this report provide a good basis for supervision and institute evaluation.

Farming Operations

From the crop record summaries we can see that most of the crops grown at D.F.I.s have a labour income earning rate below the government wage scale. This probably explains why so many of the farmers and farm youth seek employment off the farm. District Farm Institute management has so far not been able to demonstrate consistently a farming proficiency that is attractive or convincing to farmers. This is because both the porters and instructors are experience oriented to traditional labour patterns which applied to improved practice often result in uneconomic production. This can only be overcome by placing much greater educational stress on labour efficiency working skill and the use of labour saving equipment.

It is no use getting a farmer to plant more cotton, mulch, weed and prune his coffee and bananas or plant crops at the optimum time when he can't keep up the work he already knows should be done. Since hand labour is used to produce most of the crops commonly grown in Uganda, the man who works the crop can under reasonable work efficiency make a fair wage but there is little if any money left for management. This means that in order to make money using hired labour either the efficiency must be stepped up through close supervision and improved working methods or paying very low wages. The D.F.I.s must pay standard wage rates so the obvious means of demonstrating economic production is by improving efficiency of the workers.

District Farm Institutes should concentrate on efficient production because the farmer can easily detect or suspect uneconomic operations. Until and unless D.F.I.s can demonstrate a higher man hour earning rate for the common crops grown in Uganda, there is little incentive for farmers to expand beyond the subsistence family worked farm.

It is always easy to say what is wrong but to recommend changes which will improve the situation is more difficult.

One of the most time consuming tasks the farmer has and the one which probable limits his crop yield more than any other one factor is weed control. Chemical weed control needs to be demonstrated and studied to the fullest extent at D.F.I.s. Also hand, ox and tractor cultivators need to be used and studied in comparison with the jembe and hand slashing to control weeds.

Planting methods and equipment offer another opportunity to improve efficiency. Row markers, improved hoes, hand planters, etc. will reduce the planting time and improve the stand. Ox planting equipment can be obtained at reasonable cost and can reduce the planting time. The D.F.I. staff must become proficient in the use and applications of these labour saving methods or they cannot convince farmers to use them. The crop records and operations observed at D.F.I.s. do not indicate high proficiency. Both staff and farmers have to be encouraged to use initiative in finding ways to improve efficiency. The staff members must become deeply involved in the actual working skills in order to know where of they speak. We cannot expect porter to develop any great interest in innovations, initiative, labour saving or increased efficiency. There are now plenty of staff members at the D.F.I.s. to develop techniques and carry out some detailed studies on comparing time requirements and cost of different ways of doing the common farm jobs.

In addition to demonstrating the use of labour saving equipment on the D.F.I. this instruction needs to be taken out to the farming communities. This could easily be done by having the D.F.I. staff plan and work out some good one day demonstrations using D.F.I. equipment which would be staged on farms for large groups of people in the various communities in the district.

The idea must be impressed on the minds of rural people in many ways that a man's time is valuable. The only way this can be done is show how and why this time is valuable. Both physical demonstrations and factual proof must be used to convince people. The D.F.I. staff and facilities are best equipped to lead the way in this important aspect of extension.

Is the Farm a Teaching Aid?

The original instruction called for a model farm usually not to exceed 30 Acres in size. It was supposed to be typical for the district. It was to be an example of what the progressive could and should have. It was to be run on profit making lines and use oxen for cultivation but no tractor.

These objectives have so far, been carried out only in part. There has been no standard pattern followed and the small holding or model farm is operated under a different plan at each D.F.I. and not at all in some cases.

From the teaching standpoint, only a small amount of land is needed usually 15 - 25 acres. Any land in excess of this could only be used for other purposes such as, seed multiplication, livestock production or purely for income. Unless the staff is more than adequate these additional farming activities detract from effective teaching. The most effective teaching aid on the farm is the land devoted to method and result demonstrations. To merely produce a crop or animal even by the best and most economical methods does not necessarily have any effect on the farmer who sees it. The teaching aid must be able to show, favourable, significant, meaningful contrast. This can best be done by demonstration. The most important phase of farming for instruction is to keep accurate records, analyse and use them for teaching. After all when a farmer looks at a crop or a demonstration most of the questions he will ask can only be answered if accurate records are kept. A small holding or model farm has virtually no meaning unless the records are well kept made use of.

What is actually needed for teaching at the D.F.I. is $\frac{1}{2}$ - 1 acre for each of the main permanent crops grown in the area, 6 acres for a rotation which is to be used for result demonstrations (3 for grass and three for cultivated crops) pasture for oxen and a few head of improved cattle (dairy or beef), $\frac{1}{4}$ acre for vegetable garden, 1 acre for ox cultivation demonstration and 1 - 2 acres for farm building, kraals, etc. The remainder of the land should be devoted to other uses and either farmed by tractor or used for livestock.

It has been quite clearly shown that it does not pay to grow crops for income using labourers working by hand on the government pay roll. Seed multiplication using tractor would boost the available seed supply and provide an opportunity to demonstrate the economics of tractor farming where the farmers have the opportunity to evaluate it before and after they try it.

By cutting the farm acreage cared for by hand labour, the overall cost of the farming operation can be reduced and the standard of instruction improved.

COURSES

The most common type of instruction at the D.F.I. is the one week's course on general agriculture. This has no doubt served a useful purpose but is too general and spread too thin to make the greatest impact on farmers. This type of training has been reduced somewhat in favour of more specialised courses for common interest groups. This trend should continue and the staff should start preparing to teach these special interest groups with considerable more skill and depth.

The farm management aspect of crop and livestock production must be stepped up in order to ensure that commercial enterprises will pay a return for management over and above the labour and other costs. Increased emphasis will need to be placed on the economic aspect of every farming practice taught. The D.F.I. staff will do well to step up the rate of accumulating knowledge on the economic aspect of the practices they teach. This needs to be done both on the farm and in the library.

MECHANIZATION

The District Farm Institute policy has so far stressed ox cultivation. This is of course good and should be continued. The objective should be to train the farmers so they can train their oxen. Farmers cannot afford the luxury of having someone train oxen for them. When enough farmers have learned this technique they will become self-sufficient and learn from each other thus relieving the Government of this responsibility. Heavy emphasis must be placed on teaching farmers to use tools and making adjustments on the equipment used. Until the farmer learns to operate equipment skillfully and maintain it well he can make very little use of it. The first and most important step in mechanization is to prepare the people for it. Machines are no better than the man who operates and maintains them.

With tractor hire service becoming available it would seem logical to have a tractor on every D.F.I. to demonstrate its usefulness in the farming business. Farmers must be taught how to supervise the work done on his farm. Not only would it be useful for instruction but could help solve the problem of making use of the large tracts of land on the D.F.I. which are uneconomic to farm with hired hand labour. This would be a means of collecting useful data on the economics of tractor farming which is needed for teaching. It could also be a means of producing improved seed for sale to farmers and for doing result demonstrations. Mechanization is costly to use in the learning stage but it can't be learned by staying away from it. If tractor hire is to be promoted the D.F.I.s. should be given the opportunity to make a contribution toward it.

TRANSPORTATION

In order for a D.F.I. to be effective, the students must arrive for courses as scheduled and the staff must be able to make occasional visits to the farms and villages in the district.

After the first year of operation, the Lorry which transports students to the D.F.I. usually becomes unreliable. The time taken by Ministry of Works to repair the lorry ranges up to 10 months in the workshop during which time the D.F.I. is without transport for students. This means the students must come on their own or transport must be hired or the classes cancelled.

This problem can be solved by replacing lorries more frequently and using a different means of repairing them. Special Development or private workshop would no doubt eliminate much of the time spent in workshops and would be more economical.

An alternate solution is to hire transport and not maintain a lorry at each D.F.I. Still another alternate solution is to pay each student who attends a standard travel allowance based on mileage and let him find his own transport. Sooner or later the farmer will have to start making some contribution to his training. Perhaps travel is a place to start.

The staff needs to visit farmers to keep abreast of the farming practices and problems. They also need to visit farmers who have attended courses to evaluate the effect of their teaching. At present there are three A.A.O.s. and one to three A.A.s. and F.A.s. on D.F.I. staff. Usually only the Principal has a car. It would seem very much worthwhile to buy a light pickup to service the D.F.I. and transport staff to the field for demonstrations and farm visits. Labour saving demonstrations are badly needed on the farms and the D.F.I.s. are equipped to do it. A pickup for many of D.F.I. jobs is much more efficient than a lorry. It can serve a dual purpose of transporting equipment, supplies and staff. The purchase of a pickup for D.F.I. should be given high priority.

The cost of transporting people to the D.F.I.s. ranged from Shs. 3.26 to Shs. 22.00 per person attending agricultural courses in 1968. The average was 11.59 per person. This does not include driver and in most cases no depreciation was charged for the lorries. If these costs cannot be reduced it will be more economical to adopt an alternative method of getting people to the D.F.I.

RECOMMENDATIONS

1. A firm policy must be adopted for farming operations and principals not allowed to depart from the policy. This should be done for each D.F.I. by a technical committee working with the Principal, D.A.O. and R.A.O.
2. A national supervisor should be appointed to assist the Assistant Commissioner for Agriculture (Education) by supervising more closely the record keeping at D.F.I.s. He should find the weak spots and cut out the waste. With 15 D.F.I.s. the operating cost may run up to Shs. 1,500,000 annually, for the Agr. Wings alone. This certainly would justify a full-time supervisor to keep close watch and constantly try to improve their efficiency.
3. A firm policy on transport should be adopted to replace lorries at a specified mileage and have them repaired at Special Development workshops or private workshops.

The alternative to this would be to arrange other means of transport for students.

In either event a $\frac{1}{2}$ Ton pickup, Kombi Bus, or 15 passenger Toyota bus is required to do light transfer work, transport staff and demonstration equipment to the farming communities. Two Toyotas or three Kombi buses would eliminate the need for one lorry and one pick-up at each D.F.I. and the overall cost of transportation would not be much different.

4. Each D.F.I. having more than 30 acres of tillable land should have a tractor for demonstration, crop production and maintenance of grounds.

5. Small Holding

It is noted that no standard plan for operating a small holding at the D.F.I.s. has ever been followed. The tenant system has so far failed. In view of the experience, it is recommended that the small holding concept as such be abandoned in all cases except where it is now established and making a worthwhile contribution to the educational programme of the Institute. In the case of the established small holding a regular farm record should be kept and made use of in the teaching process. Where no small holding exists, the farming plan should be developed by the technical committee (see Recommendation No. 1). Record on crops and livestock produced outside of the small holding or where a small holding is not established, should be kept on an enterprise basis.

6. D.F.I. staff in cooperation with the field staff should prepare one day demonstrations both at the Institute and away from it for large groups of farmers. Labour saving demonstrations should be given a high priority.

7. Excess land not needed for teaching purposes should be devoted to improved livestock production or tractor farming to multiply good seed or leased out to farmers. It should not be left idle.

8. D.F.I. Principals should be sent for a degree in Agriculture Education. This will involve establishing the position at the degree level. Until this can be done short courses (4 - 6 months) for Principals on Agr. Education are recommended. This could be done at the rate of 4 - 6 per year. With the additional A.A.O. at each D.F.I. this kind of training could be managed without interfering with current operations.

9. Principals have had the opportunity to attend a training course annually. This should be continued. A.A.s. and instructors should also have annual training courses arranged for them. These could be done at the Agricultural Colleges between school terms.

-DISTRICT FARM INSTITUTE INFORMATION

DISTRICT	VILLAGE	YEAR OPENED	DORMITORY CAPACITY			TOTAL LAND AREA
			AGRICULTURE	COOP.	C. DEVELOPMENT	
ACHOLI	Kitgum	1968	32		-	100
ANKOLE	Bushenyi	1963	32	20	-	113
BUNYORO	Bulindi	1969	32		-	204
BUGISU	Bulegini	1969	32		-	125
BUKEDI	Tororo	1961	32	20	20	200
BUSOGA	Tkulwe	1960	40		-	238
E. MENGO	Mukono	1961	40	20	20	100
KARAMOJA	Nabuin	1965	20		-	1300
KIGEZI	Kachwekano	1965	32	20	-	40
LANGO	Ngatta	1960	32	20	32	100
MASAKA	Kamenyamigga	1963	32		-	22
MUBENDE	Mityana	1969	32	20	-	80
TESO	Serere ¹	1968	32		-	12
TORO	Kyembogo	1961	32	20	20	140
W. NILE	Abi	1964	32		-	50

¹ Opened at Arapai Agricultural College in 1963 and run for three years.

Opened again in 1968 at Serere Research Station and still operating.

DISTRICT FARM INSTITUTE ATTENDANCE 1966 - 68

	NUMBER OF PEOPLE									STUDENT DAYS								
	1966			1967			1968			1966			1967			1968		
	AGR.	COOP	C.D.	AGR.	COOP	C.D.	AGR.	COOP	C.D.	AGR.	COOP	C.D.	AGR.	COOP	C.D.	AGR.	COOP	C.D.
ACHOLI	-	-	-	-	-	-	1190	-	-	-	-	-	-	-	-	5569	-	-
ANKOLE	1499	358	-	2075	272	-	2050	466	-	3721	2564	-	8681	2218	-	8315	2698	-
BUKEDI	1667	296	351	1377	390	337	1407	365	863	5739	1893	1893	8057	2142	2259	8390	3236	3562
BUSOGA	1629	-	-	1653	-	-	1783	-	-	3774	-	-	10206	-	-	8768	-	-
E/MENGO	603	62	421	828	150	531	1247	124	341	3822	4433	4775	4140	1551	9663	5219	3430	11041
KARAMOJA	832	-	-	1599	-	-	599	-	-	5000	-	-	5634	-	-	3300	-	-
KIGEZI	3027	29	-	2948	192	-	3676	248	-	3182	127	-	5850	1017	-	10466	1688	-
LANGO	659	306	198	477	436	126	832	219	343	3985	1769	1714	2661	2120	1429	4614	1896	3298
MASAKA	684	-	-	1047	-	-	1093	-	-	3205	-	-	5322	-	-	5663	-	-
TESO							759									3558		
TORO	539	111	151	765	212	165	725	68	540	4943	680	2218	4199	2921	1443	5115	2068	3954
W/NILE	1036	-	-	824	-	-	979	-	-	5923	-	-	4969	-	-	5319	-	-

D.F.I. COST ANALYSIS 1968

	FARM LABOUR & STORES	KITCHEN, LABOUR, FOOD, FUEL AND ELECTRICITY	TRANSPORT COST	TOTAL OPERATING COST RECURRING	FARM INCOME	FARMING PROFIT OR LOSS	COST PER STUDENT DAY RATIONS	COST PER STUDENT DAY TOTAL	COST PER STUDENT TRANSPORT	NO. OF PEOPLE IN RESIDENCE COURSES
							<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
ACHOLI	29,935.05	12,475.25	3,884.70	84,517.35	1,091.35	-27,843.70	2.24	15.20	3.26	1,190
ANKOLE	52,020.25	25,994.20	13,850.00	117,266.60	29,540.00	-22,480.25	2.36	10.65	10.18	1,360
BUKEDI	33,950.95	44,060.85	10,028.58	163,358.94	22,402.55	-11,584.40	2.88	10.69	7.13	1,407
BUSOGA	42,911.57	35,677.40	2,146.12	130,634.50	16,964.00	-16,964.00	4.07	14.90	9.05	1,597
BUMENGO	58,303.11	101,622.22	15,062.17	239,012.84	13,180.30	-35,122.81	5.10	12.13	12.08	1,247
KARAMOJA	38,459.35	13,054.00	8,030.60	97,922.50	3,709.25	-3,750.10	3.95	29.65	14.38	559
KIGEZI	22,606.15	37,331.70	13,448.55	89,164.65	39,009.80	+15,403.65	3.57	8.52	9.53	1,411
LANGO	34,332.25	59,733.00	5,276.65	143,724.80	5,547.90	-28,834.35	6.12	14.65	7.62	692
MASAKA	35,428.55	29,339.25	7,450.80	79,847.85	16,178.60	-19,249.95	3.56	14.16	6.82	1,093
MESO	3,141.70	22,322.30	13,397.30	85,137.35	1,001.40	-2,141.40	6.20	23.70	22.00	609
MORO	74,970.95	30,063.95	14,490.05	160,146.85	51,366.45	-23,604.45	2.70	14.3	20.00	1,243
MURKINILE	49,263.23	22,798.26	18,669.63	112,971.53	19,703.20	-29,505.03	4.28	17.25	19.07	979

1 Includes labour fuel and rations.

2 Includes all recurring costs.

3 Cost of Lorry and hired transport divided by number of Agr. Students attending courses during the year.

4 Includes Coop, Community Development and Agricultural Courses

1968 D.F.I. COURSE ATTENDANCE (AGRICULTURE)

	NUMBER OF COURSES HELD	NUMBER OF PEOPLE ATTENDING					STUDENT DAYS IN RESIDENCE	PERCENT OF USE BASED ON NUMBER OF BEDS AVAILABLE AND 250 DAYS OPERATION PER YEAR	NUMBER OF STUDENT DAYS REQUIRED TO GIVE 100% USE FOR AGR. WING
		MEN	WOMEN	Y/FARMERS	TOTAL	ATTENDANCE AT ONE DAY MEETINGS			
1. ACHOLI <u>1</u>	41	953	63	174	1,190	200	5,569	70	8,000
2. ANKOLE	47	746	286	328	1,360	690	7,625	95	8,000
3. BUKEDI	38	607	395	405	1,407	-	8,390	105	8,000
4. BUSOGA	61	511	411	675	1,597	186	8,582	86	10,000
5. E/MENGO	89	492	382	373	1,247	274	5,219	52	10,000
6. KARANOJA	23	392	77	141	559	29	3,300	66	5,000
7. KIGEZI	69	418	482	511	1,411	2,265	10,466	138	8,000
8. LANGO	24	284	132	276	692	142	4,614	58	8,000
9. MASAKA	25	621	255	217	1,093	738	5,663	71	8,000
10. TESO <u>2</u>	25	256	34	319	609	169	3,596	45	8,000
11. TORO	34	348	78	219	645	90	5,115	45	8,000
12. W. NILE	24	452	247	280	979	918	5,319	66	8,000

1 Opened in March, 1968.

2 Opened in February, 1968.

THREE YEARS AVERAGE FIGURES FOR CROPS GROWN
ON DISTRICT FARM INSTITUTE FARMS

	MAN HOURS PER ACRE			YIELD PER ACRE IN LBS.			LABOUR INCOME PER MAN HOUR			COST PER ACRE OTHER THAN LABOUR			LABOUR INCOME PER ACRE		
	1966	1967	1968	1966	1967	1968	1966	1967	1968	1966	1967	1968	1966	1967	1968
ENTERPRISE															
COTTON	790	576	705	697	465	723	-.41	0.09	-.21	-	159.10	82.20	280.59	52.50	168.00
COFFEE	-	923	1,924	-	1,364	2,491	-	1.17	.58	-	183.93	147.97	-	900.03	733.37
SORGHUM	380	207	307	2,885	936	703	.60	.29	.31	-	126.41	140.00	234.12	41.21	67.81
BANANAS	922	782	1,038	16,391	6,063	8,450	1.15	.37	.55	-	29.84	104.27	1,052.28	272.14	499.03
F. MILLET	563	405	323	2,565	1,269	1,224	.41	.43	.64	-	103.85	86.96	231.53	172.85	184.28
G. NUTS	510	319	590	936	708	891	.39	.65	.37	-	318.83	124.26	192.02	108.03	196.02
BEANS	310	333	248	652	593	753	.39	.21	.43	-	111.15	118.63	94.77	58.65	108.95
VEGETABLES	2,370	9,984	7,000	13,037	-	22,197	1.83	.57	.50	-	3,071.60	1186.40	4,457.74	5950.20	5620.20
MAIZE	302	321	302	2,149	3,091	2641	.78	.91	.93	-	182.58	133.90	222.74	254.96	195.62
TOBACCO	2,716	-	3,516	1,219	-	1672	.88	-	.73	-	-	1038.15	2,772.65	-	2573.60
SW. POTATOES	657	445	345	7,593	5,483	4392	.73	.82	.66	-	12.40	40.67	511.64	371.40	178.95
ENG. POTATOES	899	-	-	10,252	-	-	1.13	-	-	-	-	-	1,058.10	-	-
WHEAT	-	360	470	-	2,000	1700	-	.77	.98	-	142.00	193.10	-	278.00	231.90
KL. GRASS	-	300	-	-	427	-	-	5.40	-	-	62.80	-	-	1624.52	-
CASSAVA	-	-	64	-	-	8306	-	-	4.93	-	-	17.20	-	-	315.44
SUGAR CANE	-	-	1,779	-	-	637	-	-	1.35	-	-	112.40	-	-	2408.10

NOTE: - The high variation in labour income is due to small numbers of crops included in the average figure. One crop failure due to hail or other causes can distort the picture. For example in 1967 only two crops of cotton were reported. One was a failure due to hail thereby reducing the return more than normal. While the number of crop summaries is not enough to give a reliable average, it does provide information on the potential labour requirement, cost and income for common crops of Uganda.

NUMBER AND ATTENDANCE 1969

D.F.I.		COURSES FOR FARM PEOPLE IN AGR.						TOTAL ALL COURSES AGR. WING
		AGR.		SPECIALISED		Y.F.U.		
		MEN	WOMEN	MEN	WOMEN	MEN	WOMEN	
1.	MASAKA	450	363	161	11	164	79	1,294
2.	KITGUM	462	111	-	-	396	-	1,130
3.	MUKONO	317	89	212	92	-	-	1,541
4.	LANGO							1,019
5.	TASO	648	78	-	-		415	1,169
6.	KARAMOJA	873	218	-	-		328	1,442
7.	ANKOLE	361	131	82			295	1,514
8.	BUSOGA	210	60	153	51		165	1,152
9.	BUGIJI	216	-	-	-		17	233
10.	KIGEZI	512	397	36	15	178	247	1,414
11.	BUKEDI	481	309		21			964
12.	MITYANA	97	21	17	1			136
13.	TORO	N O R E P O R T						
14.	BUNYORO	N O C L A S S E S H E L D I N 1969						
15.	W. NILE	335	229	29	-		177	770
		4,962	2,006	690	170	740	326	13,778
		6,968		881		2,463		AVERAGE PER D.F.I. 1,253