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STAFFING ASPECTS OF THE EXTENSION SATURATION
PROJECTS IN UGANDA: PRELIMINARY RESULTS

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STAFFING ASPECTS OF THE EXTENSION SATURATION
PROJECTS IN GAMBIA: PRELIMINARY RESULTS.

This paper presents some preliminary impressions obtained in the evaluation of the Department of Agriculture's Extension Saturation Projects. The main part of this evaluation is a detailed study of farmers in Miroi parish, Bukedea county and the nearby control parish Aligoi being conducted by David Vail. Previously farmers in this and three other ESP's were questioned and studied in much less depth during April and May 1969. Following the administration of the farmer questionnaire field staff in the ESP's and control parishes were questioned. Most of these interviews were conducted by the writer or David Vail but in a few cases where language was a problem research assistants were used. Time has not allowed a full report on all the responses to the staff questionnaires and in some cases supplementary information may be needed before they can be used.

RATIONALE OF STUDY

The stated aims of the ESP's lay most emphasis on the clients rather than the change agents. It is only in the fourth objective that the extension staff are mentioned:-

"To provide a result demonstration which involves both the extension staff and the farmers in a project which will convince them that the right kind of extension education is necessary to make agriculture a respectable and economically sound profession".

It is suggested that the improvement of staff effectiveness is however a much more important objective than has been suggested in official documents. There is naturally some reluctance to adopt objectives which imply that the staff are not efficient or effective already. Too critical an approach in training programmes could in fact lower morale and therefore possibly lower effectiveness. Therefore there is an inherent tendency not to emphasise the staff aspects of ESP's.

The basic aim of the ESP's is to concentrate effort in a limited area. This concentrated effort should have some important effects on the clients being concentrated on. They should also have significant effects on the change agents. It is the

purpose of this paper to enquire into the potential and achieved benefits to extension staff effectiveness.

Abbreviations

The following abbreviations will be used in this paper:-

- E.S.P. = Extension Saturation Project
- D.F.I. = District Farm Institute
- D.A.O. = District Agricultural Officer (Graduate)
- A.A.O. = Assistant " " (Diploma)
- A.A. = Agricultural Assistant (Certificate - 2 years)
- F.A. = Field Assistant (Short course training only)

FACTORS LIMITING THE EFFECTIVENESS OF EXTENSION

The factors limiting the effectiveness of extension can be grouped under three main headings. First are factors derived from the nature of the clients or farmers. Second are factors which are primarily concerned with the extension staff or their organisation. Thirdly there is the content of extension which of course is influenced by the staff but may often be outside their control.

Recent statements have implied that the first group of factors are considered most important in government circles. Sociologists like Everett Rogers have devoted a great deal of time to studying the adoption process primarily from the clients angle. Economists, on the other hand, are inclined to blame the content of extension as being the prime cause of ineffectiveness. The truth obviously lies somewhere between all these different approaches. The group of factors concerned with the extension staff are probably at least as important as the others. Furthermore they have the great advantage that there is more scope for changing the situation. This can be done through training programmes, improved selection of staff and, potentially, through programmes like the extension saturation projects.

From observation of staff in the field and from listening to what was said during the training course at Mukono (for Buganda Region E.S.P. staff) it is suggested that the following are important staff factors limiting effectiveness from time to time:-

- a) Some staff are attempting to cover such large areas that too high a proportion of time is occupied with travelling,
- b) Many extension staff, even of AAO level and above, are without any means of transport,
- c) Especially new staff, are sometimes not fully aware of what is expected of them,
- d) Some communications channels are complex (some on the course thought they should work through chiefs whereas this is not now government policy),
- e) A tendency towards being bound to the office (as a general rule an AAO should spend at least 15 days/month in the field),
- f) The shortage of A.A.'s leads to a situation where there are too many supervisors in relation to those doing the job. (In an extreme case, 1 AAO may supervise 1 AA who in turn supervises 1 F.A.),
- g) Civil service rules when applied to a diffused field service with very irregular supervision tend to encourage slackness. Only those who commit major errors of conduct like breaking the law are usually dismissed,
- h) Complaints are made that extension staff are not adequately supplied with materials such as fertilizers, simple tools, etc. for demonstration purposes,
- i) There is sometimes a lack of co-ordination between different government departments,
- j) Lack of staff housing leads to inflexibility in posting and the situation (e.g. Bukasa) where an AA in charge of an ESP spends too large a proportion of his time travelling to and from the project.

- k) Remoteness and lack of transport lead to a low morale. This is accentuated by the few opportunities for promotion or further training particularly for A.A.'s.

POTENTIAL BENEFITS IN EXTENSION STAFF
EFFECTIVENESS FROM THE USE OF E.S.P.'s

The following are considered to be the main potential benefits of E.S.P.'s:-

a) Mobility of Staff:

By concentrating the work of field staff, projects should enable staff to visit a much higher proportion of farmers. The amount of time spent on travelling as opposed to teaching or visiting should also be reduced. The project should also enable staff to plan their visits so that they do a round trip visiting several farmers who live close together. A major problem at present in extension services is the lack of funds for travel.

b) Group contacts with Farmers:

There is considerable emphasis in the saturation project training on group contacts through method and result demonstration, adult and youth clubs, etc. Such group contacts are much easier to develop when effort is concentrated on one community.

c) New extension methods:

The method demonstration has been a very under-utilised technique in Uganda. Both method & result demonstrations are stressed in ESP'S & training is provided in ESP staff courses.

d) D.F.I. recruitment:

The projects should have an effect on the recruitment of farmers for District Farm Institute courses.

e) Morale of Extension Staff:

Extension workers in remote areas often suffer from low morale due to their isolation, lack of incentive and the absence of any stimulation to keep at what is a pretty tough job. ESP'S should improve morale through:-

- i) Greater contact with senior staff at District, Region and Head Office level,
- ii) Frequent refresher courses and meetings.
- iii) Developing better attitudes to work.
- iv) More frequent contacts with subordinate staff.

f) Availability and use of extension aids:

In view of the financial assistance from USAID ESP's should improve the availability of extension aids.

g) Knowledge of viable innovations for the area:

Although this does not appear to be stressed in training presumably staff in the saturation projects should have given more thought to the content of extension advice.

h) Knowledge of marketing, input sources, prices, etc.

Extension staff knowledge of the above should improve due to the increased emphasis on extension content which should follow the starting of an E.S.P.

i) Co-ordination with other extension agents:

If well planned saturation projects should draw in other agencies and promote greater co-operation between government departments.

j) Demand for services:

Through concentrating effort farmers awareness of the availability of assistance should increase. An extension service can only be said to have taken off when there are strong demands for the services offered. ESP's should increase such demands within the project. If the results are seen as desirable there should also be an increase in demand for services outside the ESP.

DEMAND FOR SERVICES

One of the clearest indices of whether extension is providing a useful service for farmers is the extent that farmers demand assistance. In the past the Uganda Department of Agriculture has been heavily orientated towards passing out information and instructions. A 1941 Report (1) stated that information should be passed by the AO to the DC. The DC would then pass on the information "to his chiefs and instruct them to explain the matter fully in lukiiko and in letters to sub-chiefs".

In the early stages of agricultural development farmers are likely to be taught through demonstrations and the distribution of new crops. Advice will be fairly uniform for each farm and extension staff will be trained in a series of routine types of advice. As agriculture develops and more farmers are educated extension needs to offer more individual attention. As methods become more intensive farmers will start being troubled more by diseases and pests.

At both stages agricultural extension staff ^{will receive} some demands on their services if they are seen to have useful knowledge. Brett and Crawford's ^{Young's} report gives a clear indication that the Agricultural Department is seen as the major source of assistance. The Table below is based on an open ended question put to the co-operative society members.

Table I Responses to question about where help would be sought for improving the respondents farm

Source of help	No.	%
Ag. Department	232	54.9
Govt unspecified	82	19.3
Coop. Society	40	9.5
Chief	24	5.7
Local Influential	11	2.6
No one	17	4.0
Dont Know	17	4.0

(1) Report and Proceedings of the Conference on Rural Betterment held at Serere Expt. Station. 1941. Mimeo. p.5.

(2) Brett, E.A. and Crawford Young, M. Survey of Uganda Farmers. 1966-67. Mimeo report on survey of 500 members and non-members of cooperative societies.

The ESP, by concentrating attention and creating more awareness of the Department of Agriculture should increase demands on staff. A key question in the staff questionnaire was, therefore, 45a:-

"Give details of any requests from individual farmers for a visit to their farm over the past week". The Table below gives the responses to this question.

Table II The number of requests in past week from farmers to visit their farms.

<u>ESP</u>	<u>AA/FA</u> <u>i/c ESP</u>	<u>Notes</u>	<u>AA/FA</u> <u>i/c Control</u>	<u>Notes</u>
Chelekura	Nil	Sometimes as many as 8 for subsidies	-	-
Mirwi	4	Fairly typical	Nil	-
Bukasa	4	Sometimes none	1	May get up to 4
Kibibi	1	Not a typical number	3	Sometimes more

From Table II one could tentatively conclude that there is no great effect on demand for services. It may be that the areas selected are not yet at the stage when farmers are clamouring for help. One FA (Mirwi Control) replied that farmers don't come to him - he takes the initiative. This is a revealing comment on the relationship between extension staff and farmers.

More insight into the question of demands for services can be obtained by looking at the assistance sought:-

Table III Information & Assistance most commonly
Sought by farmers over a period.

<u>ESP</u>	<u>AA/FA i/c</u> <u>Project</u>	<u>AA/FA i/c</u> <u>Control</u>
Chelekura	Vegetable seeds Sick Animals Pests Subsidies	--
Miroi	Subsidies Vegetable Growing	Subsidies Farm Management Techniques
Bukasa	Advice on coffee and bananas	Coffee pruning Tractor Hire
Kibibi	Subsidies Seed supply Equipment	Tractor Hire on credit Loans Higher prices

Table III would seem to indicate that the demands for assistance in the ESP'S was slightly more technically orientated. It could therefore be that ESP'S are helping extension staff to get away from the image of being primarily handers out of subsidies. The results might be compared with those of Brett and Crawford Young:-

Table IV Responses to a question about what help should be given by Government (2)

Response	No.	%
Higher price	207	42.7
Loans	134	27.7
Farm Implements	106	21.9
Tractors	94	19.4
Insecticides	65	13.5
Rural welfare	59	12.2
New Cash Crops	29	6.0
Fertilizer	17	3.5

These responses are extremely interesting and reflect the unfortunate effect of past handouts. Extension workers may not therefore be seen as people to go to for technical advice. They may be seen primarily as people with access to subsidies, Loans, etc. Contact with them tends to centre on getting favourable treatment for a subsidy or loan. The possibility of tapping their sources of technical knowledge becomes overshadowed.

The Borgo a Mozzano project in Italy has some similarities with the concept of BSP'S. However it was established from the start that there should be no free handouts or subsidies. The Extension worker made farmers aware of government grants and loan schemes but was not directly responsible himself (3). The extension worker could thus concentrate on the task of offering technical advice.

Of the responses given in Table IV none could really be isolated as involving technical advice only. The emphasis on inputs like equipment, fertilizers and insecticides is interesting and revealing. One of the many interesting observations made during the staff evaluation concerned this point. In several cases extension staff actually purchase equipment and materials for farmers.

(3) Vironc, L.E. A case study in Extension: Borgo a Mozzano in case studies to accompany "Getting Agriculture Moving" Agric. Devel. Council. New York. 1967.

appeared to be made at the staffs own expense.

The supply of inputs ~~for~~ must be a key factor in agricultural development. Possibly one of the major contributions of AA staff might be to assist farmers in obtaining inputs. This natural trend is probably contrary to existing regulations. Perhaps the whole question of the supply of inputs needs to be reviewed. The use of extension staff for this purpose may be justified at an *early* stage. However it cannot be said to be an economic use of an AA's time if he drives 30 miles to Kampala and back to buy a tin of Kynadrin.

STAFF ATTITUDES TO ESP'S

As was to be expected most of the staff involved considered the ESP'S a success. All indicated that their work was more satisfying. All indicated that the ESP area had made more progress than other areas. However it is clear that ESP areas are selected as areas which are already above average. It is therefore difficult to disentangle the effects of the ESP from what would have taken place without a project. Particularly in the case of Bukasa the project seems to centre around one individual progressive farmer. Most of the practices adopted had been learnt before the project started (4 page 30-34.)

It has already been suggested that ESP'S should help to improve staff morale. From the responses this would appear to be the case. Responses indicated that ESP'S generated more ^uenthusiasm amongst farmers, more could be seen to be happening, clubs became more active. One AA said he could visually notice an improved standard of coffee pruning when he moved about the area.

Particular ^Sreasons for thinking that progress had been greater in the ESP'S are given in Table V :-

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- (4) Vail, D. ~~Internal~~ Report on Phase I Evaluation.
Extension Saturation Project.
Mimeo report for limited circulation Aug. 1969.

Table V Reasons why the ESP areas had made more progress than other areas.

ESP	Reasons
Chelekura	Row - cropping adopted Greater use of fertilizers and manures New, improved seeds
Miroi	Better seed - beds Timeliness of planting Road building communal labour New crops (e.g. Vegetables)
Bukasa	Coffee pruning improved Better bean spacing Improved seeds Pig expansion
Kibibi	Higher coffee and banana yields Vegetables for home consumption Clubs are more active than elsewhere

Some of these reasons do not stand up to close scrutiny. Thus in Chelekura only 1 of ⁴⁵ Vails sample had used super-phosphate fertilizer last year. On the other hand row cropping can be claimed as a major result of the ESP. 57% of farmers in the Sample had started row cropping since the ESP started compared with 11% in the control. The practice was almost non-existent before the ESP started. The reasons given for Miroi stand up to scrutiny better and fit reasonably with the results of the farmer questionnaire.

In the case of Bukasa the farmer survey indicated that farmers had increased their acreage of beans (4 page 32) but that row planting had been adopted prior to the ESP. Spacing was not specifically covered in the questionnaire: While 15% of farmers (4 page 34) were influenced by method demonstrations none claimed to have improved their pruning since the ESP started. In the case of pig expansion, if this is due to extension activity, it should have been due to activity by the Department of Veterinary Services rather than Agriculture.

MOBILITY

In the potential benefits it is suggested that field staff on ESP'S should be able to spend more time on extension. This is due to the theoretical reduction in time spent on travelling. A full appraisal of this question will have to await the analysis of time - tables kept by staff. However Table VI would appear to show that ESP staff may spend about the same time on travelling as those in other areas.

Table VI Distances travelled on duty in miles/week (staffs own estimate)

	<u>ESP Staff</u>				<u>Control Staff</u>			
	A	B	C	D	A	B	C	D
Foot	12	?	30	10	-	7	10	20
Bicycle	-	70	100	-	-	87	-	-
Motor-bike	100	-	-	90	-	-	-	150
Car/Taxi	-	-	-	-	-	-	100	-
Totals	112	70	130	100	-	94	110	170

One factor which militates against the reduced time on travel effect is the fact that staff^{are} only expected to spend 50% of their time on the ESP'S. This means that much of the other time may be spent on travel to covering the remaining area. In the case of Bukasa the normal 2 - 3 visits to the project per week^{ee} would involve about 75 miles of travel to get to and from the project alone. It can therefore be stated that the benefits of increased time spent on extension are only likely to be evident where:-

- a) The AA lives near or within the project,
- b) The area for normal extensive extension is not too large,
- or c) Staff are allowed to concentrate 100% on projects.

Mobility is also important for supervising staff. During this year a series of appointments of AAO'S i/c ESP'S have been made. Being new diplomates very few of these AAO'S have yet received car loans. In one case an AAO has ESP'S as far as 100 miles from his office. A journey takes 3-4 hours by bus and taxi. Some of these problems could be minimised by siting ESP'S nearer District offices. However more funds for car loans are urgently needed.

CONTACTS WITH SENIOR STAFF

One of the suggested factors leading to improved morale was given as greater contact with senior staff. Results were rather inconclusive in comparing control and project staff. ESP staff received an average of 3 visits per month and control staff 5 visits per month from their immediate seniors. However contact with regional and HQ. staff is increased by visits to projects. This benefit is likely to become less pronounced as more projects are developed. Table VII indicates the extent of visiting by DAO staff and above.

Table VII Number of visits by DAO'S and Extension Advisers during past year.

ESP	No. of visits by DAO	No. of visits by R.E.A'S & N.E.A.
A	6	4
B	4	2
C	1	2
D	3	4

THE EXTENT OF SATURATION

In evaluating the ESP'S a key factor is the extent that saturation is achieved. Another key factor is the ratio of farmers to field staff in the ESP's and the equivalent ratios for other areas of the country. If ESP's are shown to give substantial results it will be important to know how many staff are needed to cover the country with a similar density of staff. Before we can go into the staff densities it is important to know how much of the time of an A.A. is spent in a project and how much in other areas. This will of course vary considerably from project to project. Table VIII presents some estimates of time spent on projects based on time-tables prepared by field staff. It should be noted that Departmental policy is that staff i/c ESP's should spend 50% of their time in the ESP.

Table VIII Estimated proportions of time spent on ESP's by AA's/FA's in charge.

Project	Minutes taken to reach project meeting place	Estimated % of working time spent on ESP
Bukasa	120 (bicycle)	40
Kibibi	20 (motor-bike)	20
Chelekura	12 (bicycle)	50
Miroi	15 (bicycle)	40

It will be appreciated that the above figures are very approximate. The extent of Saturation may not be accurately judged by the percentage of working time spent on an ESP. In the case of Bukasa the A.A. spends about 2 days per week on the project but of each day 4 hours is occupied in travelling to and from the project. Even with the most active field staff one could hardly describe such a situation as Saturation. In fact the farmer survey showed that some of the Bukasa farmers were unaware that they lived within an Extension Saturation Project. Furthermore only 8% of farms had been visited and less than 40% had attended either a meeting or demonstration in the past year (4p. 31). It is perhaps only fair to add that in the control no farms had been visited in the past year.

The Farmer Survey (4) gives a valuable cross check of the extent of Saturation. Method Demonstrations, which are stressed in the training of ESP staff, and which fit the community emphasis show up well in Table IX.

Table IX Average number of Method Demonstrations seen per respondent in past year.

	ESP	Control
A	2.8	0.4
B	3.6	1.3
C	1.1	?
D	2.0	0.2

It should be pointed ^{out} however that in the case of Bukasa and Kibibi 70% and 63% respectively saw no method demonstrations.

The fact that in some areas the impact of the Department of Agriculture is almost non-existent is a reflection of the extremely low staffing rates. Table X gives some comparative staffing rates for various districts in Kenya and Uganda. It will be seen that, except in certain areas (e.g. Bugisu) staffing rates in Uganda are extremely light. In one area of West Mengo District an Agricultural Assistant is expected to cover an area which has over 10,000 tax payers (3 Gombololas). It should also be noted that the most saturated Uganda E.S.P (Kibibi) covers about 3 sq. miles, which represents about the same density as the normal staffing of the high potential areas of Kenya. ⁽⁵⁾

Table IX gives us some indication of how Saturated the ESP's are in relation to the control parishes. Control parishes were chosen as representative of the same general area as the ESP's. As far as was possible they were matched for access to markets and roads but matching proved extremely difficult in Buganda.

Table X Estimated Staffing Densities in various Districts of East Africa. ⁽⁶⁾

District/Area	Total Agric. Dept. Technical Staff under DAO	Area per staff member (Sq. miles)	Farmers per staff member
Embu District, Kenya	114	9	250
Mbere Division	22	40	400
Embu Division	92	2	200
East Mengo District, Uganda	54	94	2600
West Mengo District, Uganda	31	148	5060
Bugisu District, Uganda	113	14	440

(5) Note however that Kenya employs a much higher proportion of F.A. level staff.

(6) Watts, E.R. Agricultural Extension Services in Uganda. Uganda Agric. Soc. Jour. Vol. II No. 2. Sept. 1969.

Table XI Staff Densities for ESP's and Control Parishes

	<u>ESP's</u>		<u>Control Parishes</u>	
	Approx. Sq. Miles	No. Tax payers in ESP	Approx. Sq. Miles l A.A.	Approx. No. Farmers in area covered by AA
Chelekura	20	530	?	?
Miroi	20	309	100	1500
Bukasa	5	345	50-60	7500
Kibibi	3	264	120	10000

Table XI gives a good indication of the extent of Saturation. Staff densities must however be interpreted in the knowledge that A.A.s have other duties outside the ESP's. It will be seen also that even with saturation staff densities are less than in Embu District, Kenya. The ESP could therefore be said to be very largely a response to staff shortages. The extremely diffused extension as carried out in the control parishes is unlikely to be very effective even where a range of viable innovations are available.

CONCLUSIONS.

Even this preliminary review of the staff evaluation indicates that many of the possible benefits of ESP's have some substantiation. There is a considerable range of application of the ESP idea between the 4 projects studied. Both on the basis of the farmer and the staff evaluation it would appear that Miroi is the most effective. The others would probably follow in the order Chelekura, Kibibi and Bukasa.

There may be a danger of attributing the poor results in Buganda exclusively to the aftermath of the Emergency. While this must have had an important influence a number of other factors should be considered. Among these are:-

- a) The decline in the coffee price,
- b) The surplus of coffee and consequent de-emphasis in extension,

- c) Lack of progress with the Govt. diversification policy,
- d) Farmers own diversification efforts (e.g. ginger in Kibibi) often spoilt by over production and price falls,
- e) A general shortage of viable innovations leading to non-viable practices being stressed (e.g. Sweet potatoes on ridges),
- f) An apparent tendency towards concentrating on progressive farmers which may be more deeply rooted in Buganda. One AA reported he had 200 progressive farmers out of 7500 in his area. Of these 20 were of a "good" standard and he keeps a list of them.

In the case of Miroi the area has several advantages outside the factors concerned with ESP's. Land is not a limiting factor and labour problems are eased to some extent by ox cultivation. Miroi also has a cash crop with possibilities for expansion of production - i.e. cotton. Bukasa has the major disadvantage that the AA takes 2 hours to get to the area. Furthermore he is only working as a part-time extension worker.

Some of the most important conclusions to come out of this study are those concerned with comparisons between areas. Knowledge of why extension is achieving results in some areas and not others can help not only Uganda but other countries as well. It is clear that some of the principles of the ESP do work in certain circumstances. What we need to go further into are the reasons why they work in certain places and not in others.

The following tentative conclusions are put forward as a basis for discussion and further enquiry:-

- a) ESP's are more likely to succeed where there are a series of viable innovations available to the extension staff,
- b) The technical competence and personality of the individual in charge of a project are key factors.
- c) The viability of innovations is very often a function of the marketing facilities and thus price stability of the enterprise concerned.

- d) That generally speaking insufficient attention has been given to the content of extension and training of staff in the selection of viable innovations.
- e) Even in the most successful ESP neglect of provision for input sources and credit have severely limited the impact of the project.
- f) Effectiveness of ESP's would be improved by siting them near the homes of respective staff or by providing housing within the project.
- g) 100% concentration of effort on a slightly larger community might produce better results than the present 50:50 division of time between ESP's and the surrounding area.

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