

INSTITUTE FOR MANPOWER RESEARCH MN 128

**Characteristics of a group
of small-scale farmers in
Gazankulu:
an exploratory study**

**C.A. Nicholson
Ros Hirschowitz**

**A.B. Boshoff
T.J. Bembridge**



RGN·HSRC

001.3072068 HSRC MN 128

BIBLIOTEK LIBRARY

RGN

RAAD VIR
GEESTESWETENSKAPLIKE
NAVORSING

HSRC

HUMAN
SCIENCES RESEARCH
COUNCIL



RGN · HSRC

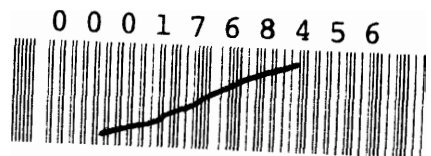


RGN-HSRC

SENTRUM VIR BIBLIOTEEK- EN
INLIGTINGSDIENSTE
CENTRE FOR LIBRARY AND
INFORMATION SERVICES

VERVALDATUM/DATE DUE

<p>IBL 2/10/90 855-99-0</p>			
-------------------------------------	--	--	--



Characteristics of a group
of small-scale farmers
in Gazankulu:
An exploratory study

Research Finding MN 128

Characteristics of a group of small-scale farmers in Gazankulu: An exploratory study

C.A. Nicholson
Ros Hirschowitz

A.B. Boshoff
T.J. Bembridge

Pretoria
Human Sciences Research Council
1988

C.A. Nicholson, B. Inst. Agrar. (Hons.)
Ros Hirschowitz, D. Litt. et Phil.

Institute for Manpower Research
Acting Executive Director: J.H. Beukes

ISBN 0 7969 0613 0

© Human Sciences Research Council 1988

Printed and distributed by the HSRC
134 Pretorius Street
Pretoria

BIBLIOTEEK LIBRARY		HSRC
1938 -04-12		
STANDKODE 001.3072068 HSRC M.N 128	REGISTERNUMMER	
BESTELNUMMER R/O	078887	

PREFACE

This report is an abridgement, a reintegration and a reinterpretation of a detailed and extensive master's thesis. The research for the project was carried out by Clive Nicholson who also wrote the original thesis. The report in its present form was written by Dr Ros Hirschowitz, while Prof. Boshoff of the University of Pretoria and Prof. Bembridge of the University of Fort Hare, supervised the work of Clive Nicholson during the research phase of the project and gave him assistance and advice in the writing of the thesis. Prof. Boshoff and his assistant Andrew Kaplan supplied the tables for the analysis of the data.

The participants in the study are sincerely thanked for their co-operation and for spending so much time on answering the questions. The people who helped with the fieldwork are also sincerely thanked.

This report is dedicated to the memory of Dr Steve Terblanche, the previous Executive Director of IMAN, whose ideas, interest, patience, advice and guidance contributed so fundamentally to the success of the project.

CONTENTS

CHAPTER	PAGE
EKSERP/ABSTRACT	vii
1. BACKGROUND TO AND AIMS OF THE STUDY	1
1.1 Introduction	1
1.2 Aims of the study	4
1.3 Methodology	5
2. RESULTS OF THE STUDY	11
2.1 Biographical variables	11
2.2 The resources for farming available to the respondents	17
2.3 The way in which the respondents operated and managed their farms	26
2.4 Personality variables and their effects on the farming operations of the respondents	34
3 SUMMARY AND CONCLUSIONS	39
3.1 Summary	39
3.2 Conclusions	40
APPENDIX 1: Summary of interview schedule	44
APPENDIX 2: Variables on which the successful and the average group of farmers differ from each other	46
REFERENCES	48

ABSTRACT

A comparison between 30 successful and 30 average farmers in Gazankulu indicated that there were a number of differences between them regarding their life circumstances, the resources available to them to carry out their farming operations, the way in which they ran their farms and certain personality characteristics. The successful farmers were better educated than the average ones; they were more market oriented in their approach to farming; they were more likely to buy modern machinery and equipment; they were more likely to plan ahead, to budget for expenses and to organize their work. As people, they were more likely to be internally controlled and to try out new methods. They displayed many entrepreneurial characteristics.

EKSERP

'n Vergelyking tussen 30 suksesvolle en 30 gemiddelde boere in Gazankulu het getoon dat daar 'n aantal verskille tussen hulle was ten opsigte van lewensomstandighede, die hulpbronne tot hul beskikking om hul boerderybedrywighede uit te voer, die wyse waarop hulle hulle plase bestuur, asook sekere persoonlikheidseienskappe. Die suksesvolle boere se onderwyspeil was hoër as dié van die gemiddelde boere; hulle was meer markgerig in hul boerderybenadering; hulle was meer geneig om moderne masjinerie en toerusting aan te koop, en hulle was meer geneig om vooruit te beplan, vir uitgawes te begroot en hul werk te organiseer. Wat hul persoonlikheid betref, was die suksesvolle boere meer geneig om internbeheerd te wees en nuwe metodes uit te toets. Daarby het hulle baie entrepreneurseienskappe getoon.

CHAPTER ONE

BACKGROUND TO AND AIMS OF THE STUDY

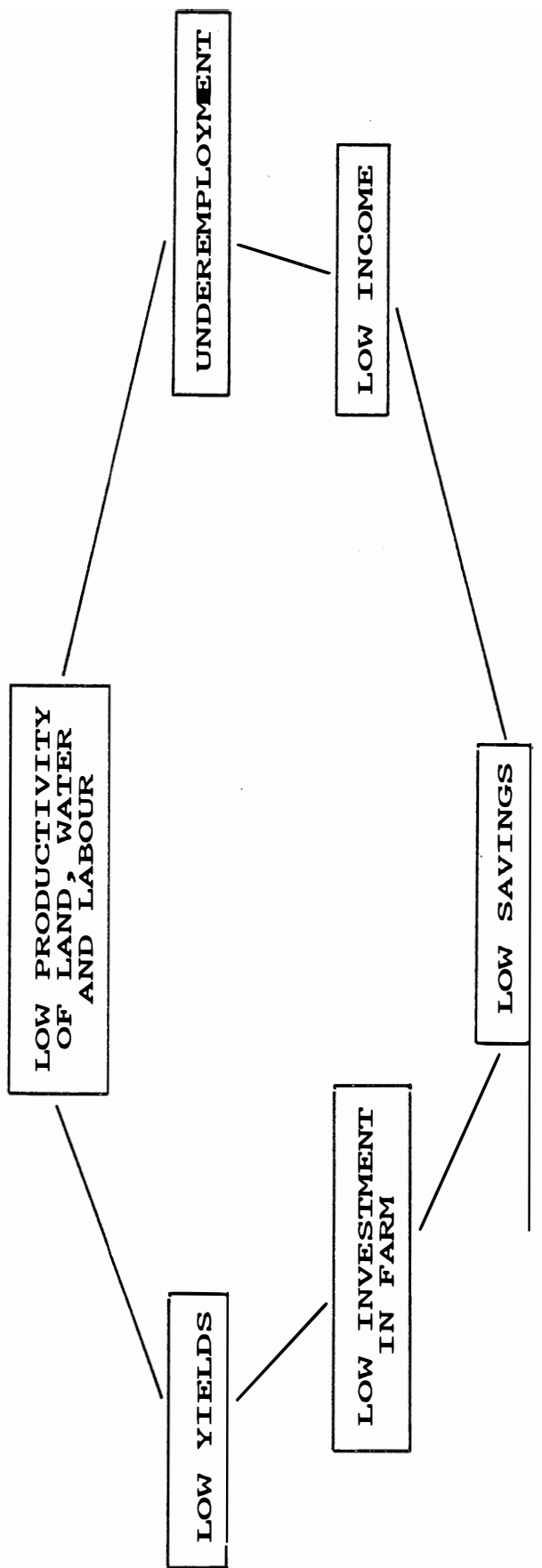
1.1 INTRODUCTION

"There are probably few problems on earth today more critical than the battle to see that all the earth's people can feed themselves" (Singh & Ray 1980 : 509).

The continuing incidence of low productivity, low income, low investments and low yields, as illustrated in Figure 1.1 forms the background against which people in the developing countries try to feed themselves. Once established, this circular pattern is difficult to break. The black rural dwellers in Southern Africa all too easily succumb to this pattern. Rural areas of the national states and independent states in Southern Africa consist of 16,72 million hectares of which approximately 76% receive, on average, an annual rainfall of more than 500 mm. This land has good potential for agricultural production, but it produces only one third of the food requirements of the indigenous population (Bembridge 1987 : 18). The low agricultural productivity of these developing rural areas has coincided with the growth of the population and with increased grazing requirements, as more animals are being kept. Before 1900 there was evidence of successful farming by the indigenous population (Kiernan 1981; Louw & Kendall 1986). The decline in productivity over the past three decades may, in part, be ascribed to :

- * The lack of adequate services and infrastructure such as access roads, irrigation water and energy sources, means of communication, health, education and commercial services;
- * The deterioration of grasslands and forests, as well as soil erosion and unwanted changes in fresh water systems that have occurred in these areas;

FIGURE 1.1
FACTORS INFLUENCING LOW PRODUCTIVITY IN SUBSISTENCE AGRICULTURE



- * The growing population which exceeds the agricultural capacity of the land, thus insufficient arable and grazing land is available for all families;
- * The lack of training in modern agricultural methods and the lack of knowledge on how to optimally use the available land;
- * The lack of suitable technology;
- * The inability to acquire modern farming equipment;
- * Problems associated with the land tenure system and the negotiability of arable and grazing rights. (Erskine 1984; Nicholson 1986.)

In spite of the inadequate agricultural development of the black rural areas in Southern Africa, there are a few successful farmers (estimated at 0,2%) who have achieved levels of production beyond subsistence farming to become commercial farmers (Bembridge 1986b). An exploration of the life circumstances of these farmers and what makes them successful in comparison to average farmers who struggle to subsist on the land forms the basis of this study. If the productivity of the farmers is to be improved in the developing rural areas, it is important for future selection of commercial farmers to be able to identify the successful farmers in an area and to single out those factors that contribute to their success. Not only the way in which they farm and the type of crops and food they produce, but also their social and economic circumstances as well as their personalities need to be studied.

Two theoretical frameworks are relevant to the way in which the study of farmers and their operations were approached in this project, namely the theory of entrepreneurship as a personality variable and the theory of social diffusion. Successful farmers can be regarded as entrepreneurs as well as both innovators and early

adopters of innovations and possibly initiators of a diffusion process.

The most striking attribute or characteristic of an entrepreneur is that of high achievement motivation (McClelland 1961). Those with a high need for achievement tend to drift towards entrepreneurial work situations. Entrepreneurship is associated with a willingness to take moderate, calculated risks, and to accept responsibility for any actions taken involving risk. Entrepreneurs are also more likely to believe that they have control over the circumstances of their own lives and to have a high self-esteem. This study aims to look at the extent to which successful farmers possess the characteristics of entrepreneurs.

Diffusion is defined as "the process by which an innovation is communicated through certain channels over time among members of a social system" (Rogers 1983 : 11). Successful farmers are also more likely to be initiators and early adopters of innovations in that they introduce new methods or products into an area and possibly set a process of social diffusion in motion. However, there is as yet no evidence that the diffusion process occurs in the same way in traditional societies as it does in other societies.

Subsistence farmers may be more likely to accept a traditional way of life. The diffusion of innovations may therefore take a longer time to reach them.

1.2 AIMS OF THE STUDY

This study is essentially exploratory in nature. It aims to

- (a) identify a group of successful commercial farmers in the Gazankulu district,
- (b) compare these farmers to a group of average farmers, who are farming under similar conditions, with regard to

- * biographical characteristics,
- * resources such as land size, capital and labour,
- * the way in which they operated and managed their farms,
- * certain personality characteristics.

This comparison should yield useful information which can be of help to the relevant authorities concerned with rural agricultural development, the objectives of which are to improve the income levels of rural people, to increase the agricultural production of the area and to conserve, maintain and improve the natural resources of soil, vegetation and water through sound land use practices (Carpenter 1981).

1.3 **METHODOLOGY**

1.3.1 Choice of geographical area for the research project

The areas chosen for this research project, namely Malamulele, Giyani (East and West), Ritavi (I and II) and Mhala comprise the four regions of the national state of Gazankulu. These areas were selected because fairly similar agricultural conditions prevail in all regions making it possible to select successful and average farmers, while keeping agricultural conditions relatively constant. Gazankulu is situated in the far eastern and north eastern regions of the Transvaal. A large part of it borders on the Kruger National Park. The climate is tropical to sub-tropical with very hot summers and moderate, virtually frost free winters. The rainfall is similar in these areas. It is relatively low and generally the average is approximately 600 mm per annum. The vegetation is predominantly bushed grassland or bushveld. The water supply is mainly the surface water of rivers and of a few dams, including the recently completed Middle Letaba Dam. River water, stored or flowing, is the "life blood" of Gazankulu. Agricultural land suitable

h dry-land and irrigable, is extremely limited. The total land area of Gazankulu is 656 531 hectare of which approximately 13% is arable or potentially arable land (Gazankulu Development Information 1985). Approximately 500 000 people live in Gazankulu (1985 Population Census, Central Statistical Services) comprising approximately 82 000 households, about half of whom have agricultural rights. Figure 1.2 gives an indication of where Gazankulu is located in the North Eastern Transvaal, while Figure 1.3 indicates the areas within Gazankulu where the farms of the identified successful farmers are located.

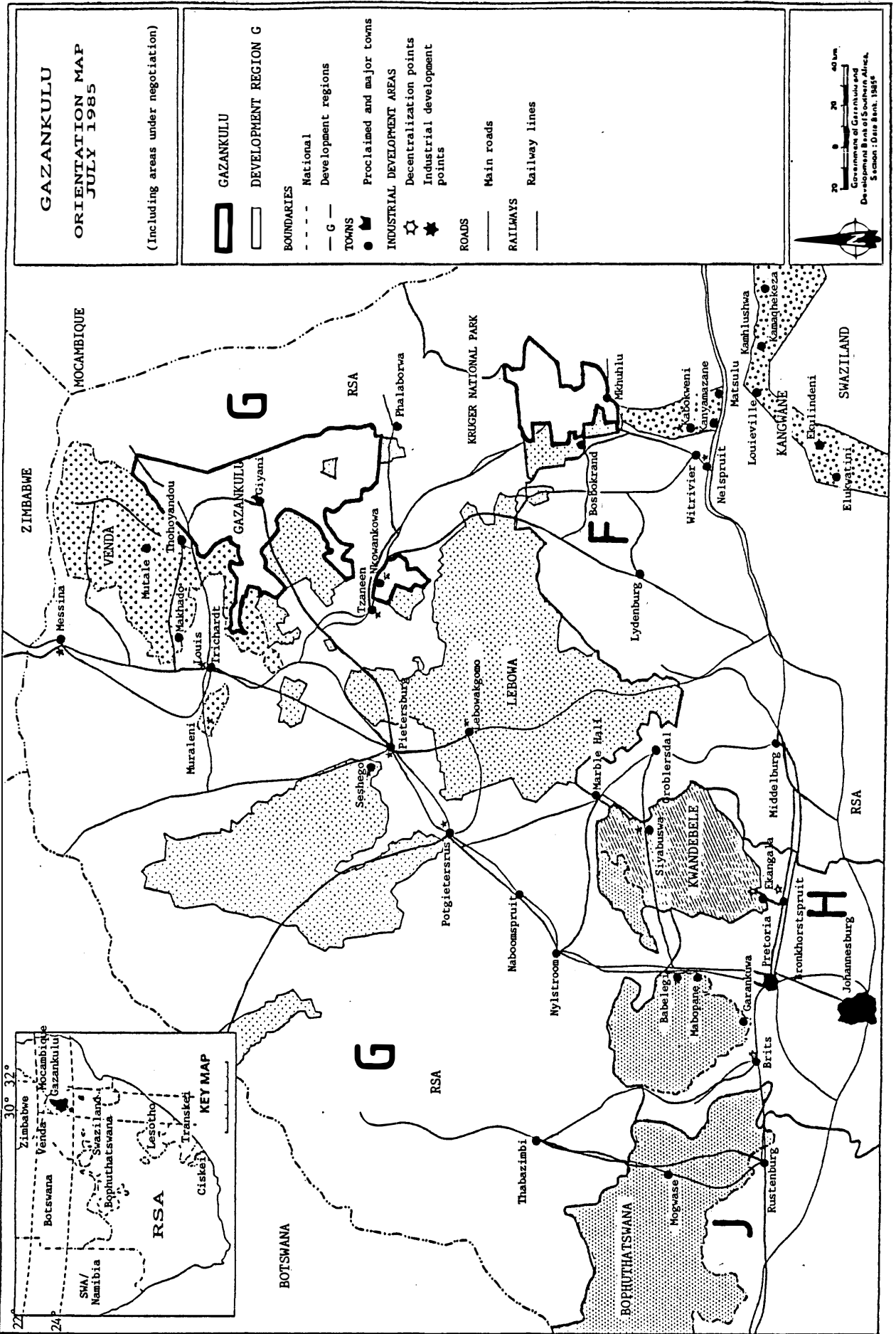
1.3.2 The selection of the sample

Although the method of selection of the sample of both successful commercial and average farmers was subjective, it nevertheless was based on knowledge of the farmers and farming practice in the area. After obtaining permission from the relevant authorities, experienced extension officers of the department of agriculture, who had had frequent contact with the farmers, supplied the names and addresses of those farmers whom they felt were successful commercial farmers on the basis of how well they were running their farming operation and whether or not they were commercially oriented.

After the day to day running of the farms had been observed by the extension staff, thirty successful commercial farmers were selected from the original list supplied by the extension officers as the most successful farmers in the area. These farmers were regarded as being market oriented and the extension officers perceived that they were running their operations profitably.

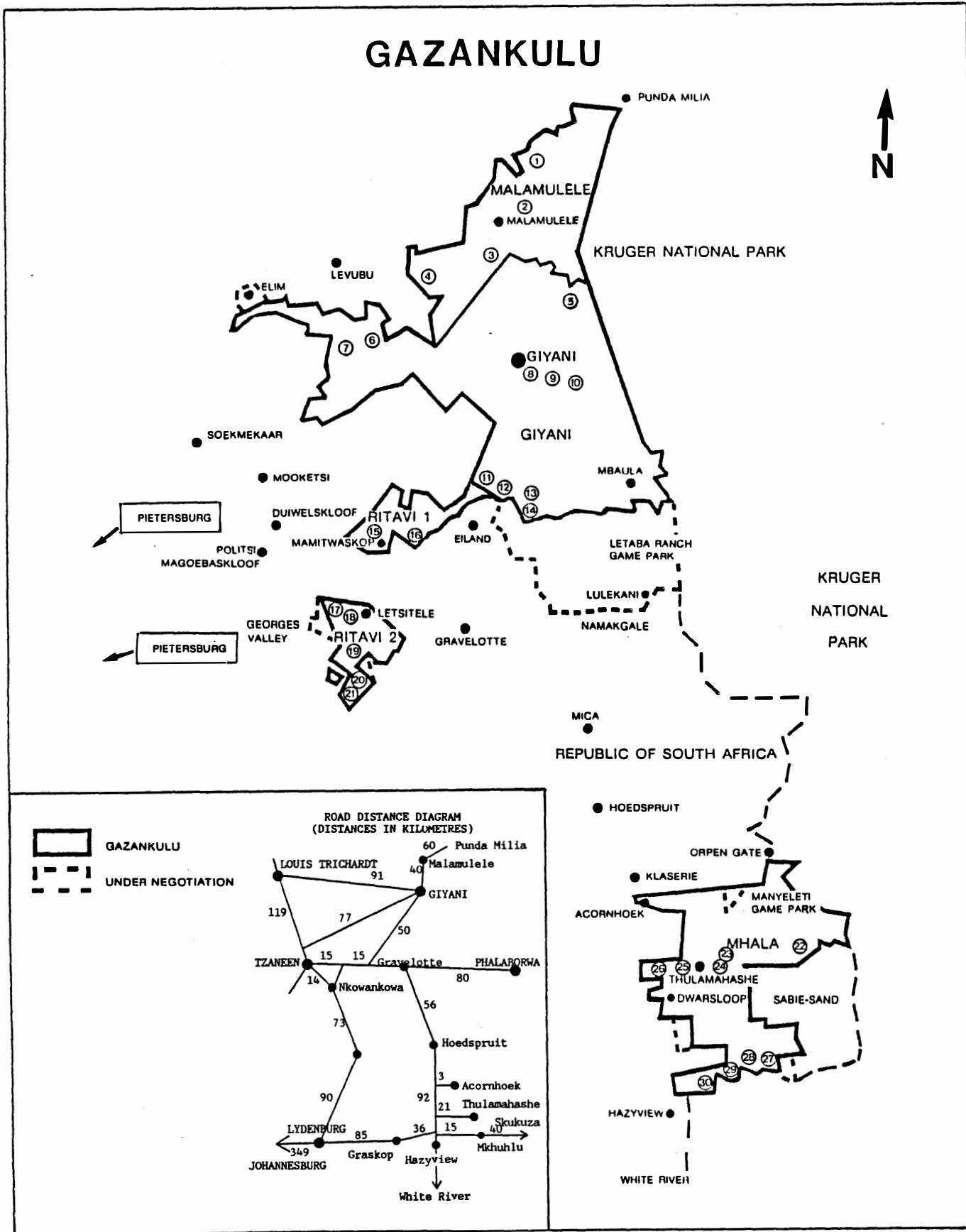
Thirty average farmers were then selected for comparison purposes, with the help of the agricultural extension officers. Each one was farming in the same vicinity as a successful farmer under similar agricultural conditions. However, unlike the successful farmers,

FIGURE 1.2
ORIENTATION MAP OF GAZANKULU (JULY 1985)



Source: Development Bank of Southern Africa (1985)

FIGURE 1.3
MAP SHOWING THE APPROXIMATE LOCATION OF THE SUCCESSFUL
FARMER RESPONDENTS



they were not market oriented, but were farming at subsistence or below subsistence levels. In good years, some of them were able to sell excess produce informally to local consumers, but this was exceptional. These average farmers are an example of the typical small scale agricultural land holding rural household in Gazankulu. This type of household comprises approximately 56 % of all households in developing rural areas of Southern Africa (Bembridge 1987 : 18).

1.3.3 Interview procedure

Semistructured individual interviews, consisting largely of open-ended questions were conducted with each of the 30 successful and the 30 average farmers. A summary of the areas covered in the interview schedule is given in Appendix 1. Many of these questions were obtained from Van der Merwe's (1976) study of the successful Xhosa businessman. This schedule covered a wide range of topics in considerable depth, including biographical information, type of farming undertaking, socio-economic aspects of the operation and psychological characteristics of the respondent. The interviews were rather lengthy lasting between two and a half to four and a half hours. The local extension officers acted as interpreters, even though the researcher present at the interviews was familiar with Shangaan, the language spoken in Gazankulu. The questions were exploratory in nature and aimed to identify any possible differences or similarities between the two groups of farmers.

1.3.4 Analysis of data

The Chi Square statistical technique was used to compare the responses of the two groups on all the variables. (All differences discussed were significant at the $p < 0,05$ level (Appendix 2)). Because of the exploratory nature of the study, the small sample size, the large number of variables and the type of questions asked, no other analysis was carried out. A content analysis approach was used to categorise the responses.

In the following chapters, the results of the study will be discussed. This will be followed by a summary of the findings and some conclusions.

CHAPTER 2

RESULTS OF THE STUDY

The results of this study indicate that the group of successful farmers could indeed be distinguished from the average ones on a number of variables. The differences between the groups support the contention that the successful farmers were more likely to be entrepreneurs. In some ways they were innovators and in other ways they were early adopters in the commonly accepted diffusion process. However, it was not only their personality traits but also their approach to farming and their farming methods that distinguished the successful from the average farmer. In the discussion that follows these differences will be highlighted. In view of the exploratory nature of the study, a large number of questions were asked. Since this report is a summary of the findings, no attempt will be made to discuss all the findings relevant to each question. Instead an overview of the main findings is given and their implications are discussed. The Chi Square values of all variables on which the two groups differed significantly from each other ($p < 0,05$), or the Fisher Exact Probability values, where applicable, are indicated in Appendix 2.

The variables taken into account in this study were divided into four groups, namely biographical variables, those variables related to resources available to the farmer, those related to farm management and certain personality variables.

2.1 BIOGRAPHICAL VARIABLES

As far as biographical variables are concerned, both the conventional ones such as education, age and sex, as well as the ones related to tribal customs, such as relationship to the headman, number of wives, number of children and religious practices, were taken into account, because variables related to a traditional way

of life have been shown in past studies to have an influence on farming practice (Bembridge 1986a).

This study indicates that the life circumstances of the successful farmers differed from those of the average ones in important ways which may have influenced their approach to farming. They differed with regard to educational qualifications, age, home background, religious affiliations and past work experience. These differences are discussed below.

2.1.1 Education

The most noticeable difference between the successful and the average farmers regarding biographical variables was that of level of education. Table 2.1 indicates that two thirds of the successful farmers had completed at least Standard 3 at school, while only about one quarter of the average farmers had done so. If completion of Standard three can be regarded as being the basic requirement for literacy and numeracy (Ellis 1986), then it is apparent that most of the successful farmers were literate, while most of the average farmers were not. Almost two thirds of the average farmers, as compared to approximately a quarter of the successful farmers, had received no schooling at all. Indeed the level of education of both groups is low, but nevertheless the better education of the successful group may be an important contributing variable in explaining the differences between the farming methods of the two groups as discussed later in this chapter. Functional literacy, or the ability to use literacy skills necessary for the job, was also more likely to be found among the successful farmers. As we shall see, they were better able to make use of banking facilities, of radio reports on the market prices of farm produce and of basic bookkeeping skills to run their enterprises than the average farmers.

One characteristic of an early adopter (Rogers 1983) is the ability to understand new techniques and to try them out. Arguably, the

TABLE 2.1

COMPARISON OF LEVEL OF EDUCATION OF
SUCCESSFUL AND OF AVERAGE FARMERS, 1986(a) Level of education

Level of education	Successful farmers		Average farmers	
	N	%	N	%
None	7	23,3	19	63,3
Grades (Subs)	1	3,3	1	3,3
Std. 1			2	6,7
Std. 2	2	6,7	1	3,3
Std. 3	2	6,7	2	6,7
Std. 4	2	6,7	3	10,0
Std. 5	3	10,0	1	3,3
Std. 6	6	20,0	1	3,3
Std. 7	2	6,7		
Std. 8	2	6,7		
Std. 9				
Std. 10 (Matric)	2	6,7		
Diploma	1	3,3		
TOTAL	30	100	30	100

(b) Respondents who could be regarded as being literate*

Category	Successful farmers		Average farmers	
	N	%	N	%
Literate *	20	66,7	7	23,3
Illiterate	10	33,3	23	76,7
TOTAL	30	100	30	100

Chi Square = 13,07; $p < 0,01$. $df=1$

* For the purposes of this study, literacy means having completed at least Standard 3 at school.

better education of the successful farmers made it more likely that they would be able to apply farming innovations to their operations because education had potentially given them a better understanding of modern farming methods.

2.1.2 Age and sex

Two other important variables distinguishing the two groups of farmers from each other were those of age and sex. Regarding sex, although a small proportion of the total sample (N=10 or 17%) were women, only two of the successful farmers, as compared to eight of the average farmers, were female. This finding is in agreement with the finding of Bembridge (1986b) in the Transkei.

As far as age is concerned, the respondents in both groups were likely to be more than 40 years old. However, the successful farmers were more likely to be younger than the average ones. Six of the successful, compared to only one of the average farmers, were aged 40 years or younger, while twenty (two thirds) of the successful farmers and 16 of the average ones were aged between 41 and 60 years. Thirteen (43%) of the average farmers, as compared to only five of the successful farmers, were over 60 years of age. Previous studies in South Africa (Bembridge 1985; Coetzee 1979; Redelinghuys 1969) have shown that younger farmers tend to be more successful than older ones. Age may be a contributing factor influencing success in farming because younger people may be more adaptable and therefore more willing to try out new methods than older people. Younger people may also have had more exposure to modern farming methods.

2.1.3 The occupation of the parents of the respondents

Previous experience of or acquaintance with farming was another factor apparently contributing to successful farming practice. Farmers whose fathers were also farmers or who had worked on farms were

more likely to be successful than those whose fathers had not been farmers or had not worked on farms.

2.1.4 Previous places of residence of the respondents

Most of the respondents in both groups (21 of the successful and 24 of the average farmers) were still living in the areas in which they were born. An interesting finding is that 5 or 17% of the successful farmers had previously lived in white areas as compared to only one of the average farmers. Previous research (Hart 1972) has indicated that successful black business entrepreneurs are likely to have lived in and to have worked in white areas thus gaining exposure to new ways of carrying out tasks. Broader social contacts may help to improve business skills.

2.1.5 The marital status and the spouses of the respondents

Questions concerning marital status were asked because the acceptance of a traditional tribal way of life may have influenced the respondents' approach to farming. However, the two groups did not differ significantly from each other on those variables relating to marital status. Respondents in both groups were equally likely to be married; polygamy was practised equally by both groups and the size of the family was also similar for both groups.

The most outstanding difference between the spouses of the successful, as compared to the average group of farmers, was level of education. Three quarters (N=22) of the spouses of the successful farmers, as compared to less than a quarter of the average farmers' spouses (N=7) had completed at least Standard two at school. The higher education of the successful farmers' spouses meant that they were better able to help with a variety of tasks on the farm and not merely with manual ones. The responses of their spouses indicate that they were often involved in the supervision of hired labour on the farm.

2.1.6 The family and kinship ties of respondents

Two interesting findings emerged concerning family ties of respondents. Firstly, the parents of the successful group of farmers were more likely to be living with them. This finding may be a result of the younger age of the successful respondents. Secondly, this group were more likely to support dependants living away from home. This is more likely to be a result of rather than a precondition to being successful. The better financial position of the successful farmers enabled them to support dependants living away from home. The average farmers were less likely to be able to afford to do so.

As far as other kinship ties are concerned, no differences were found between the two groups, except that the average farmers were more likely to be related to the chief or headman through marriage than the successful farmers.

2.1.7 Previous jobs of respondents

The successful farmers were more likely to have been either farm labourers, thus gaining direct farming experience, or else entrepreneurs, running a small business, before entering farming. The average farmers were more likely to have been general labourers before embarking on farming. Farming and business experience may have helped the successful farmers to understand the commercial aspects of farming, and far more successful farmers (N=16) felt that they possessed business skills than average ones (N=1). Twelve of the successful farmers, as compared to three of the average ones, felt that their previous jobs had taught them something about farming.

2.1.8 The religious affiliations and beliefs of the respondents

Questions on religious affiliation were asked because the acceptance of new ideas and values in one sphere, namely religion, may have influenced the acceptance of new ideas and values in another sphere, namely farming.

The most significant finding regarding religious affiliation and practice was the greater conformity to tribal traditions and to traditional beliefs among the group of average farmers. Traditional religion was practised by 16 of the average farmers and by six of the successful ones. Twenty seven of the average farmers, as compared to 11 of the successful ones, conformed to tribal customs at least to some extent. Twenty seven of the average farmers, as compared to 20 of the successful ones had undergone traditional tribal marriage ceremonies. However, 23 of the successful farmers, and 18 of the average ones were members of a Christian church. These findings indicate that the movement away from traditional beliefs and customs and the acceptance of new ideas and values are related to success in farming. This tends to agree with the findings of Bembridge (1985) who found that membership of a world religion was related to farming progressiveness. Perhaps among the more traditionally orientated respondents, the process of social diffusion was slower, because traditional values which are steadfastly held over a long period of time are difficult to change. The consequences of change are feared.

2.2 THE RESOURCES FOR FARMING AVAILABLE TO THE RESPONDENTS

The differences between the two groups were evident, not only with regard to biographical variables, but also with regard to the resources that were available to them to run their farms and their approach to farming.

Generally, as will become evident in the discussion that follows, the successful farmers were more likely than the average ones to

have a different approach to farming than the average ones. They tended to be more market orientated. This tendency shows itself in the reasons they gave for entering farming, the type of crops that they grew, the way in which the farm was managed and the investment of financial and human resources in the farming operation.

2.2.1 Reasons for entering farming as an occupation

The two groups of farmers entered farming for rather different reasons. Successful farmers were more likely to enter farming to make a living, to attempt a commercial venture, to serve the community and because they were interested in farming. The average farmers were more likely to enter farming to avoid hunger for both themselves and their families and to avoid poverty. This finding can be interpreted in terms of motivation theory to mean that the average farmers were more likely to enter farming to satisfy basic physiological, safety and security needs (Maslow 1943). The successful farmers were more likely to enter farming to satisfy social and achievement needs and the need for self-actualization. These needs for social contacts, for achievement and for self-actualization have been described as higher order or growth needs (Maslow 1943). According to Maslow, needs are hierarchically arranged, and the satisfaction of lower level or deficiency needs has to take place before growth needs can emerge. The average farmers can be seen as a group who are still struggling to satisfy basic needs, and therefore feel too insecure to allow higher order needs to develop. The successful farmers, on the other hand, may be viewed as a group who have met their basic needs and are striving to satisfy growth needs.

2.2.2 Initial farming assets of the respondents

Farming assets referred to here include land, buildings and implements. These assets form the basis for the farming operation. The two groups were compared in terms of what assets they originally

had and how they developed or failed to develop or expand these assets.

When they originally entered farming the successful farmers started out with more assets than the average farmers. The size of land was, on average, larger for the successful group. Table 2.2 indicates that 26 of the successful and 29 of the average farmers had been allocated 10 hectares of land or less. The small size of the farms should be seen as a very important constraining factor which made it difficult for both groups to make a success of farming, and one over which both groups had very little control. As will become apparent later, the successful farmers were more likely to have obtained more farming land after they started farming.

The successful group were more likely to have obtained more modern equipment and implements at the beginning of the venture. For example, nine of them had obtained tractors at the start of their operation, while none of the average farmers had done so. While both groups had obtained hand implements, more average (N=9) than successful farmers (N=4) had obtained draught implements. The average group were thus more likely, from the beginning, to expect that they would use traditional farming methods, such as plowing by the use of draught animals, than the successful group. Indeed, the majority of successful farmers did not own any cattle (N=13 as compared to 20 of the average farmers) at the start of their ventures.

Buildings and structures were absent on all farms, except on those of two successful farmers at the beginning of their undertaking.

2.2.3 Present farming assets of the respondents

Over time, the successful farmers were more likely to have improved on their farming assets than the average ones. This applied particularly to obtaining land and modern implements.

TABLE 2.2

THE AMOUNT OF LAND AVAILABLE FOR FARMING ORIGINALLY AND
AT THE TIME OF THE STUDY, 1986

Farmer	Successful farmers		Average farmers	
	Original land allocation (N=30) ha	Land allocation at time of the study (N=30) ha	Original land allocation (N=30) ha	Land allocation at time of the study (N=30) ha
1	8	10 ha	2	2 ha
2	5	10	0,5	1
3	1	8	1	1
4	2	3	1	2,5
5	16	16	1	1
6	10	40	2	7
7	0,33	2	2	5
8	4	15	1	2
9	4	10	4	2
10	12	12	1	1
11	6	10	0,5	0,5
12	4	20	1	2
13	0,5	9	1	2
14	0,25	10	0,5	0,5
15	0,5	20	0,25	3
16	0,25	12	5	2
17	0,5	9,5	1	1
18	1	4	1	1
19	4	20	1	2
20	1	10	2	2
21	3	14	1	2
22	12	15	6	2,5
23	5	11	1	2
24	0,5	15	1	2
25	10	30	1	1
26	2	7	6	6
27	1	2	3	7
28	1	6	Unknown	10
29	0,5	3	0,25	0,25
30	Unknown	Unknown	0,25	0,25
\bar{X}	4,0	12,2	1,6	2,4
sd	4,3	8,2	1,6	2,3

Regarding acquiring land, it needs to be realized that land ownership was a desired but seemingly unattainable goal for both groups of farmers, but this applied particularly to the successful group, as 28 of the 30 successful farmers, as compared to 18 of the average ones regarded land ownership as desirable. Land rights, rather than land ownership, however, is very common practice in developing rural areas. Most of the land in the Gazankulu area belongs either to a tribal authority or else to the government of the national state or else to the South African Development Trust. Three of the successful, but none of the average farmers, claimed that they owned the land on which they were farming. This claim was probably due to a difference in perception of what real ownership of land is, compared to ownership of land rights through the granting of these rights by an authority. However, in spite of having started off with relatively small farms, the successful farmers were more likely to have in time acquired land rights of larger farm holdings than the average ones, as illustrated in Table 2.2. Twelve of the successful farmers had been able to obtain more than 10 hectares of land ($\bar{X}=12,2$), while none of the average farmers had been able to do so ($\bar{X}=2,4$). The small size of land holding and the non-negotiability of land rights are definite constraints to agricultural development (Bembridge 1986a). Urgent attention needs to be given to the possibility of more land ownership and of making larger plots available in black rural areas.

The successful, rather than the average farmers, wanted to own the land on which they farmed. Seventeen of the successful, as compared to 10 of the average farmers, were dissatisfied with the present method of land tenure. Twelve of these 17 successful farmers wanted to purchase the land on which they were farming, while five wanted more land on which to farm. Only two of the ten dissatisfied average farmers wanted to purchase the land on which they were farming, although the other eight wanted more land on which to farm.

Regarding implements and equipment, the successful farmers were far more likely to continue to obtain a greater variety of new equipment in larger quantities than the average group. The differences between the two groups regarding ownership of equipment are illustrated in Table 2.3. By possessing modern equipment the successful group were able to use modern farming methods, as and when necessary. The average group (N=22) however were more likely than the successful group (N=11) to hire tractors when they needed to, indicating that among the average farmers, there is at least some degree of openness to using modern methods. Ownership of tractors rather than hiring them was however more important to the successful farmers, giving them more self reliance in their farming practice.

The successful group were also far more likely to have added a variety of building structures to their farms than the average group, as illustrated in Table 2.4. While only two of the successful and none of the average farmers had any buildings on the farm when they started their ventures, the successful group were more likely to build sheds and stores and cattle kraals than the average ones, thus developing the farming potential of the land even further.

2.2.4 The produce of the respondents

Crop cultivation or else both crop cultivation and the keeping of livestock were undertaken by both groups. The successful farmers however, were more likely to grow cash crops such as tomatoes, cabbages, onions, mangoes and green beans than the average ones. On the other hand, the average farmers were more likely to cultivate subsistence food crops such as maize, ground nuts, spinach and pumpkins. Thus for example, Table 2.5 indicates that the majority of successful farmers (N=21) cultivated tomatoes which is a very important cash crop in the north-eastern Transvaal lowveld, where Gazankulu is situated, whereas only 11 of the average farmers did so. Maize, which is the basis of the staple diet of the rural people in the area was cultivated by the vast majority of average

TABLE 2.3
A COMPARISON OF EQUIPMENT AND IMPLEMENTS OWNED BY THE
SUCCESSFUL AND AVERAGE FARMERS AT THE TIME OF THE STUDY, 1986

Equipment and implements owned		Successful farmers (N=30)		Average farmers (N=30)		Chi Square
		N	%	N	%	
Irrigation equipment	Yes	23	76,7	2	6,7	30,24**
	No	7	23,3	28	93,3	
Veterinary equipment	Yes	2	6,7	30	100,0	ns
	No	28	93,3			
Hand implements	Yes	30	100,0	30	100,0	ns
	No					
Hammer mills	Yes (1)	2	6,7			ns
	No	28	93,3	30	100,0	
Trailers	Yes (1)	2	6,7			ns
	No	28	93,3	30	100,0	
Pumps	None	19	63,3	30	100,0	13,47**
	1	4	13,3			
	2	4	13,3			
	3	2	6,7			
	4	1	3,3			
Tractors	None	9	30,0	28	93,3	25,45**
	1	13	43,3	2	6,7	
	2	6	20,0			
	3 or more	2	6,7			
Ploughs - tractor drawn	None	7	23,3	17	6,7	24,28**
	1	2	6,7	2	6,7	
	2	8	26,7			
	3	8	26,7			
	4 or more	3	10,0			
Animal drawn	1	2	6,7	9	30,0	
	2			2	6,7	
Harrows	0	23	76,7	28	93,3	ns
	1	7	23,3	1	3,3	
	2			1	3,3	
Cultivators	0	22	73,3	30	100,0	ns
	1	8	26,7			
	2					
Planters	0	23	76,7	30	100,0	ns
	1	5	16,7			
	2	2	6,7			
Sprays - Tractor drawn	0	25	83,3	30	100,0	ns
	1	5	16,7			
Knapsack sprays	0	6	20,0	25	83,3	24,09*
	1	9	30,0	4	13,3	
	2	6	20,0	1	3,3	
	3	3	10,0			
	4	3	10,0			
	5	3	10,0			

ns = not significant ** $p < 0,01$

TABLE 2.4

A COMPARISON OF THE PRESENCE AND THE NUMBER OF BUILDINGS AND STRUCTURES FOUND ON THE SUCCESSFUL AND AVERAGE FARMER'S OPERATIONS AT THE TIME OF THE STUDY, 1986

Building and structures		Successful farmers (N=30)		Average farmers (N=30)	
		N	%	N	%
None at all		5	19	14	47
Cattle kraals	Yes	19	63,3	15	50,0
	No	11	36,7	15	50,0
Chicken sheds	Yes	8	26,7	30	100,0
	No	22	73,3		
Stores	Yes	18	60,0	5	16,7
	No	12	40,0	25	83,3
Implement sheds	Yes	11	36,7	30	100,0
	No	19	63,3		
Labour quarters	Yes	3	10,0	30	100,0
	No	27	90,0		
Pigsties	Yes	2	6,7	30	100,0
	No	28	93,3		
Reservoirs	Yes	3	10,0	30	100,0
	No	27	90,0		
Pump house	Yes	1	3,3	30	100,0
	No	29	96,7		
Lean-to	Yes	1	3,3	30	100,0
	No	29	96,7		
Office	Yes	1	3,3	30	100,0
	No	29	96,7		

Whether or not there were buildings on the farm:
Chi Square = 6,24; $p < 0,05$. $df=1$.

TABLE 2.5

THE TYPE OF CROPS CULTIVATED BY RESPONDENTS, 1986

Crops	Successful farmers N=30)		Average farmers (N=30)	
	N	% (a)	N	% (a)
Tomatoes	21	70	11	37
Maize	16	53	26	87
Cabbages	10	33	6	20
Onions	8	27	1	3
Groundnuts	6	20	16	53
Spinach	5	17	8	27
Mangoes	5	17	1	3
Green beans	5	17	2	7
Potatoes	4	13	1	3
Pumpkins	3	10	8	27
Sweet potatoes	2	7	3	10
Baby marrows	2	7		
Oranges	2	7		

(a) Percentage of farmers growing this crop.

farmers (N=26) as compared to just over half of the successful farmers (N=16). This indicates a greater market orientation on the part of successful farmers.

Regarding livestock, successful farmers were more likely to own more cattle, while the average ones were more likely to own goats, although they also owned some cattle. The cattle that the average farmers owned were likely to be used as draught animals.

2.3 THE WAY IN WHICH THE RESPONDENTS OPERATED AND MANAGED THEIR FARMS

The two groups of farmers differed from each other in the way in which they managed their farms and ran them on a day to day basis. Generally, the successful farmers were more likely to base their decisions on market forces (demand for produce and economic factors) whereas the average ones were more likely to base their decisions on natural phenomena (seasons, pests, etc.).

2.3.1 Record keeping, planning and budgeting activities of the respondents

It has been clearly established (Bembridge 1975; Bembridge and Burger 1976) that managerial aptitude, measured in terms of planning, budgeting, keeping records, maintenance of assets and handling of labour is a major factor determining progressiveness of commercial farmers.

In the present study, the successful farmers were far more likely than the average ones to keep records of their operation, to plan ahead and to budget, thus supporting the earlier findings.

Although both groups thought it was important to keep records of the costs of farming, the income received, the production yield and the labour situation, 25 successful farmers, as compared to 6 average ones actually did so. The lack of education of the average group may have made it impossible for them to keep records.

Inventory keeping and budgeting were neglected by both groups. Only six of the successful farmers, but none of the average ones kept an inventory of equipment and stock and only six of the successful group, but none of the average farmers did careful budgeting. However, most of the successful farmers had some idea of the budget needs for the following year. Only five of this group said that they had no idea of how much their farming venture would cost in the next year. This is in stark contrast to the average group, where 26 respondents had no idea of how much their farming operation would cost them in the following year. Indeed 27 of the successful farmers planned their future farming operations, at least to some extent, as compared to 13 of the average ones.

These findings suggest that while the successful farmers had significantly higher levels of managerial aptitude than the average ones, there was still scope for some of the latter to improve their managerial capacity.

2.3.2 The hiring and utilization of farm labour by the respondents

Successful farmers create jobs in agriculture. Table 2.6 indicates that while 26 of the successful farmers hired one or more full time workers on a permanent basis, only three of the average farmers did so. These jobs were in many ways exploitive, but nevertheless offered some relief from poverty. Remuneration was generally very low (ranging from R30 to R70 per month) and working conditions were primitive, as there were no defined rest periods for the workers and no sick or vacation leave. A few successful farmers (N=6) had introduced differentiated pay scales and were paying between R85 and R350 for tractor drivers and for those in supervisory jobs. These better paid jobs were all held by men, while the vast majority of poorly paid general farm labour jobs were held by women. In addition to money, produce of the farm was also given to the workers in return for their labour.

TABLE 2.6

THE NUMBER OF FULL-TIME WORKERS EMPLOYED
BY THE RESPONDENTS, 1986

Number of workers employed	Successful farmers		Average farmers	
	N	%	N	%
None	4	13,3	27	90,0
1 - 5	11	36,7	3	10,0
6 - 10	7	23,3		
11 - 20	4	13,3		
21 - 30	3	10,0		
31 - 40				
41 or more	1	3,3		
TOTAL	30	100	30	100

Whether or not full time workers were hired:
Chi Square = 35,31; $p < 0,01$, $df = 1$.

The successful farmers were also more likely to hire temporary labour for seasonal harvesting and picking jobs more frequently and in larger numbers than the average farmers, thus creating both permanent and temporary jobs for the local community.

2.3.3 The participation of the families of the respondents in farming

Probably because of their greater resources and levels of production, the spouses, children and grandchildren of the successful farmers were more likely to help with a variety of tasks on the farm, including the supervision of farm labour, whereas those of the average farmers were more likely to help with basic cultivation and general farm labour. The families of the successful farmers were thus given the opportunity of gaining expertise in various aspects of farming. They thus had more opportunities for developing farm management skills. Successful farmers also seem to have had fewer relatives to support on the farm, although they had more dependants living elsewhere which may indicate that their farming methods helped their families to be able to leave the farm. The relatives may have gained expertise by participating in various aspects of the enterprise, enabling them to venture out on their own.

2.3.4 The marketing of farm produce

Marked differences between the successful and average farmers were noted regarding the way in which they marketed their farm produce. Among the average farmers, 10 did not sell their produce as they only managed to obtain sufficient food from their farms for subsistence. The rest of this group sold their produce through informal channels. The successful farmers, on the other hand, all sold at least some of their produce. They made use of both formal and informal methods of marketing. Selling on the formal market implies grading the produce and then sending the first and second grades to

the markets in large towns and cities, for example to Johannesburg and Pretoria. Informal marketing takes place by selling produce at roadside stalls or else by means of direct sales to the local community. Because they had greater surpluses for sale, the successful farmers were more likely to try to get the best price for their produce than the unsuccessful ones. For example, 21 of them listened to market reviews on the radio before deciding where to sell their produce. They made use of agents at the major marketing centres or else of the local co-operatives for marketing their produce.

This ability to use various resources to find out about the markets, and to integrate and apply this knowledge is directly related to literacy and to communication skills. The superior functional literacy of the successful farmers is very evident here.

Problems experienced by the successful farmers in marketing their produce include those concerned with transporting it to the large centres and those concerned with limited access to formal markets. These problems are interrelated. Regarding transport, reliance is placed on white transport operators, many of whom are producers themselves, to get their produce to the markets, which in turn limits the access to markets. The successful farmers then have to accept the price realized at the markets where the white transport operators take the produce. They cannot try to sell it elsewhere. Most successful farmers expressed the desire for more involvement in the marketing of their own produce.

2.3.5 Financial and economic considerations

An important factor hampering the farming operation of black farmers in Southern Africa is that of inadequate credit facilities. Indeed, Bembridge (1986a) indicated that credit is inadequate or inaccessible to most black farmers. On the other hand, Fenyes (1982) found that black farmers are resistant to accepting credit, partly because in the past credit was given to them without suffi-

cient checks and controls and without training them on the use of and the implications of having credit facilities. This resulted in bankruptcy for many of them.

In the present study, although more than half of both groups had banking accounts, the farmers found it difficult to obtain credit. Only five of the successful, but none of the average ones had farming loans. The lack of funding made it difficult for the respondents to undertake farm improvements. The competition from white farmers in the area who were operating more profitably on far larger farms tended to be seen as a factor affecting their creditworthiness by both groups.

The availability of credit often depends on guarantees that the loan can be repaid, and insurance of the farming operation is one way of minimizing certain risks regarding repayment of credit. Indeed, insurance is an important consideration in any business undertaking and although 27 successful and 15 average farmers thought that they needed insurance against drought or damage to crops through hail, pests, frost and other occurrences, only one successful farmer in the total sample had taken out an insurance policy to protect his farming operation. However, 16 of the successful farmers, as compared to only 2 of the average ones had taken out life insurance.

2.3.6 Profits made through farming by the respondents

Because of greater resources and higher levels of output, successful farmers were more likely to run their farms profitably than average ones, even under adverse circumstances. During 1984 and 1985, the two years prior to the time when the interviews were conducted for the present study, there had been a drought in the area. In spite of the drought, 23 or 77% of the successful farmers had made a profit during these years. Table 2.7 indicates that of the six average farmers who felt that they had made a profit, four of

TABLE 2.7

THE PROFITABILITY OF THE FARMING OPERATION OF
THE RESPONDENTS IN THE TWO YEARS PRIOR TO THE
INVESTIGATION, 1983 - 1985

Farming profits	Successful farmers		Average farmers	
	N	%	N	%
PROFIT: Unsure of amount	4	13,3	4	13,3
Less than R1 000			2	6,7
R1 000 - R4 000	9	30,0		
R5 000 - R10 000	8	26,7		
R11 000 - R20 000	2	6,7		
NO PROFIT: Subsistence only			12	40,0
Drought	3	10,0	6	20,0
Recently started farming	2	6,7	1	3,3
Low product prices	1	3,3		
Transport problems			1	3,3
Loan debt	1	3,3		
No reason			4	13,3
TOTAL	30	100	30	100

them were unsure of the amount of the gains that had been made and two had made profits of less than R1 000.

The successful farmers took concrete steps to ensure the future success of their operations whenever possible, and all but one of the successful farmers (N=29) reinvested the profits gained in any particular year into their farming operation. They used the money for capital improvements such as new machinery, equipment and building structures as well as for improvement of the productivity of the land, for example by buying fertilizer. The average farmers were less likely to reinvest their profits in the farming operation.

2.3.7 Soil conservation measures taken by the farmers

One factor influencing success in farming is that of the quality of the soil. Fertilization of the soil and soil conservation measures are important aspects of farm management. Both groups of farmers were aware of the occurrence of soil erosion and its effects on agriculture. They were aware that overstocking of animals causes veld deterioration. Soil conservation measures such as contour ploughing, the building of contour walls and strips, the construction of drainage furrows, terraces and ridges, the inclusion of fire breaks and sound soil preparation, were made use of by all the successful farmers and by only half of the average ones.

2.3.8 Problems experienced by the respondents

No differences were found between the two groups regarding problems experienced by them. The most pressing problem for both groups was that of the drought in the area at the time of the study. Other problems expressed concerned pests, plant diseases, financial constraints, the size of the plot, transport, and obtaining ploughing units. The financial constraints, limited size of the farming land and transport problems have been discussed previously. The other problems mentioned are not unique to small scale rural farmers in

Gazankulu, but affect farming operations in the other less developed areas.

2.4 PERSONALITY VARIABLES AND THEIR EFFECTS ON THE FARMING OPERATIONS OF THE RESPONDENTS

The findings of this study, as discussed in the following sections, support the contention that the successful farmers were more likely than the average ones to display the characteristics of entrepreneurs as well as those of both innovators and early adopters in a diffusion process. Their leadership position in the community, their contact with more people, their innovative approach to farming and their inner directedness and confidence distinguished the successful from the average farmers.

2.4.1 The contacts with others and social standing of the respondents

Although innovators are unlikely to be opinion leaders, early adopters in a diffusion process are likely to fill this role. They have contacts with more people than later adopters. Potential adopters of any innovation look to them for advice and information about the innovation (Rogers 1983). They are thus initiators of channels of communication concerning change and they are therefore important people to try and influence if there is a need to introduce change in an area. Further research is needed to determine whether the successful farmers were innovators or early adopters, and to identify their exact role in the diffusion process. In this study they showed signs of being early adopters in that they were more likely to assume formal leadership roles in various organizations. A similar number of successful (N=23) and average farmers (N=19) were members of an agricultural organization. However fourteen successful as compared to eight average farmers were office bearers in these organizations. The same applied to membership of sport and social organizations; the numbers of members of this type of organization were similar for each group, but the successful farmers were again more likely to hold office than the average ones. The

successful farmers were more involved in charity work and in the rendering of services to the community than the average ones. Other people in the area were more likely to come to the successful farmers (N=23) for advice related to farming than to come to the average ones (N=13). However, it is not known whether or not they took this advice. Their actual influence on the community requires further investigation.

The successful farmers discussed their farming problems with more people than the average ones as illustrated in Table 2.8. They also had more contact on a more frequent basis with white farmers in the district, thus having more contacts with people of other cultures, which is typical of opinion leaders (Rogers 1983). Thus 27 of the successful as compared to 12 of the average group felt they could benefit from a working association with the white farmers in neighbouring districts through receiving advice and assistance, through obtaining farming information and through learning how these farmers approach and solve problems related to farming. The successful farmers were also more likely to have more contact with agricultural extension officers in the area and to ask for assistance from organizations in the area such as the Gazankulu Development Corporation.

2.4.2 Locus of control of the respondents

Locus of control is a psychological variable that influences how we approach various life situations. It is a subjective generalized belief about whether we feel that we ourselves have control over the direction of our own lives or whether we feel that our lives are controlled by external circumstances beyond our control. A person with an internal locus of control believes that he can influence the course of events affecting his life. A person who feels externally controlled believes that his life is controlled by outside forces. He therefore cannot influence his own life circumstances (Rotter 1966). Internally controlled people approach their work in a different manner from externally controlled ones. Rotter

TABLE 2.8

RESPONSES REGARDING AVAILABLE RESOURCES WITH WHOM TO DISCUSS
PROBLEMS, 1986

Discuss farming problems with:	Successful farmers		Average farmers	
	N	%	N	%
Extension officer, stock inspector, professional officer	12	40,0	15	50,0
Black fellow farmers	1	3,3	6	20,0
Development corporation officials (stock)	1	3,3		
Extension officers and white farmers	3	10,0		
Extension officers and black farmers	5	16,7	3	10,0
White and black farmers	1	3,3		
Extension officers and white and black farmers	6	20,0		
Extension officers and white farmers and co-operative	1	3,3		
Spouse			2	6,7
Nobody			4	13,3
TOTAL	30	100	30	100
TOTAL NUMBER OF FARMERS CONSULTING				
	N		N	
Extension officers	27		18	
Fellow black farmers	13		9	
White farmers	11			

(1966) has clearly shown that internal control contributes to the development of entrepreneurial skills.

The results of the present study show that the successful farmers were more likely to have an internal locus of control than the average ones. Twenty four or 80% of the successful farmers, and only 12 or 40% of the average farmers had an internal locus of control in that they accepted personal responsibility if something went wrong with their farming operation. Average farmers were more likely to blame natural causes such as the drought or pests, or supernatural causes for their farming failures. The average farmers were inclined to believe that suitable conditions determine the success of the farming operation whereas the successful ones were more likely to believe that working harder, more commitment, persistence and perseverance and putting in more time into farming determine the success of the farming operation. They were more prepared to take calculated risks and to learn from their mistakes than the average farmers.

2.4.3 Acceptance of change by the respondents

It is important for farmers to be adaptable and to accept or even to initiate change if they wish to make a success of their ventures, and in this study both groups had moved away from the traditional tribal way of life. There was a tendency for both groups to accept at least to some extent, Western clothes, diet, education, housing, transport, religious affiliations and commercial practice. However, the successful farmers were more likely to have initiated change than the average ones. When answering the question "have you ever been the first to try out anything new in farming?" 23 successful and 9 average farmers responded positively. The successful farmers were more innovative and therefore they were prepared to try out new methods, systems or techniques of farming; they were more open to attempting the cultivation of new crops or else the keeping of new stock breeds. Entrepreneurship involves doing things in a new and better way (McClelland 1961), and the success-

ful farmers fulfil the criteria of both entrepreneurship and innovativeness. This finding again highlights the need for further research on the relation between innovation and early adoption in a diffusion process in a developing community.

Indeed, both groups wanted further change. They both said they wanted an improved infrastructure, and more land to be made available to them as well as more land ownership. They also wanted better co-operation between people involved in agriculture, less constraints, easier access to loan capital and more government assistance. Some of this change had already taken place. Twenty five of the successful compared to 14 of the average farmers felt that farming methods had improved in the area in recent years and twenty seven successful as well as 20 average farmers felt that they had improved their own personal farming techniques and methods in recent years.

2.4.4 Entrepreneurial characteristics of the respondents

In addition to accepting change, entrepreneurs are more confident of their abilities and they are more likely to feel that they can succeed. They are less worried about taking moderate risks and are more optimistic about the future. In this study, the successful farmers showed confidence in their abilities to manage a farm successfully. Only 9 of them as compared to 21 of the average farmers felt that there were other farmers in the area running a better, more profitable operation than they were. Most of the successful farmers were proud of their commercial success whilst most of the average farmers were proud that they could manage to feed their families. The successful farmers were more likely to be optimistic about the future than the average ones. They were also more likely to want to help to improve the quality of life for other people in the area. As possible opinion leaders and as entrepreneurs, they should be in a good position to be able to do so.

CHAPTER THREE

SUMMARY AND CONCLUSIONS

3.1 SUMMARY

This study was directed at helping to meet the urgent need to improve the agricultural yield and profitability of farming operations in black rural areas. It explored how a group of successful farmers differed from a group of subsistence farmers in the Gazankulu area on a number of variables. The aim was to see what could be learned from the way in which these successful farmers ran their operation that could be of benefit to the other farmers to help them to become more productive. It was assumed that by gaining a better understanding of what contributes to success in farming, suggestions could be made that could assist in the improvement of the quality of farming operations in black rural areas and in the compiling of criteria for the selection of farmers for future agricultural schemes.

The variables taken into account in this study could be divided into four categories, namely biographical variables, those variables related to resources available to the farmer to carry out his operation, those related to the way in which the farm was managed and certain personality variables.

Once two samples had been selected, one sample consisting of 30 successful and the other of 30 average farmers, based on the observations and recommendations of agricultural extension officers in the area, interviews were conducted with these respondents. An interview schedule was drawn up and was used as a guideline to cover all the relevant aspects of the respondent's approach to farming. A large number of questions were asked in order to explore a variety of possible differences between the groups.

The findings indicate that the two groups of farmers did indeed differ from each other on a number of variables. The successful farmers were generally better educated and younger than the average ones. They were more market orientated, and tended to cultivate cash crops rather than subsistence ones. They used more modern farming methods. They bought modern machinery and equipment and added buildings and structures to the farm, making it a more viable farming prospect. They managed to acquire more land than was originally allocated to them and they used their profits to improve their farming operations. Of particular significance was their higher level of managerial aptitude, as evidenced in the way in which they planned, budgeted, organized and kept records in comparison to the way in which these tasks were done by the average farmers. They also created jobs in the area as they employed more permanent and temporary workers on their farms than the average farmers.

Their personalities differed from those of the average farmers in that they were more likely to be internally controlled, to be innovators and to be early adopters in a diffusion process and to display the personality traits of entrepreneurs. They had more contacts with a variety of people involved in farming including white farmers in the neighbouring farming districts. Their higher level of management of their farms and their commitment to the success of their enterprises, their greater willingness to take risks and their leadership role in the community were all factors contributing to their success. They could therefore be viewed as both initiators of a diffusion process and as entrepreneurs.

3.2 CONCLUSIONS

Gazankulu, in common with all the other rural areas occupied by black people in Southern Africa, needs to address the problems of rural poverty, low agricultural production and undernutrition. One way of doing this is to try and encourage the entrepreneurial characteristics that were indicated in this study to develop in these

areas. The recognition and promotion of this human potential will enhance agricultural development, particularly if it is spearheaded by the successful entrepreneurs already present in the area.

If change is to be brought about in the farming methods further research is necessary to determine whether the successful farmers can be used as change agents and as role models for other farmers. They already, to some extent, fulfil these roles, in that they are leaders in various organizations in the community. They could be further encouraged by authorities concerned with the development of black rural areas to assume further leadership. Further research is needed to determine whether the diffusion process can be expedited by giving these successful farmers, who may also be community leaders, more authority and more recognition.

When applicants are selected as potential farmers in the allocation of land for land tenure, they could be selected on the criteria singled out here as contributing to success in farming. Particular emphasis could be placed on the criteria of managerial aptitude. This selection of the people most suitable for farming ventures could help in using the land more productively. It could also help in creating jobs for others as the successful farmers were more likely to create jobs than the average ones.

However, the whole system of land allocation needs to be examined. The respondents and particularly the successful ones indicated that they would like to be able to purchase the land on which they were farming. Serious consideration should be given to the selling of land or negotiability of land rights by the authorities. The small size of farms was also a constraint affecting the viability of the farming operations of both groups. Farmers, particularly the successful ones, should be allowed to acquire more land.

The lack of sources for obtaining loans, the lack of adequate access to formal markets, the transport difficulties and the inadequate infrastructure such as roads, schools and water resources all

contributed to the problems that both the successful and the average farmers experienced in making their farming ventures economically viable. These problems need urgent attention.

Indeed, in rural areas throughout Africa, serious problems beset farmers in their attempt to survive on the land. The drought of recent years has turned these problems into a crisis situation. The most urgent problems requiring attention are those caused by water shortages. Short term hunger relief and malnutrition prevention by bringing and distributing food into the areas are urgent priorities.

In the longer term, self-help schemes are essential to break the cycle of poverty and undernourishment and reverse the trends of inefficient methods of agricultural production. The talents and high standing in the community of the few successful farmers in each area can be used to maximum advantage by obtaining their total involvement and commitment to these schemes.

Indeed the number of problems that need to be tackled are overwhelming. Water needs to be conserved and used sparingly. This implies such measures as the drilling of boreholes, the construction of reservoirs and small dams, the digging of deep furrows to limit water run off and the taking of measures to prevent evaporation. The soil needs to be fertilized to improve its yield. Soil erosion needs to be prevented by such measures as the planting of grass and the planting of trees to act as windbreaks. Pests need to be controlled. Access roads and transport facilities need to be made available. Present farming methods need to be fully understood, which means taking traditional methods and their cultural significance into account, with a view to adapting and changing them and making them more efficient. Training in farm management is essential. Basic numeracy and literacy skills need to be acquired to enable potential farmers to plan and to budget and to run the farm efficiently. The provision of long term ongoing health care and educational facilities are also vital considerations.

Such vast change cannot be accomplished over a short time span. However, overall goals need to be set, and then plans should be drawn up on how to achieve these goals. The overall strategy can be broken up into a number of plans to achieve specific aims within a clearly defined period of time. Community projects to be tackled to achieve shorter term intermediate goals can then be initiated. In order to do this, channels of communication between the community, the farmers in general and the successful farmers in particular on the one hand, and the recognized leaders, tribal chiefs and authorities on the other, need to be established. Priorities for development, taking all viewpoints into account, can be jointly established and long-range goals and strategies can be formulated and short-term and intermediate range goals can be set. For example, after a decision on overall development goals for the area, such as the development of the necessary infrastructure for improving the quality of the produce has been reached, the joint decision can be taken that as a first step, during the next year the community will participate in planting grass and in financing the drilling of boreholes for water for the area. The following year, as a second step, attention will be given to training courses in basic skills for effective farm management in the area.

The skills and talents of the successful farmers and their entrepreneurial qualities can be used to maximum advantage in these types of community projects. If they are used as community leaders to implement clearly defined goals which they have helped to formulate, they should be able to make a valuable contribution to rural development.

It is important to use the successful farmers as catalysts for improving and upgrading agriculture. The problems of the average farmers should however also be addressed. In particular, special courses and auxiliary services to help them to acquire basic farming and marketing skills should be considered.

APPENDIX 1

SUMMARY OF INTERVIEW SCHEDULE

BIOGRAPHICAL INFORMATION

Information was obtained on sex; age; place of birth; previous places of residence; parents' occupation; parents' influence on respondents; size of family of origin; marital status (including polygamous marriages); number of children; number of dependents (including those living at home and those living away from home); level of education of both respondent and of spouse/s; previous work history; religious beliefs and practices; position of authority held in the tribe and relationship to chief or headman in the area.

RESOURCES FOR FARMING

Questions were asked regarding the reasons for entering farming; the size of the farm at the beginning of the venture and at the time of the study; the number of buildings and structures that were originally present and that had been added; tenure and ownership of the land being farmed; the kind of farming that is practised; the type of crops that are cultivated; the number of farm animals on the farm and the farming implements and machinery originally purchased and those that had been added since the start of the venture.

OPERATING AND MANAGING THE FARM

The areas covered in this section include the employment of farm labour, including permanent and seasonal farm labour; the remuneration of the workers; the family's contribution to the labour, the running and the management of the farm; the keeping of financial records and inventories; the planning and budgeting for the following year's needs; the way in which the produce is marketed and the

location of the markets; the availability and use made of farming loans; the use made of insurance; the use made of banking and building society facilities; the way in which accounts are paid, the profitability of the enterprise; whether or not the profits, if any, were re-invested in the farming venture; problems experienced in farming and the understanding and use made of soil conservation measures.

PERSONALITY VARIABLES

Aspects taken into account in this section include membership of and leadership positions in farming associations, recreation, religious and other organizations; the contacts that have been established with extension officers and others who can help in the farming venture; the contacts that have been established with white farmers and the type of information that is exchanged during these contacts; the help and advice given to others generally and to those with farming queries and problems specifically; the opinions of the farmers of their ability to farm and how successful they believe they are; their method of taking farming decisions and their readiness to take risks; commitment to farming; attitude towards change and towards the introduction of new ideas or methods and their self confidence.

APPENDIX 2

Variables on which the successful and the average group of farmers differ from each other.

Variable	df(c)	χ^2 (a)
Sex of respondents	1	4,32
Age of respondents	3	8,08
Was father's occupation related to farming	1	5,38
Type of encouragement by parent	3	7,64
Parents living with respondents	1	5,46
Dependants living away from home	1	4,80
Whether literate or not	1	13,07
Whether spouse is literate or not	1	13,53
White farmers are a source of information	1	5,96
Extension officers are a source of information	1	7,18
Previous jobs	3	11,30
Previous job related to farming	1	5,87
Whether or not traditional beliefs were subscribed to	1	6,72
Whether or not religious beliefs influenced success	1	3,77
Whether cash or subsistence crops were cultivated	1	20,04
Reasons for starting farming	3	30,99
Implements acquired at the start of farming venture	2	15,55
Size of farm at time of investigation	1	28,53
Type of change needed in land allocation	1	6,45
Desire for land ownership	1	9,32
Whether or not irrigation equipment was owned at time of the study	1	30,24
Whether or not pumps were owned at the time of the study	1	13,47
Whether or not tractors were owned at the time of the study	1	25,45
Ploughs/tractor drawn or animal drawn	2	24,28
Whether or not farm buildings were present	1	6,24
Whether or not full time workers were hired	1	35,31
Type of help given by children on the farm	1	8,40
Employment of seasonal labour	2	22,95
Whether or not related to the chief	1	4,02
Membership of agricultural organization	2	8,48
Whether or not respondent participated in community activities	1	9,02
Type of advice sought by others from respondent	4	12,63

(Continued)

(a) Fisher's exact test was used for 2x2 contingency tables.

(c) $p < 0,05$ for all values given.

Variable	df	x ²
Readiness to advise others	3	8,69
Innovativeness	2	13,13
Whether or not other farmers were better than respondent	2	9,60
Seeking advice from other farmers	2	14,78
Whether or not respondent conformed to tribal customs	1	18,37
Whether or not respondent kept an inventory	1	7,96
Planning of future farming activities	1	20,69
Whether or not financial records are kept	1	24,09
Idea of the costs of farming for the following year	2	29,68
Methods of marketing produce	2	29,98
Whether or not respondent tried to find the best market for produce	1	6,78
Marketing through an organization	1	4,81
Whether or not marketing problems were experienced	1	8,53
The need for insurance	2	10,52
Whether or not respondents possessed life insurance	1	15,56
Profit made during the last two years	2	26,88
Methods used to pay accounts - cash or credit	1	12,50
Whether or not there is competition in marketing produce	1	10,80
Whether or not problems are discussed with extension officers	1	7,2
Whether or not problems are discussed with white farmers	1	13,47
Trade and business skills of respondents	2	17,52
Type of contact with whites	4	19,80
Ways in which respondent felt they benefited from contact with whites	3	20,34
Whether or not assistance is received from white farmers	1	15,00
Whether respondent accepts responsibility for failures or else blames others	1	10,00
Whether or not the respondent worked at night	1	14,70
Whether or not farming changes have taken place in the area	1	9,82
Whether or not respondents have changed their farming methods	1	6,09
Whether or not respondents have changed their lifestyle in recent years	1	7,95
Whether or not respondents are prepared to take farming risks	2	9,82
Whether or not conservation measures are practised	1	20,00
Whether or not respondent thinks that grazing lands are deteriorating	1	5,78
Pride taken in farming operation	4	12,44
What is required to improve living conditions?	4	18,20

REFERENCES

1. ARNON, I., RAVIV, M. 1980. From fellah to farmer. Rehovot: Settlement Study Centre.
2. BEMBRIDGE, T.J. 1975. The communication and adoption of beef cattle production practices in the Matabeleland and Midlands provinces of Rhodesia. Pretoria: University of Pretoria. D. Agric. (Inst. Agrar.) thesis.
3. BEMBRIDGE, T.J., STEYN, G.J., WILLIAMS, J.H.L. 1983. An evaluation of the KwaZulu Extension Service. Fort Hare: ARDRI.
4. BEMBRIDGE, T.J. 1985. A systems approach to agricultural development. In: GRAAF, J.F. (ed.) Bophuthatswana Rural Development Papers. Pretoria: Africa Institute of South Africa.
5. BEMBRIDGE, T.J. 1986a. Opinion leadership in the Transkei. South African Journal of Agricultural Extension 15 : 11-18.
6. BEMBRIDGE, T.J. 1986b. Characteristics of progressive small-scale farmers in Transkei. Social Dynamics 12(2) : 77-85.
7. BEMBRIDGE, T.J. 1987. Considerations in agricultural extension for less developed areas of Southern Africa. Fort Hare: University of Fort Hare. Unpublished paper.

8. BEMBRIDGE, T.J., BURGER, P.J. 1976. The importance of opinion leaders in extension. South African Journal of Agricultural Extension 5 : 13-16.
9. CARPENTER, N. 1981. A development approach for semi-arid areas of the ECWA Region. F.A.O., Rome, Mimeo.
10. CENTRAL STATISTICAL SERVICES. 1985. Geographical Distribution of the Population, Population Census. Pretoria: Central Statistical Services.
11. COETZEE, D.F. 1979. Eienskappe van die meer suksesvolle swart boer. Bloemfontein: Universiteit van die Oranje Vrystaat. Ongepubliseerd.
12. DU PREEZ, P.H. 1983. Ontwikkeling van swart ondernemerskap. Referaat gelewer by die Konferensie van die Sielkundevereniging van Suid-Afrika, Pietermaritzburg: BENSO. Ongepubliseerd.
13. DU PREEZ, P.H. 1984a. Basic socio-economic elements of a development theory for traditional societies. Development Southern Africa 1(1).
14. DU PREEZ, P.H. 1984b. Human factors influencing the work performance of the Bantu. BENSO. Unpublished paper.
15. DURAND, D., SHEA, D. 1974. Entrepreneurial activity as a function of achievement motivation and reinforcement control. The Journal of Psychology 88 : 57-63.

16. DURAND, D. 1975. Effects of achievement motivation and skill training on the entrepreneurial behaviour of black businessmen. Organisational Behaviour and Human Performance 14 : 76-90.

17. ELLIS, C.S. 1986. Geletterdheid Statistiek in die RSA, 1980. Pretoria: RGN. RGN-verslag Soling 8.

18. ERSKINE, J.M. 1984. Rural development : Putting theory into practice. Pietermaritzburg: Institute of Natural Resources, University of Natal. Unpublished paper.

19. FENYES, T.I. 1982. A socio-economic analysis of smallholder agriculture in Lebowa. Pretoria: University of Pretoria. D.Sc. (Agric) thesis.

20. GAZANKULU DEVELOPMENT INFORMATION, SECTION 7. 1985. Agriculture and Mining. Compiled by the Data Bank Section of the Development Bank of Southern Africa, Sandton.

21. HART, G.P. 1972. African Entrepreneurship : Occasional Paper Number Sixteen. Grahamstown : Institute of Social and Economic Research, Rhodes University.

22. HORNADAY, J.A., ABOUD, J. 1971. Characteristics of successful entrepreneurs. Personnel Psychology 24 : 141-152.

23. HORNADAY, J.A., BUNKER, C.S. 1970. The nature of the entrepreneur. Personnel Psychology 23 : 47-54.

24. KETS DE VRIES, M.F.R. 1977. The entrepreneurial personality. A person at the crossroads. Journal of Management Studies 34 : 34-57.
25. KIERNAN, F.P. 1981. A social anthropological study of African sugar cane growers on the Natal North Coast. Durban: University of Natal.
26. KINGSHOTTE, A. 1980. The organisation and management of agricultural extension and farmer assistance - a note on developments in Botswana. Part 1: Organisation for extension and some extension problems, agricultural administration. Applied Science Publishers Ltd., England.
27. LOUW, L., KENDALL, F. 1986. South Africa : The Solution. Bisho, Ciskei: Amagi Publications.
28. MASLOW, A.H. 1943. A theory of human motivation. Psychological Review: 370-396.
29. McCLELLAND, D.C. 1961. The achieving society. New Jersey: Van Nostrand Co. Inc.
30. McCLELLAND, D.C. WINTER, D.G. 1969. Motivating Economic Achievement. New York: The Free Press.
31. NICHOLSON, C.A. 1986. Gazankulu : Population development through rural community development. A socio-economic approach. Pretoria: The Population Development Programme. Unpublished.

32. OLSON, P.D., BOSSERMAN, A. 1984. Attributes of the entrepreneurial type. Business Horizons May - June: 53-56.
33. RAY, J.J., SINGH, S. 1980. Effects of individual differences on productivity among farmers in India. Journal of Social Psychology No 112.
34. REDELINGHUYS, H.J. 1969. 'n Verkenningstudie oor die Bantoeondernemer in die Tswana-tuisland. Pretoria: RGN. Verslag MM4.
35. ROGERS, E.M., NEILL, R.E. 1966. Achievement motivation among Colombian peasants. East Lansing: Michigan State University, Department of Communication.
36. ROGERS, E.M., SCHOEMAKER, F.F. 1971. Communication of innovations : A cross-cultural approach. (2nd Ed.) New York: The Free Press.
37. ROGERS, E.M. 1983. Diffusion of innovations. New York : The Free Press.
38. ROTTER, J.B. 1966. Generalised expectancies for internal versus external control of reinforcement. Psychological Monographs: General and Applied 80(1).
39. SINGH, P. 1969. Need for achievement among successful - unsuccessful and traditional - progressive agricultural entrepreneurs of Delhi. Journal of Social Psychology No 79.

40. SINGH, N.P. 1970. Need for achievement among agricultural and business entrepreneurs of Delhi. Journal of Social Psychology No 81.
41. SINGH, S., RAY, J.J. 1980. Modernisation and development among Indian farmers. A modern proof of some old theories. The University of Chicago: Economic Development and Culture Change: 509.
42. SINGH, T.K., SINGH, S.N. 1980. Differential perception of the characteristics of innovations of farming couples for high yielding varieties of wheat and family planning practices. Indian Journal of Extension Education 16 (3+4).
43. SINHA, D. 1969. Study of motivation in a developing country : Concept of happy life among Indian farmers. Journal of Social Psychology 79: 89-97.
44. TAPSON, D.R. 1984. Agricultural potential of the homelands problems and prospects. Fort Hare: University of Fort Hare, ARDRI. Unpublished.
45. VAN DER MERWE, W.G., 1976. Die persoonlikheid van suksesvolle Xhosa-sakemanne met spesiale verwysing na prestasie motivering. Fort Hare: Universiteit van Fort Hare. D.Phil. (Lettere en Wysbegeerte)-proefskrif.

RGN BIBLIOTEK	HSRC LIBRARY
------------------	-----------------

HUMAN SCIENCES RESEARCH COUNCIL RAAD VIR GEESTESWETENSKAPLIKE NAVORSING

President	Dr J.G. Garbers	President
Deputy Presidents	Dr H.C. Marais, Dr J.D. Venter	Adjunk-presidente
Vice-Presidents	Dr K.F. Mauer, Prof. D.J. Stoker	Vise-presidente
Executive Director: Administration	J.G.G. Gräbe	Uitvoerende Direkteur: Administrasie
Chief PRO	Dr G. Puth	Skakelhoof

Functions of the HSRC

The HSRC undertakes, promotes, supports and co-ordinates research in the field of the human sciences. It also determines research priorities, disseminates the findings of human sciences research, facilitates and evaluates the implementation of research findings, stimulates the training of researchers, places the full spectrum of human sciences disciplines at the service of the inhabitants of the RSA and promotes science in general.

Institutes

Institute for Communication Research (ICOMM)
Institute for Educational Research (IER)
Institute for Historical Research (IHR)
Institute for Manpower Research (IMAN)
National Institute for Personnel Research (NIPR)
Institute for Psychological and Edumetric Research (IPER)
Institute for Research Development (IRD)
Institute for Research into Language and The Arts (IRLA)
Institute for Sociological and Demographic Research (ISODEM)
Institute for Statistical Research (ISR)
Bureau for Research Support Services (BRSS)
Administration

Head office

Private Bag X41, Pretoria 0001
Republic of South Africa
Telegrams RAGEN
Tel. (012) 202-9111
Telex 3-20893 SA

NIPR

P.O. Box 32410, Braamfontein 2017
Republic of South Africa
Telegrams NAVORSPERS
Tel. (011) 339-4451
Telex 4-25459 SA

Regional offices

Western Cape, Private Bag X5, Roggebaai 8012
Tel. (021) 419-2572/3/4/5 Telex 5-22260 SA
Natal, P.O. Box 17302, Congella 4013
Tel. (031) 815970 Telex 6-28567 SA
NIPR Eastern Cape, P.O. Box 1124, Port Elizabeth 6000
Tel. (041) 53-2131 Telex 2-43203 SA

Funksies van die RGN

Die RGN onderneem, bevorder, ondersteun en koördineer navorsing op die gebied van die geesteswetenskappe, bepaal navorsingsprioriteite, versprei die resultate van geesteswetenskaplike navorsing, vergemaklik en evalueer die implementering van die resultate van navorsing, stimuleer die opleiding van navorsers, stel die volle spektrum van dissiplines in die geesteswetenskappe ten diens van die inwoners van die RSA en bevorder die wetenskap in die breë.

Institute

Instituut vir Geskiedenisnavorsing (IGN)
Instituut vir Kommunikasie-navorsing (IKOMM)
Instituut vir Mannekragnavorsing (IMAN)
Instituut vir Navorsingsontwikkeling (INO)
Instituut vir Opvoedkundige Navorsing (ION)
Nasionale Instituut vir Personeelnavorsing (NIPN)
Instituut vir Psigologiese en Edumetriese Navorsing (IPEN)
Instituut vir Sosiologiese en Demografiese Navorsing (ISODEM)
Instituut vir Statistiese Navorsing (ISN)
Instituut vir Taal- en Kunstenavorsing (INTAK)
Buro vir Ondersteunende Navorsingsdienste (BOND)
Administrasie

Hoofkantoor

Privaatsak X41, Pretoria 0001
Republiek van Suid-Afrika
Telegramme RAGEN
Tel. (012) 202-9111
Teleks 3-20893 SA

NIPN

Posbus 32410, Braamfontein 2017
Republiek van Suid-Afrika
Telegramme NAVORSPERS
Tel. (011) 339-4451
Teleks 4-25459 SA

Strekkantore

Wes-Kaap, Privaatsak X5, Roggebaai 8012
Tel. (021) 419-2572/3/4/5 Teleks 5-22260 SA
Natal, Posbus 17302, Congella 4013
Tel. (031) 815970 Teleks 6-28567 SA
NIPN Oos-Kaap, Posbus 1124, Port Elizabeth 6000
Tel. (041) 53-2131 Teleks 2-43203 SA

ISBN 0 7969 0613 0