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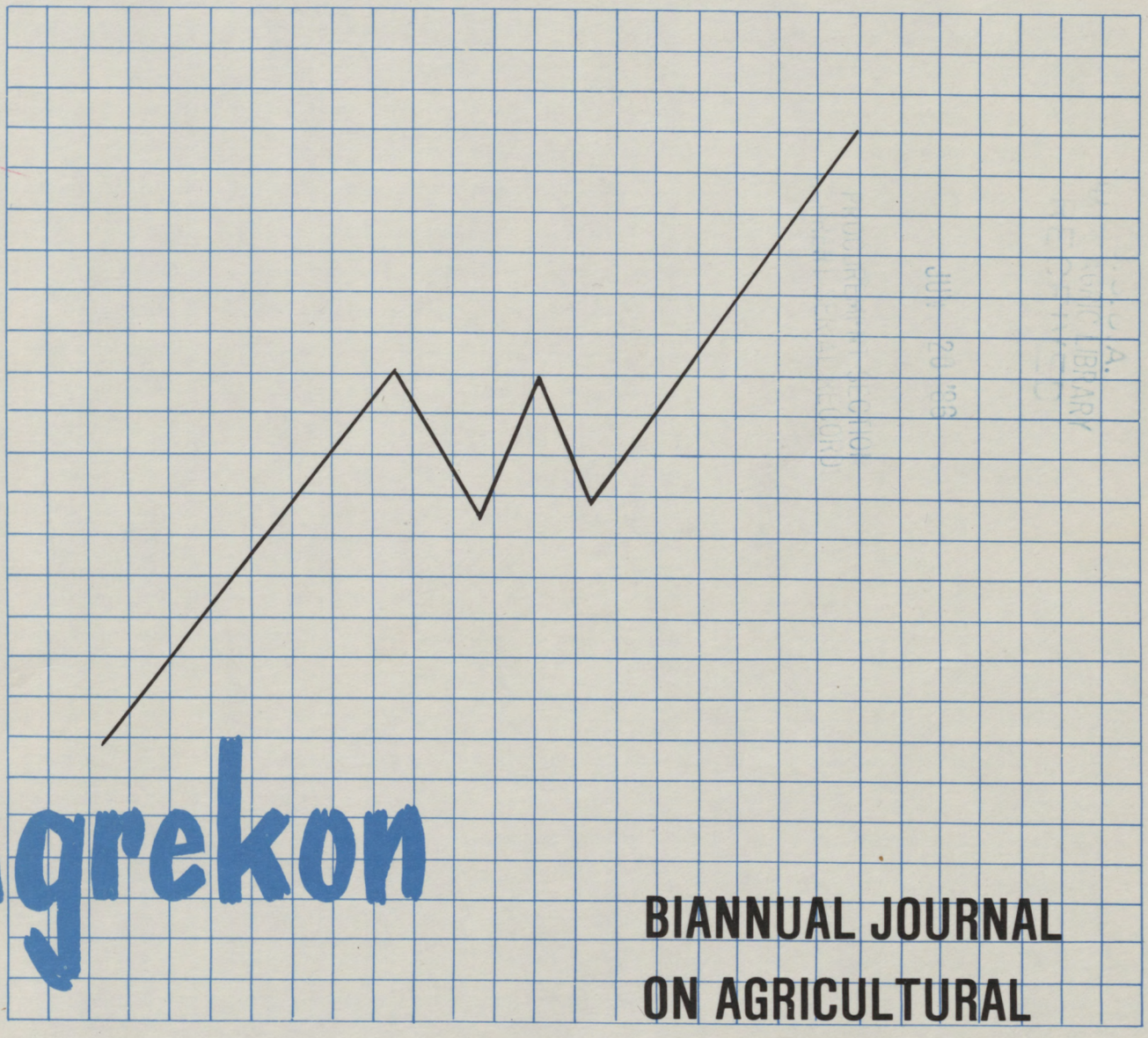

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THE IDENTIFICATION AND ATTITUDES OF SUCCESSFUL AND LESS SUCCESSFUL FARMERS IN SMALL HOLDER AGRICULTURE IN CISKEI[1]

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INTRODUCTION

"Present efforts in agricultural development, at least at pronouncement level, are aimed directly or indirectly at the farmer but unfortunately the supposed object of all these efforts is the least understood of all the elements in development" (Tagumpy-Castillo, 1966). Effective agricultural development should start with the farmer and his farming system. This is in contrast with the so-called "grand scale" approach (which records an alarming high percentage of expensive failures), where development schemes were tackled with preconceived ideas by development agencies.

Very little is known of the "typical farmer" of Ciskei. It is often assumed that farmers are ignorant, do not react to economic incentives and are unwilling to change. It is also more often than not assumed that the typical farmer is still in Rostow's traditional society. Furthermore, it is assumed that all farmers are alike and that their farming units are far too small.

The purpose of this article is to report on a rural research project in which an effort was made (a) to identify groups of farmers on the basis of performance as reflected by farming income and (b) establish any relevant differences between the attitudes of the different groups towards farm management and related matters (if such differences existed).

THE GXULU IRRIGATION SCHEME

In the selection of a group of farmers that could be analysed according to economic criteria, it was decided to find a group where some kind of financial record system had been in existence over a reasonable period of time. The Gxulu irrigation scheme in the Keiskammahoek district of Ciskei[3] fulfilled this requirement.

The Gxulu irrigation scheme was started in the early 60s and each of the 81 farmers was allocated 3 acres (1,2 ha) of irrigable land. A production system was worked out by the Department of Agriculture and Forestry[4] in terms of which each farmer's land was divided into three 1-acre plots. One acre is planted to maize, one acre to lucerne and the third to vegetables - normally beans, peas or cabbages.

Similar short-term "input packages" - seed, fertiliser and pesticides - are supplied by the Department (today the co-operative) for the farmers' account. Machinery operations are controlled from a central pool and the farmer hires each particular machine (operators included) at a standard tariff. At the end of the season (for each crop) the farmer delivers his harvested crops to the co-operative for marketing at a predetermined price and receives the balance of his account.

Managerial decisions related to the planning, co-ordination and supervision of labour activities, application or irrigation water and harvesting of crops are the responsibility of the farmer.

Although one third of a farmer's land is supposed to be under some variety of vegetable, it was found that in the majority of cases vegetables contributed very little towards the cash income of the farmers. It was also found that very few farmers sold vegetables to the co-operative over the period of analysis. It was therefore decided to use only the maize and lucerne enterprises in trying to identify the most and least successful farmers in the scheme.

RESEARCH PROCEDURE

The research procedure followed to achieve the aim set out in Part 1, viz to identify the most successful and least successful farmers in the scheme and secondly to follow this classification by an attitude survey to establish differences between these two groups, if any, was as follows:

Rating of the top and bottom farmers

The top and bottom groups of farmers were rated for income from maize, for income from lucerne and for consistency. Consistency in each group was determined on the basis of the number of years a farmer appeared in that group. Where the number of years was equal, the farmer with the

1 This article is based on a study conducted during 1978/79 by the Department of Agricultural Economics, University of Fort Hare, Ciskei. The monetary values may therefore be somewhat dated. The empirical findings and conclusions are, however, most relevant, since small farmer development programmes are of major importance in less developed agriculture

2 Development Bank of Southern Africa

3 A fairly detailed record system for the scheme was introduced during 1967 and these records were used for the analysis

4 Ciskei Government Service

lowest standard deviation in income was regarded as the most or least successful (see Table 1).

Only maize production was considered for the consistency rating since lucerne production was analysed over only five years, and it was thought unwise to attach too much weight to consistency over such a short period. Nevertheless, the frequency in the income from lucerne was also indicated.

15 farmers in the top income rating also appeared in the top consistency list and 13 out of the 15 in the bottom income group also appeared in the bottom consistency group. The remaining two farmers in the bottom consistency group were among the 20 bottom income performers, and were thus included in the selection sample list (bottom 17).

Differences in attitudes

The second objective, establishing differences in attitude between these two groups, was achieved by interviewing a selection of the top and bottom groups of farmers using a questionnaire. During the interviews some 100 questions were asked through two experienced interpreters. On some crucial issues a system of double checks was followed to try to ensure truly representative answers.

The interviews were also used to obtain a personal impression of the farmer concerned and to accumulate general statistics about himself, his family and his farm business.

TABLE 1 - Rating of top and bottom farmers on the Gxulu irrigation scheme (1967-73)

Maize Production (8 year period)					Lucerne Production (8 year period)			Farmers to be interviewed
1	2	3	4		5	6	7	8
Farmer No.	Income rating	Consistency rating*	Average net income (X)** R on 0,4 ha	(S)***	Farmer No.	Income rating	Average net income per acre** R on 0,4 ha	Winners
Top 15 farmers								
15(7)a****	1	2	84,60	27,29	40(4)a****	1	47,22	15
70(6)****	2	3	82,06	24,23	15(3)****	2	46,75	70
40(6)****	3	4	77,51	25,41	22(3)****	3	38,58	40
42(5)****	4	5	69,15	16,25	17(2)****	4	38,13	42
10(7)****	5	1	69,08	20,14	80(2)****	5	35,14	10
26(4)	6	6	65,29	17,10	30(2)	6	34,83	22
22(3)****	7	13	65,19	28,77	8(4)	7	34,18	37
75(4)	8	8	63,25	23,24	43(1)****	8	32,26	17
37(2)	9	15	62,83	16,29	11(2)	8	31,89	30
30(4)****	10	10	62,54	25,4	10(3)****	10	31,30	
36(3)	11	14	61,54	32,74	70(3)****	11	29,79	
19(4)	12	9	60,06	24,60	13(1)	12	29,35	
17(4)****	13	11	59,96	26,12	65(2)	13	28,90	
3(3)	14	12	57,04	15,84	42(2)****	14	28,37	
64(4)	15	7	56,06	19,78	37(1)****	15	27,88	
Average net income			**66,41**	**(8,38)**	**Average net income**		**34,30 (5,92)**	
Bottom 17 farmers								
80(7)****	1	1	14,17	16,88	2(5)****	1	7,05	2
2(6)****	2	2	20,97	10,59	20(3)	2	8,92	54b
76(5)	3	4	21,11	9,5	49(3)	3	11,15	25
54(6)****	4	3	21,16	15,09	81(3)	4	11,33	20
25(5)	5	6	25,87	17,62	54(2)****	5	12,23	69b
9(4)	6	11	27,59	15,50	69(3)****	6	12,24	57
20(4)	7	9	27,63	14,47	1(3)	7	12,89	
60(4)	8	12	28,20	16,69	59(2)	8	13,64	
56(4)	9	7	29,06	8,10	48(3)	9	14,10	
58(4)	10	8	29,98	14,39	14(2)	10	14,10	
55(5)	11	5	30,29	14,87	57(2)****	11	14,46	
43(3)****	12	-	30,30	9,4	62(1)	12	15,02	
71(3)	13	-	30,92	10,65	53(0)	13	15,49	
57(4)****	14	10	31,04	15,37	61(2)	14	15,96	
73(4)	15	14	31,98	18,43	15(1)****	15	15,99	
69(4)****	-	13	32,13	17,55				
12(4)	-	15	36,65	29,23				
Average annual net income			**27,59**	**5,30**	**Average net income/acre/year: bottom 15 farmers**		**12,97 (2,48)*** **	

* = Consistency ratings determined by (a) frequency within which a farmer appeared in bottom 15 (b) the standard deviation (S) of the average annual net income of farmer

** = X (average annual net income per farmer on 0,4 ha over 8 years)

*** = Standard deviation of X

**** = Farmers that appeared in both columns 1 and 5

a = Times appeared in top and bottom 15 over the total period

"WINNERS" AND "LOSERS"

The first objective of this study was to identify a group of the most and least successful farmers within a larger community. The selected farmers were those who appeared in the top and bottom ratings for both maize and lucerne production (see Table 1). Nine farmers could be identified as consistently being the most successful farmers - Winners - and six farmers as consistently being the least successful - Losers - out of the 81 farmers studied.

From Table 2 it can be seen that in respect of these two enterprises the top farmers had significantly greater incomes for each year than the bottom group. For maize production over the seven year period, the bottom realized only 41,5% of the income achieved by the top group. For lucerne this figure dropped to 37,8% over the five years.

In Table 3 the 'Winners' and 'Losers' average incomes from maize and lucerne are compared with the average incomes of the bottom and top groups.

TABLE 3 - Average farm income per annum for Winners and Losers (1967 - 1973)

Winners		Losers	
Farmer No.	Net income (R)	Farmer No.	Net income (R)
15	131,35	2	28,02
70	111,85	54	33,39
40	124,73	25	41,86
42	97,52	20	36,55
10	100,38	69	42,24
22	103,77	57	45,50
37	90,71		
17	98,09		
30	97,37		
Winners average	106,20	Losers average	37,93
		Percentage of winners	35,7%
Top 15 average	100,71	Bottom average	40,56
		Percentage of top	40,3%

FRAMEWORK OF ATTITUDES ANALYSED

Having identified 15 (9 + 6) farmers who represented the top and bottom income structure of the scheme, the secondary objective of the study was achieved when some differences in attitudes towards farm management and related issues could be established between the winners and losers.

Differences in attitudes towards certain important variables of the process of economic develoment were recorded. These variables included attitudes towards training and education, agricultural modernisation, farm management, some community beliefs and values, economic success, and events outside the community (see Table 4 for the various categories of variables).

Since two farmers from the losers' group and one from the winners' group died or left the scheme, the sample analysed consisted of four losers and eight winners. The main results of the interviews are listed in Table 4.

The reasons for differences in the answers obtained during the interviews of the two groups are not clearly defined. Some differences will require further investigation before definite conclusions can be reached.

Attitudes and main differences are summarised below:

- A third of the bottom group of farmers (or 50% of the losers) were women, whereas all the top farmers were men.
- The winners had fewer children than the losers; however, the winner farmers had more outside dependants than the losers.
- The winners were far more tradition-bound, in their attitude towards farmer training.
- The winners seemed to be less tradition-bound,

TABLE 2 - Average net income for maize and lucerne production (81 farmers)

Maize production				Lucerne production			
Year	Average net income (R) on 0,4 ha			Year	Average net income (R) on 0,4 ha		
	Gxulu Irrigation scheme (81 farmers)	Top 15	Bottom 17		Gxulu Irrigation scheme (81 farmers)	Top 15	Bottom 15
1967	59,51	79,02 (13,92)*	44,89 (17,04)*	1969/70	45,67 (18,65)*	67,04 (17,89)*	27,89 (5,98)*
1968	30,09	52,47 (20,57)	17,35 (10,10)	1970/71	12,52 (7,56)	19,88 (9,89)	8,21 (4,15)
1969	30,61	44,02 (16,02)	16,58 (5,62)	1971/72	17,59 (10,21)	25,05 (12,05)	10,37 (5,59)
1970	48,47	69,02 (12,65)	30,64 (8,12)	1972/73	24,23 (15,21)	41,73 (15,20)	10,76 (5,66)
1971	66,65	100,13 (19,42)	44,47 (17,70)	1973/74	13,33 (7,36)	17,82 (6,78)	7,61 (6,20)
1972	34,21	54,80 (18,33)	20,14 (8,32)				
1973	38,63	65,49 (21,87)	19,08 (9,84)				
Average net income maize	**44,02**	**66,42 (8,38)**	**27,59 (5,30)**	**Average net income lucerne**	**22,57 (7,59)**	**34,30 (5,92)**	**12,97 (2,48)**

* = Standard deviation

TABLE 4 - Attitudes of most successful farmers - Winners - and least successful farmers - Losers

		Winners	Losers
A	*Demographic aspects*		
	Males	8	3
	Females	0	3
	Ratio: Males/Females	8/0	3/3
	Age: Average years	60,2	59,5
	Children: Average number	3,5	4,0
	Dependants: Average number	2,6	1,8
B	*Education*		
	Standard 5	1	0
	Standard 4	0	0
	Standard 3	0	1
	Standard 2	2	2
	Standard 1	1	1
	Lower grades	0	0
	None	0	2
	No response	3	0
	Ratio: Std. 2+/Std. 1-	3/1	3/3
C	*Informal leaders*		
	Headman	3	3
	Extension Officer	3	1
	Farmers	1	0
	No response	1	0
	Preference Headman: Ratio	3/7	3/4
	Preference Extension Officer: Ratio	3/7	1/4
D	*Community attitude*		
	(i) *Towards success (increase in income)*		
	Acceptance	6	2
	Suspicion	1	2
	No particular reaction	1	0
	Ratio: acceptance/suspicion	6/1	2/2
	(ii) *Towards outsiders*		
	Government officials-Ratio: trust/suspicion	8/0	4/0
	Scheme staff-Ratio: trust/suspicion	8/0	4/0
	Shopkeeper-Ratio: trust/suspicion	8/0	4/0
	(iii) *Towards outside events*		
	Listen to radio - Ratio: yes/no	8/0	3/
	Read newspapers - Ratio: yes/no	7/1	1/3
	Interested in politics - Ratio: yes/no	1/7	1/3
E	*Attitude towards agricultural production and modernisation*		
	(i) *Farming*		
	Economic activity (business)	8	0
	Way of life (subsistence)	1	4
	Ratio: business/subsistence	8/1	0/4
	(ii) *Production and enterprise preference ratio*		
	No. 1	Maize (6/8)	Maize (2/4) Vegetables (2/4) Lucerne (3/4)
	No. 2	Vegetables (4/8)	Cattle (3/4) Lucerne (1/4)
	No. 3	Lucerne (4/8)	Cattle (1/4)
	No. 4	Cattle (4/8)	-
	(iii) *Farm records*		
	Should records be kept? - Ratio: yes/no	8/0	4/0
	Are records kept? - Ratio: yes/no	6/2	3/1
	Are they used in planning? - Ratio: yes/no	6/2	3/1
	(iv) *Factors that will increase income*		
	More land - Ratio: yes/no	5/3	0/4
	More technical inputs - Ratio: yes/no	8/0	3/1
	Improved supervision - Ratio: yes/no	6/2	2/2
	Change in farming system - Ratio: yes/no	0/8	2/2
	Increase in credit availability - Ratio: yes/no	4/4	1/3
	Improvement in climate factors - Ratio: yes/no	8/0	4/0
	(v) *Training*		
	Participation in -		
	short training courses	8/8	0/4
	farmers' days	8/8	0/4
	agricultural shows	6/8	0/4
	training by White farmers	4/8	2/4
	Reading of agricultural pamphlets	6/8	2/4

TABLE 4 - Attitudes of most successful farmers - Winners - and least successful farmers - Losers

		Winners	Losers
F	*Attitude towards economic improvements*		
	(Priorities in terms of spending an increase in income)		
	Improvements on housing:		
	High priority	7	-
	Middle priority	-	-
	Low priority	-	-
	No response	1	4

in that they did not consider the headman as the leader of the community to the same extent as the bottom group.

- Both groups identified farmer no. 15 as the best farmer. (This co-incided with the findings of the author).
- The winners, to a higher degree than the losers, believed that the community would not be very suspicious of success.
- The losers did not aspire to more land to increase their income, while 63% of the top group aspired to more land.
- The winners were far more positive in their attitude towards farming as a way to earn a living and not merely as a way of life.
- The winners were far more confident about their current production system than was the case with the bottom farmers.
- With the present co-operative structure, 50% of the winners and 75% of the losers did not consider credit as limiting factor.
- For both groups maize was the most favoured crop, but the winners were prepared to put definite priorities on the other enterprises whereas the losers were not prepared to do so.
- The winners put the improvement of housing very high on their list of priorities, whereas the losers did not consider this to be a priority.
- Neither group considered the additional support of relatives priority, but during the interview most winners did admit that they could not shirk their responsibility towards their families.
- The winners seemed to be more aware of what was going on outside their community, via radio and the press.
- Neither group was very interested in party politics and most farmers expressed their absolute distrust of politicians.

CONCLUSIONS

- It was possible to identify groups of farmers who consistently performed far above (most successful) and far below (least successful) the average of all farmers on the Gxulu irrigation scheme. Significant differences in farm income between these farmers could be established, despite similar input packages (seed, fertiliser, insecticides, etc.) and mechanisation services.
- As technology was a constant factor, differences can be related to farm management and related parameters. Some of these parameters were identified by a study of the attitudes of farmers grouped as most and least successful.
- Clear differences in attitude between these most and least successful groups could be established. The reasons underlying these differences are, however, not very clear and will need further investigation before the question "Why are some farmers performing consistently better than other farmers?" can be answered. Such answers should also lead to valuable information on other parameters, apart from income, that may enable the researcher, extension officer, policy planner, etc., to play a significant *ex ante* role in farm management research. There is thus no 'typical' farmer or one homogeneous group of farmers on the Gxulu irrigation scheme. This hypothesis can be extended to all small-scale farmers in less developed agriculture. (See Smith, 1978.)
- This study also claims to be one of a few where the attitudes of the poorest group of farmers were examined (see Chambers, 1980) and contrasted with that of the high-income farmers.
- It is important for future efforts in development and research to take cognisance of variables such as those identified by this study, since programmes cannot be advanced over a commonly defined broad front to include all people on the land. Development strategies and research programmes should take into consideration the differences in attitude and income producing capability, i.e. management ability, between farmers. Programmes should incorporate a stratified approach with regard to the provision of inputs such as management training, credit facilities, extension, research and other services to farmers with different capabilities.

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