

**A STUDY TO IDENTIFY AND EVALUATE THE IMPACT OF THE  
KEISKAMMAHOEK FARMER SUPPORT PROGRAMME ON FARMER  
DEVELOPMENT**

**By Thozama Melody Doni**

**Submitted in satisfaction of the requirements for the degree of  
Master of Agriculture.**



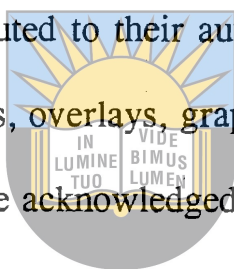
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## DECLARATION

I, Thozama Melody Doni do hereby declare that the work contained in this thesis is entirely my own work with the exception of such quotations or references which have been attributed to their authors or sources and that all photographs, sketches, maps, plans, overlays, graphs and pictograms are made or drawn by me save where I have acknowledged that another is the author.



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Dated at Alice this 3rd day of February 1997 *Together in Excellence*

A handwritten signature in black ink, appearing to be 'T.M. Doni', written over a horizontal line.

T.M. DONI

## ACKNOWLEDGEMENTS

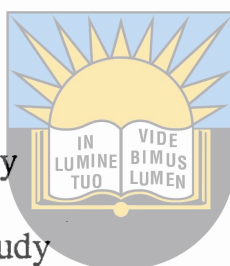
I would like to thank the following people for having assisted in making this study a success:



Prof. Ben Bester for his guidance and advice; Messrs Siguqu, Ngqokweni and Ngwane for their assistance in providing me with valuable information regarding the FSP; Mr Paul De Villiers for his encouragement and motivation; Mr Craig Sparg for editing the script and above all my mother and sisters for their support and encouragement.

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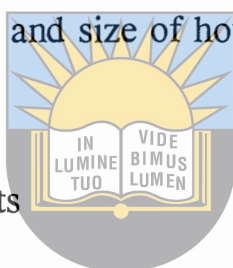
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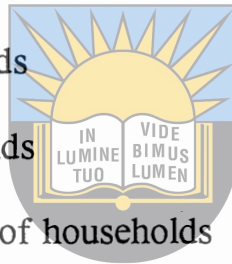
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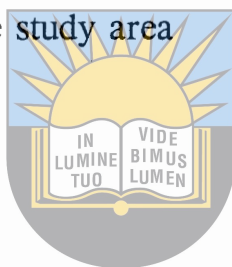


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## CHAPTER 1


### INTRODUCTION

The conditions prevailing in the developing rural areas of South Africa are a cause for concern. This is evident when the optimal utilization of the agricultural land is considered. Most of these areas fall under the jurisdiction of the former self governing states and independent homelands. In comparison to the commercial white farming sector, agriculture in the rural areas can be regarded as inefficient and unproductive.

The developing rural areas of South Africa occupy an area of about 16.72 million ha of which approximately 76 percent receives a rainfall greater than 500mm per annum (Nicholson and Bembridge, 1991). These areas can therefore be regarded as having good potential for semi-intensive agriculture. In spite of this however, agricultural production levels in these areas constitute only about a third of their estimated potential (Nicholson and Bembridge, 1991).

The position of agriculture in the developing areas of South Africa in comparison to the white farming sector can be seen in Table 1.

**TABLE 1. GROSS VALUE OF AGRICULTURAL PRODUCTION IN SA, THE FORMER SELF GOVERNING STATES AND TBVC STATES, 1979/80.**



	FIELD CROPS		HORTICULTURE CROPS		LIVESTOCK	
	R' 000	%	R' 000	%	R' 000	%
R.S.A	2648963	95.71	849383	93.72	1886397	93.00
TRANSKEI	52000	1.88	7800	0.86	58200	2.87
BOP.	9131	0.33	4429	0.49	13721	0.68
VENDA	1805	0.06	1665	0.18	3543	0.17
CISKEI	830	0.03	2085	0.23	4430	0.22
KWAZULU	37052	1.34	31472	3.47	40665	2.00
QWAQWA	116	0.01	722	0.08	325	0.02
LEBOWA	12275	0.44	4472	0.49	13540	0.67
GAZANKULU	3442	0.12	2212	0.24	5132	0.25
KANGWANE	1862	0.07	1040	0.12	1800	0.09
KWANDEBELE	124	0.01	1020	0.12	649	0.03
TOTAL	2767600	100.00	906300	100.00	2028402	100.00

Source: Van Rooyen, 1989.

Rose and Tapson (1984) ascribe this lack of progress in these areas to factors such as:-

- *Shortage of capital.*
- *Non availability of inputs at the right time and place.*
- *Poor communication infrastructure.*
- *Lack of properly trained and motivated extension personnel.*
- *Lack of application of improved technologies developed through research.*



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### **1.1. The objective of the study**

The research proposes to identify and evaluate the impact of the Keiskammahoek Farmer Support Programme on the farmers who have participated in the programme. Participation in the context of this study is defined in terms of the farmers who made use of the credit facility provided through the programme. This statement constitutes the problem being researched in this study. This is achieved by looking at both the farmers who have used the credit facility and those who have not used it in spite of the fact that they had access to arable land.

## 1.2. The importance of the study

The Farmer Support Programme as a strategy for developing subsistence or small-scale farmers is a relatively new concept. There is still an ongoing discussion about whether a so-called transformation approach or an improvement approach should be adopted in order to stimulate development amongst the rural farming community (Van Rooyen and Vink, 1987).




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The debate centres around the uncertainty as to whether large scale rapid development (transformation approach) or small-scale smooth development (improvement approach) should be promoted (Van Rooyen and Vink, 1987). Studies that have been done in Venda and Lebowa have shown positive results. This however, cannot be regarded as universal as situations and conditions under which the programme has been implemented are different.

This study is undertaken in the belief that an evaluation of the impact that the FSP has had on farmer development would be useful to policy makers

as well as operational and financial institutions in agricultural and rural development. According to Van Rooyen and Vink, (1987), the evaluation of the Farmer Support Programmes could lead to the following:

- 
- (a) *Easier identification of farmers with the potential to become commercially viable.*
  - (b) *Improved selection criteria of farmers for future agricultural development programmes.*
  - (c) *Ensuring better utilisation of the agricultural potential in these areas.*
  - (d) *Better quality services directed at selected farmers to ensure a greater efficiency and cost effectiveness of such services.*
  - (e) *Less risks in financial assistance to farmers.*

The above should ensure that the scarce financial resources of the developing areas with respect to agricultural development are optimally applied. The study will also attempt to fulfil part of what is entailed in

the DBSA Keiskammahoek project description, which is to assess whether the FSP can be regarded as successful during the first three years of its implementation.

### 1.3. The sub-problems and research questions

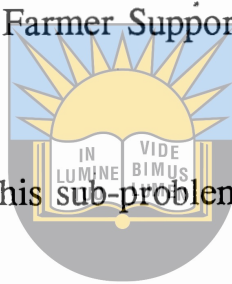


- (a) The first sub-problem is to determine whether the objectives set for the Farmer Support Programme were appropriate or compatible with the needs of the rural farmers.

The research questions for this sub-problem are as follows:-

- (i) *Whether the participating farmers regarded farming as a means of improving their living conditions in the rural areas.*
- (ii) *Whether targeting the Farmer Support Programme on dryland crop production was appropriate for the area under study.*

- (b) The second sub-problem is to determine aspects which could be associated with farmer participation in the use of the credit facility provided through the Farmer Support Programme.



The research questions for this sub-problem are as follows:-

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- (i) *Whether there were any aspects, either personal, socio-economic or extension service related which resulted in farmers participating in the programme.*
- (ii) *Whether the non-participation of other rural farmers in the programme could be attributed to the manner of implementation of the programme or to the attitude of these farmers towards the Farmer Support Programme specifically or farming in general.*

- (c) The third sub-problem is to determine whether there were any improvements in agricultural income, crop production and status of the farmers which could be attributed to the Farmer Support Programme.



The research questions for this sub-problem are as follows:-

- (i) *Whether the credit support service was continuously and effectively used by the participating farmers.*
- (ii) *Whether there was any significant difference with regard to crop production, agricultural income and food self sufficiency between participating and non-participating farmers which could be attributed to the credit facility provided through the Farmer Support Programme.*
- (iii) *Whether from the findings the programme can be regarded as having succeeded in meeting its objectives.*

- (d) The fourth sub-problem is to determine whether the Keiskamahoek Farmer Support Programme can be regarded as having been successful in meeting its objectives.



The research questions for this sub-problem are as follows:-

- (i) *Whether the elements of the Keiskammahoek Farmer Support Programme were properly implemented.*
- (ii) *Whether the programme can be regarded as having been successful or not.*

#### 1.4. Orientation to chapters

Chapter two gives a broad description of the climatic, physical, and some demographic features of the study area. A historical overview of the Farmer Support Programme in the area is outlined including the objectives

of the programme, its envisaged implementation as well as the institutions involved in the programme. Since the programme was designed for dryland crop production to begin with, an evaluation of the suitability of the Keiskammahoek area for dryland crop production is made in this chapter.

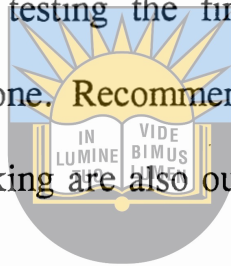


**Chapter three** entails a literature review of the principles underlying a farmer support programme. This is achieved by outlining the nature of agriculture in developing areas as well as placing emphasis on the need for a holistic approach to rural development as compared to an agricultural sector approach. The elements of a farmer support programme and how they can help to develop agriculture in less developed areas are also outlined in this chapter.

**Chapter four** explains how the data for the research was structured, the tools that were used to collect the data, how it was prepared for analysis and how it was interpreted.

Chapter five entails the analysis and the interpretation of the collected data with an emphasis on those aspects that are related to the problem being researched and research questions asked.

Chapter six presents the findings emanating from chapter five. Conclusions are drawn by testing the findings against the research questions asked in chapter one. Recommendations and implications of these findings for policy making are also outlined in this chapter.



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### 1.5. Definition of terms and abbreviations used in this study

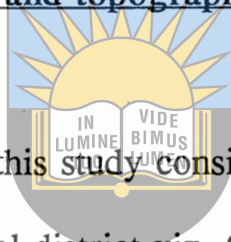
- CAB :- Ciskei Agricultural Bank
- CAC :- Ciskei Agricultural Corporation
- CFC :- Ciskei Farmers Co-operative
- DARFD :- Department of Agriculture and Forestry, Ciskei
- DBSA :- Development Bank of South Africa
- FSP :- Farmer Support Programme
- Non-participant:- Rural farmer who did not use the FSP credit facility
- Participant :- Rural farmer who used the FSP credit facility

## CHAPTER 2

### BACKGROUND TO THE STUDY

#### 2.1 Description of the study area

##### 2.1.1 Geography, altitude and topography



The area covered by this study consists of four (4) villages in the Keiskamma magisterial district viz. Cata, Mnyameni, Rabula and Mbems and the villages in the Amatola Basin which fall under the Middledrift magisterial district. The town of Keiskammahoek lies in the northern part of the study area and Middledrift is located on the south west Boundary of the area.

The study area can be subdivided into two regions namely:-

- (a) The more mountainous Northern region which falls into the Amatola mountain range. This region is at an altitude of

about 1500m above sea level. Amatola Basin, Cata and Mnyameni villages are situated in this region.

- (b) The Southern region which forms part of the coastal plateau where Rabula and Mbems villages are situated. This area is at an altitude of between 500m and 600m above sea level.

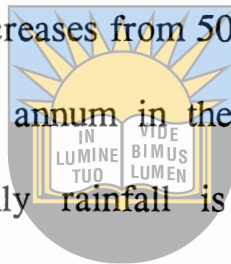


The altitude of the entire area changes by more than 1000m within a distance of 30km *resulting in steep slopes*, narrow valleys and a limited area of gently sloping soils suitable for cropping (Loxton and Venn, 1988).

The topography of the area predisposes soil erosion and increases the need for soil conservation works. Within the Amatola Basin, only four percent of the land has a slope of less than five percent (Burger, 1983).

### 2.1.2. Climate

The area lies within the summer rainfall region of Southern Africa, with almost seventy percent of the annual precipitation occurring in the six month period, October to March (Hill, Kaplan and Scott, 1977). The rainfall increases from 500mm per annum in the south to over 1000mm per annum in the northern part of the area. Variability of monthly rainfall is considerably greater than variability of annual rainfall (Loxton and Venn, 1988).



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The high altitudes result in a higher frequency of frost, short growing seasons and occasional snow. Extreme maximum temperatures on the coastal plateau may be as high as 44°C in January and 31.5°C in July. The Amatola mountain area experiences cooler summer temperatures with occasional snow during winter. Peak evaporation rates are recorded in December and January with mean monthly rates of 180-190mm and daily losses of up to 8mm (Loxton and Venn, 1988).

### 2.1.3. Soils

The soils tend to reflect the physiographic and climatic patterns of the area. On the gently sloping highlands in the higher rainfall areas (over 700mm/annum) the generally deep brown and red soils of Oakleaf, Hutton and Clovelly forms occur. In the drier low lying area, dolerite red soils of the Shortlands form and black vertic soils of the Acardia form are found. Shallow Glenrosa and Mispah forms are also found throughout the area (Loxton and Venn, 1988).

The inherent high erodability on many soils coupled with steep topography necessitates very strict attention towards land selection for cropping. According to Hensely and Laker (1978), less than twenty (20) percent of this pedosystem is suitable for rainfed cropping.

#### 2.1.4. Vegetation

The greater part of the study area is classified as False Thornveld of the Eastern Cape (Acocks, 1975). The rest of the area is Valley Bushveld vegetation which occurs in the east along the Keiskamma river and Dohne Sourveld in the humid mountainous parts of the study area.



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The carrying capacity of the veld is assessed at 5ha/LSU. At least thirty five (35) percent of animals should be browsing rather than grazing species (Loxton and Venn, 1988). Due to the continuous overgrazing and overstocking, much of the veld is in a poor condition and far below inherent potential. This has resulted in bush encroachment which can be seen in most of the veld as well as active soil erosion.

### 2.1.5. Water resources

The area is well endowed with water resources which are mainly located in the upper portion of the Keiskamma River Basin and immediately below the Amatola Mountain which receives a relatively high rainfall.

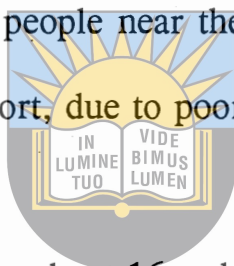


Three major dams (Mnyameni, Cata and Sandile) have been constructed and provide a yield of 28.4mm/annum (Loxton and Venn, 1988). This is used to provide Dimbaza, Keiskammahoek and Middledrift with domestic water supply as well as meeting the needs of the Keiskamma and Zanyokwe irrigation schemes and several rural water supply schemes.

The opportunity exists for small dams to be constructed on the tributaries of the Keiskamma, Rabula and Amatola rivers which could be used to meet the local demand for labour intensive irrigated gardens (Loxton and Venn, 1988).

### 2.1.6. Communication and transport

The Amatola basin is situated 14km north of Middledrift. There are regular bus and taxi services which convey people to and from Middledrift. Only the people near the main gravel road have got direct access to transport, due to poor road development.



Mnyameni and Cata are about 16 and 18km from Keiskammahoek respectively. This part of the study area is mainly served by minibus taxi operators. Due to poor roads this service is not regular and sometimes transport becomes a problem.

The Mbems villages and Rabula are situated near the tarred main roads linking King William's Town/Alice and King William's Town/Keiskammahoek respectively. As a result of this close proximity to these main roads, transport is not a problem for the residents of these villages.

There are very few households with telephones in the entire study area and some villages have no telephones at all. Postal services are only available in the towns of Middledrift and Keiskammahoek.

#### **2.1.7. Population and housing**




The total population of the study area is estimated to be around 67 645 people. About eighty (80) percent of the population in the study area live in the Keiskammahoek magisterial district with the remaining twenty (20) percent living in the Middledrift district (Loxton and Venn, 1988).

There has been an improvement in the housing pattern within the area. Though there are still many traditional houses, the majority of new houses that are built are mainly of cement bricks with corrugated iron roofs.

## 2.2. Historical overview of the Keiskamma FSP

### 2.2.1. Development objectives



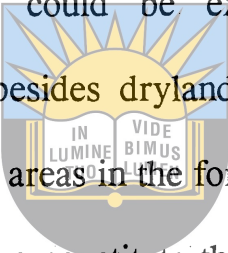
The development objective of this programme is "*The promotion of structural change, away from subsistence agricultural production towards commercialisation of agriculture, by the provision of comprehensive support services to emerging farmers, in the Keiskammahoek district and part of the Middledrift district*" (DBSA, 1988).

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### 2.2.2. Planned implementation of the programme

According to the DBSA project description, the first phase of this programme would provide all elements of the FSP to dryland crop farmers on approximately 5000 ha. This phase would be contained

within the area covered by this study for a period of three years (1990/91, 1991/92 and 1992/93 production seasons). The idea behind this was to allow proper assessment of the FSP. If it is proved successful, it could be expanded to include other agricultural activities besides dryland crop production and also extend it to cover other areas in the former Ciskei. This expansion in terms would therefore constitute the other development phases of the programme.



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During the first phase, support for farmers would consist of the following:-

- (a) *The provision of the necessary managerial, advisory and technical support, the training of participating farmers and the development of the necessary organizational and logistical support structures.*

(b) *The provision of the following services in accordance with demand:*

(i) *Production inputs to farmers*

(ii) *Mechanization support services*

(iii) *Marketing facilities*

(iv) *Training and extension*

(v) *Capital requirements*



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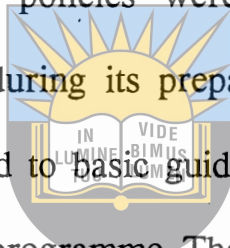
(c) *The phasing out of the Ciskei Department of Agriculture tractor services.*

(d) *Establishment of new and/or support of existing private contractors to provide mechanization.*

(e) *The encouragement of farmer group formation to promote efficient use of the existing extension service.*

### 2.2.2.1. General design for the implementation of the FSP

In order to comply with the development objectives of the programme, relevant policies were accepted by the various institutions involved during its preparation and planning. These were in turn translated to basic guidelines to be used during the implementation of the programme. These guidelines are as follows:-



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(a) Institutional framework

The institutional structure of this programme was designed to provide for a well defined arrangement of independent roles for all participants in the target area. The institutions that were planned to be involved together with their roles are as follows:-

(i) The Development Bank of South Africa

DBSA was to provide all the funds for the FSP.

The Ciskei Agricultural Bank was to be given the funds in the form of a loan from DBSA.

DBSA was to charge CAB low interest rates

ranging from six (6) percent to ten (10) percent

depending on the type of loan provided. CAB

was to administer the loan and make it available

to the farmers. An additional two (2) percent

interest rate was to be added by CAB to cover

its administration expenses.

The total amount of money that was allocated to

this programme for the first three years was

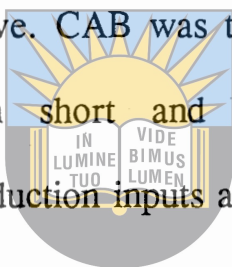
R2.23 million. This was budgeted for use on

infrastructural development, movable assets,

fixed assets and production inputs.

(ii) Ciskei Agricultural Bank

The Ciskei Agricultural Bank was to administer the FSP loan from DBSA as stated in (a) (i) above. CAB was to provide the farmers with both short and medium term loans for production inputs and infrastructure.

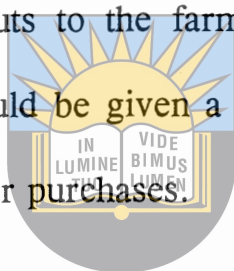


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The procedure that was to be followed for allocating credit for production inputs was that the Extension Officer in charge of the area would assess the requirements of the farmers that were needing assistance from the FSP. He thereafter had to compile a list of the farmers together with their requirements. Each farmer had to complete a separate loan application form. These were then submitted to CAB through the field officers serving the different districts for consideration.

After loan approval by CAB the purchase requisitions were to be sent to the Ciskei Farmer's Co-operative which would supply the inputs to the farmers. Members of the CFC would be given a two (2) percent discount on their purchases.



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 (iii) Department of Agriculture and Forestry

One of the most important roles of this Department was to ensure co-ordination of the programme. The main directorates involved in the programme were Farming Development, Extension and Technical Services.

The main functions of the Farming Development branch was to support and encourage the formation of farmer interest groups, act as a

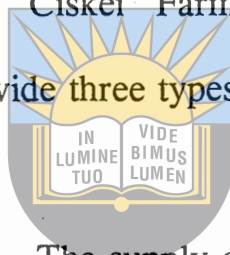
convenor of all parties involved as well as to act as a liaison between the Department and farmers at grass root level. This was to be done through an FSP co-ordinator appointed as a Chief Professional Officer by the Department. The directorate of Extension was to provide the essential extension service at district level to the specific target groups.

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The directorate of Technical Services was to be responsible for the provision of agricultural mechanisation services, the construction of basic agricultural infrastructure, the maintenance of conservation works and the construction of small dams and dipping tanks.

(iv) Ciskei Farmers Co-operative

The Ciskei Farmer's Co-operative was to provide three types of services viz:



- The supply of production inputs.

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- Provision of special services such as back-up support and basic financial training.

- Provision of credit (members only)

Members of CFC could also apply for production loans through CFC at two (2) percent lower interest rates. After receiving

such applications the CFC would forward them to CAB for approval.

(b) FSP programme co-ordination



The co-ordination of the FSP programme was to be done mainly through three committees viz:

- Farmers Association Committee
- Private Contractor's Committee
- Steering Committee

(i) Farmers Association Committee

The Extension Officers in the areas in conjunction with the FSP co-ordinator were

supposed to encourage farmers to form farmer's Associations. The committee of the farmer's association comprised of at least one member of the residents association or local committee with the remaining representatives being made up from the farmers. This committee was to discuss matters affecting member farmers and pass proposals to the steering committee of FSP.

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(ii) Private Contractors Committee

When the ploughing services were phased out from the Department of Agriculture, tractors and equipment were sold to private individuals at reasonable prices. Loans for these were made available by CAB. The idea was to create better efficiency in these services as well as promoting entrepreneurial skills. These private contractors

had a committee in each area with one person representing them in the steering committee.


(iii) Steering Committee

The prime function of this committee was to make sound decisions with regard to planning, implementation and control of the FSP. This committee was to be made up of representatives from all the institutions and committees involved in this programme. The directorate of Farming Development was to act as convenor and the head of this directorate was to be the chairman of meetings. The Steering Committee was expected to submit quarterly reports to DBSA. These were to be compiled from the information supplied by all the participating institutions.

### 2.3. The agricultural potential of the study area

Van Rooyen, Vink and Christoudolou (1987), propose three possible criteria for the identification and selection of target areas for the FSP in order to provide an efficient economic allocation of support services.

They are as follows:

- 
- (a) *The agricultural potential of the resource base*
- (b) *The demand for support services by individuals and communities.*
- (c) *The availability of existing technical and infrastructural support.*
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In view of these criteria Van Rooyen et al (1987), suggests that areas rating high in all three should be given priority, areas with high agricultural potential but lacking in the latter two can be classified as future growth areas. Areas with low agricultural potential should not be target areas.

### **2.3.1. Potential for dryland crop production**

The Amatola mountain region which includes the Amatola Basin, Cata and Mnyameni is the only portion of the greater Ciskei that can be regarded as humid (Marais, 1975). The mean annual rainfall for this area is 1 065mm for the Amatola Basin and 915mm for Cata and Mnyameni (Austin, 1988). This zone is represented by the Stutterheim, Amatola, Keiskammahoeck and Winterberg land types. The dominant soils are Hutton, Clovelly, Mispah and Oakleaf forms. There are a number of factors which limit crop production in this area, the first factor being the high altitudes which results in higher frequency of frost and shorter growing seasons. Secondly the steep slopes and broken topography limit the suitability of some soils for crop production purposes (Marais, 1975). According to Marais (1975), the potential of this area for rain fed crop production can be regarded as high.

Rabula village lies on the Keiskamma land type with dominant soils being Hutton, Oakleaf and Mispah (Marais, Brutsch, Laker, and Graven, 1978). The mean annual rainfall for this portion of the study area is 686mm (Austin, 1988). The river valleys have a fair potential for dryland crop production of sorghum, soyabeans, ground nuts and sunflowers but the production of maize is risky due to a high water deficit in January.



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The Mbems villages lie on the Debe land type with dominant soils being Westleigh and Glenrosa. Mean annual rainfall for this area is 674mm (Austin, 1988). Though a large portion of this area is arable, maize production is risky due to the presence of an impervious layer which tends to promote water logged conditions especially in wet seasons (Marais et al, 1978). This area however, is suitable for other agronomic crops like sorghum and sunflower. Marais et al (1978), rate this area as one with low to medium potential for dryland crop production.

Van Averbeke and Marais (1991), mention that climatic conditions in the greater part of Ciskei favour the production of summer crops, however, in spite of the apparent summer concentration of rainfall most parts of the Ciskei remain marginal for rainfed cropping. This is as a result of the water deficit which can be regarded as the main limitation. This is mainly a problem during the period lasting from approximately mid-January to mid-February when conditions of peak evaporative demand tend to coincide with frequent decline in rainfall (Van Averbeke and Marais, 1991).



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This problem coupled with frequent droughts make rainfed cropping very risky. Van Averbeke and Marais (1991), observed that most rural communities in Ciskei practice a system of mixed agriculture with the emphasis being on animal production with crop production being of secondary nature. Maize which is by far the most important crop is grown at low input levels. The levels of input tend to decline with the degree of risk of crop failure. This indicates the peasant farmer awareness of the prevailing risk factor.

## CHAPTER 3

### PRINCIPLES UNDERLYING A FARMER SUPPORT PROGRAMME IN DEVELOPING COUNTRIES

#### 3.1. The nature of agriculture in developing countries.




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Thormeyer (1987), mentions that in the developing world 80 percent of the farmers are involved in subsistence agriculture covering 60 percent of the land. These subsistence farms produce barely enough for their basic family requirements, for this reason there is very little trade between this agricultural sector and other sectors of the economy (Arnon, 1981; Nicholson & Bembridge, 1991).

##### 3.1.1. Resource characteristics

Mellor (1970), contends that since traditional agriculture is an antecedent of modern agriculture, it is necessary to understand this base from which modernization departs in order to understand the

facilitators and inhibitors of modernization and to diagnose appropriate policy for agricultural development. A description of the nature of agriculture in developing countries can be done better by landing more weight on a resource based characterisation of this agricultural sector. Land and labour form the basic inputs of a traditional agriculture, they are both considered more important than capital (Mellor, 1970; Ghatak & Ingersent, 1984; Harding, 1981).



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#### 3.1.1.1. Land

Harding (1981), states that in peasant household farms, land is often either communally owned or subject to customary usufructuary rights and, as such involves neither an initial capital outlay nor rental cash payment. Even in those communities where freehold or outright ownership of land is exercised, the existence of social status associated with land ownership tends to affect the system of economic choices with regard to land (Firth, 1970).

Singini, Sartorius Von Bach and Kirsten (1992), mention that evidence from other developing countries has shown that farm sizes of peasant or small-scale farmers are typically small, in most cases averaging between less than one hectare to four hectares. The small sizes of these units of land form part of the basic factors affecting economic progress in a peasant economy, resulting in low land productivity.



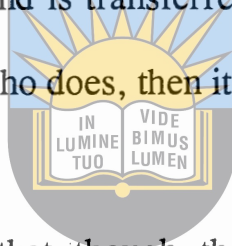
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Low (1984), however, refutes the above statement by stating that the above analogy is based on the hypothesis of a land shortage and thus poses an empirical paradox since researchers commonly find that available arable land is not fully utilised in traditional farm areas. Low (1984), further mentions that since only 73 percent of dry arable land and 75 percent of irrigated land was cultivated in Kwazulu in 1972, it means that land shortage is not the problem that conventional wisdom would have us believe. Low's argument is supported by findings of Bembridge (1987) on a survey in Ciskei that only 55 percent of available land for rainfed cropping was cultivated.

Tapson (1986), explains Low's argument and supports the argument on the effect of small land sizes on land productivity by stating that the low productivity of land is a complex interaction of the productivity of both land and capital. Tapson (1986), further mentions that if the individual unit size of land is too small to make effective mechanization economically viable, the low returns on hand labour in agriculture means that this land is simply withdrawn from agriculture. For this reason we have the paradox of large areas of arable land remaining unused in a condition of land scarcity.

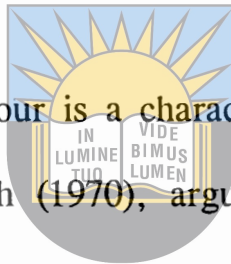
Much has been written on the effects of communal land tenure on agricultural development in less developed areas (Mellor, 1966; Clute, 1982; Machete, 1986; de Wilde, 1967). One view is that the communal land tenure system is obstructive to increased agricultural production (Machete, 1986). Mellor (1966), bases this

school of thought on the argument that the lack of land transfers affects agricultural production negatively. Clearly though, a sale of land does not itself create a productive asset, it only transfers an asset. However, if the land is transferred from one who does not use it effectively to one who does, then it may increase production.



Low (1984), mentions that though the land tenure system in developing areas is mostly communal, there is some considerable flexibility with regard to land allocation eg. share-cropping etc, this flexibility does not mean that land is necessarily made available to those who are most willing and able to use it productively. Hughes (1974), supports the above argument by stating that migrant labourers and others who may be away for extended periods, often give a "temporary right of cultivation" to kinsfolk who may not need any extra land. All that is required is that some attempts should be made to cultivate it so that the migrant's right to this land is not impaired.

### 3.1.1.2. LABOUR



Reliance on family labour is a characteristic that is used when defining peasants. Firth (1970), argues that the term "family labour" in rural households does not apply to an immediate domestic unit of parents and children, it includes extended family members.

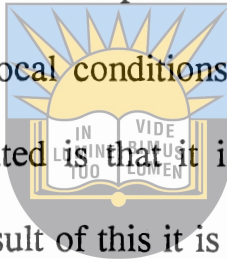
Bembridge (1987), found in his study of three rural villages in Ciskei, that 36 percent of rural farmers interviewed felt that they had sufficient land to cultivate as an increase in their land holdings would be associated with an increase in their labour requirements. This finding is an indication that labour is one of the constraints for agricultural development in peasant agriculture. This problem is aggravated by the fact that in rural areas most of the able bodied

men work in cities or towns leaving woman, children and old people to look after agriculture (Bembridge, 1987; Williams and Rose, 1989; Mellor, 1966).

Low (1974), supports this observation by mentioning that in the prevailing wage employment market in Southern Africa, young, educated and adult male members have the best off farm job prospects. It will thus be the older, less educated and female members of the household who are left to do most of the farm work. For this reason the comparative advantage concept suggests that the marginal returns per farm worker will tend to fall as family labour is withdrawn from the indigenous farm household (Low, 1974). This follows from a consideration of the type of members who usually leave for wage employment compared with those that remain on the farm.

Bembridge (1987), estimates that in the traditional rural economy in Africa as a whole, between 60 percent and 80 percent of the

work in food production and 50 percent of the animal husbandry is performed by women. This is in addition to all household chores such as food processing and child rearing. Tapson (1986), cites Houghton and Walton (1952) and Fleuret (1978) as stating that a range of 16 to 44 hours is reported to be spent on household chores depending on local conditions. A feature of this activity that is seldom appreciated is that it is physically strenuous and energy sapping, as a result of this it is obvious that the women do not have enough time to devote to the demanding agricultural production practices and management.



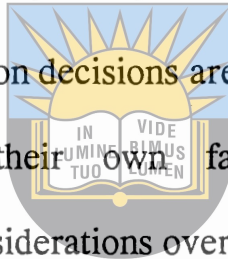
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### **3.1.1.3. Production and consumption characteristics.**

Peasant farmers are often referred to as "subsistence" farmers. This is because a greater portion of their farm output is directly consumed by the household rather than sold to the market (Ellis, 1988). Arnon (1981), attributes the cause of this as being

extremely limited capital resource, constancy in the use of traditional methods of production and in the commodities produced, and low productivity of land and labour.

Wharton (1970), emphasises the fact that in peasant agriculture, consumption and production decisions are intertwined. The degree of dependence upon their own farm production makes consumption/survival considerations overrule the commercial ones thereby affecting decision making and economic behaviour.



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#### **3.1.1.4. Agricultural support environment**

Hunter (1978), states that Less Developed Countries do not have adequate transportation facilities, communication network and credit facilities for moving goods through the marketing system and for disseminating information on prices, supply and demand. The efficiency in transportation depends not only on the efficiency of transporters but on the adequacy of

infrastructural provisions; the ability and quality of roads and railways.

Doni (1992), mentions that in less developed areas there has been reluctance by banks and other financial institutions to lend to peasant or subsistence farmers. This has been due to the lack of collateral to bolster their credit-worthiness. This lack of collateral is mainly due to the land tenure system which for the majority of cases does not allow outright ownership of land. The peasant farmer has to depend mostly on mutual help, particularly credit within tribal groups (Hunter, 1978).

### **3.2. The need for a holistic approach towards a sustainable rural development in developing areas.**

Tapson (1986), mentions that rural development has made very little impact on rural poverty in Southern Africa. This phenomenon applies to the rest of the developing areas in the world as well. The reason of the failure of most rural development strategies can be attributed mainly to

the agricultural sector approach to rural development. The goal of rural development is to improve the well-being of the rural communities. Since the determinants of well being are interconnected (September, 1986) a rural development strategy can only succeed if all those determinants are taken into consideration.



### 3.2.1. The concept of Rural Development.

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Lele (1975:20), defines rural development as "improving the living standards of the mass of the low income population residing in rural areas and making their development self sustaining". Lele (1975), further analyses this definition into three features which he envisages as having considerable implications on how rural development programmes are designed and implemented, viz:

- (a) *Improving living standards of the subsistence population involves setting priorities in the mobilization and allocation of resources.*

- (b) *Mass participation requires assurance that resources are allocated to low income regions and classes.*
- (c) *Making the process self sustaining requires development of appropriate skills and implementing capacity, and the presence of institutions at the local, regional and national level to ensure effective use of resources and to foster mobilisation of additional financial and human resources for continued development at subsistence level.*

September (1986), lists the following as the factors constraining policy formulation and implementation of rural development strategies.

- (a) *Those inherent in the political, institutional framework applying in the rural areas*
- (b) *Those arising from perceptions about development that exist among decision makers.*

- (c) *Those related to the capacity to identify, prepare, implement and operate projects and programmes.*
- (d) *Those arising from the controversies and uncertainties about what the applicable rural development strategy should be.*



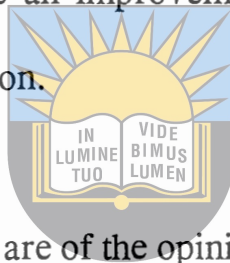
Lynas and Hartzenburg (1987), address the last constraint by citing Erkin's (1985) view that rural development must be considered in terms of social progress as this goes further than meeting an economic objective. This statement accords with the philosophy that a holistic approach, embodying attention to a range of activities aimed at improving the quality of community existence (water supplies, woodlot, housing, roads, employment etc) is as important as generating economic enterprises. The purpose of development should not be developing things but developing man (Lynas and Hartzenburg, 1987).

### 3.2.2. Application of an integrated rural development strategy

Honey, Thomas and Davidson (1992), mention that over the past decades two main approaches have been used to combat rural poverty. The first involved programmes designed to increase off farm employment. The second concentrated on increasing agricultural output of rural households. Though both approaches can be regarded as being sound as far as meeting their objectives, however their impact was limited because of over-ambitious objectives and inadequate means (Honey et al, 1992).

A criticism of the agricultural approach to rural development is that, this strategy which is aimed at increasing agricultural growth has had limited success in reducing poverty as it has often failed to benefit peasant farmers or is irrelevant to the rural landless (Honey et al, 1992; Bryant and White, 1984). Bryant and White (1982), further mention that plans which focus only on agricultural


development are part of the problem. Arnon (1981) argues that whilst it is difficult to envisage rural development without increases in agricultural output and productivity, modernization in agriculture cannot on its own ensure an improvement in the welfare of the bulk of the rural population.



Bryant and White (1984), are of the opinion that the causes of rural poverty are multiple and interdependent and thus have to be addressed simultaneously by many sectors hence the idea of "integrated rural development". Bembridge (1987), views this concept as a multidimensional process with objectives aimed at eradicating poverty, providing employment opportunities, reducing income inequalities and raising living standards as well as bringing about personality development.

In this process however, agriculture should be seen as a means to an end and not an end itself. Bembridge (1984), believes that for

such an approach to succeed, increasing attention should be given to satisfying basic needs and to encouraging participation by people in their own development. According to Tapson (1986:3) the following features of rural development are worth emphasising when designing a rural development programme.

- 
- (a) *It is the development of people to the point where they can satisfy their needs themselves.*
- (b) *It is self-sustaining, therefore by definition cannot continually be supported by intervention.*
- (c) *It depends on increased productivity and employment.*
- (d) *It is multi-sectoral, therefore requires the support, co-ordination and commitment of the national administrative and political arms to succeed.*

De Villiers (1980), suggests that an integrated rural development programme should be implemented according to the following phases:

- (a) *The first phase encompasses formulation of development policies by the government.*
- (b) *In the second phase core projects must be developed, starting on chosen growth points. This should be preceded by an in-depth study of the viability of such projects.*
- (c) *When the core projects are well established the third phase should involve providing integrated agricultural support infrastructure to identified farmers.*
- (d) *The fourth phase involves extending the agricultural support to all peasant or subsistence farmers.*
- (e) *The fifth and the last phase involves implementing the basic needs approach.*

The above constitute guidelines which can be modified according to the demands of each situation for which rural development is to be implemented.

### 3.3. The Farmer Support Programme as a means of farming development in developing areas of Southern Africa.

The dualistic nature of the Southern African agricultural economy is quite apparent. Van Rooyen (1987), attempts to draw a picture of this by stating that "capital intensive commercial farms exist alongside subsistence production units. Large-scale agricultural estates and privately owned family farms operate within sight of communally oriented tribal farming systems"

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The difference in these two types of "agricultures " is more visible on the production side. Natrass (1981), as cited by Van Rooyen (1987), states that white commercial farmers produced an output of R1 298 per man and R119 per hectare cultivated in comparison to R65 and R34 respectively for subsistence farmers.

This dualism in black and white farmers in South Africa is a direct result of past agricultural policies (Van Zyl and Kirsten, 1992).

Van Zyl and Kirsten (1992) further argue that the "two agricultures" phenomenon should be viewed as a consequence of historical events on policies restricting fair access to resources and markets and in particular, legislation biased against black smallholders as part of the apartheid policy.



Van Rooyen (1987), attributes this diversity to a large extent on the fact that white commercial farmers have been enjoying comprehensive agricultural support from financial institutions (both government related and private), marketing boards, co-operative movement, organised agriculture, research, extension and political lobby. The subsistence or smallholder farmers in South Africa have been operating outside this support structure. Thus, the lack of access to agricultural support forms one of the most serious bottlenecks towards developing subsistence farming in South Africa.

Some specific agricultural development objectives aimed at developing South African agriculture are outlined by Van Rooyen (1987) to include

the following:

- (a) *To structure agri-support systems, promoting equitable or fair access of all farmers in Southern Africa to opportunities in agriculture.*
- (b) *To promote entrepreneurial activity in agriculture*
- (c) *To reach large numbers of the rural population by supporting small-scale farming and by creating employment opportunities.*
- (d) *To increase the level of household food production to at least secure reasonable subsistence and nutritional levels for poor rural families.*
- (e) *To promote market related, commercialised farming by optimally utilising available resources, production factors and market opportunities.*



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The FSP is designed to meet the above stated agricultural development objectives.

### 3.3.1. Important components of the Farmer Support Programme



Recognising the importance of a small farmer approach to agricultural development per se is however not enough, there are important pre-requisites that have to be considered if this strategy is to succeed and bear the desired fruits. A summarised version of these prerequisites as stated by Van Rooyen, Vink And Cristodoulou (1987) are as follows:-

- (a) *The supply and funding of inputs and production assets to farmers.*

The objective of this is that subsistence farmers should have easy access to a complete package of inputs.

(b) *Mechanization services*

This help to alleviate bottlenecks in the preparation of land and the transportation of inputs and farm products.

(c) *Marketing services*

Marketing services in this context refers to all those activities that facilitate the removal of produce from the farm gate to the point of sale. Provision of marketing services will help create incentives for further production.

(d) *Extension service, demonstration and research.*

These are important to develop the farmer towards independence and to diagnose areas for further improvement.

(e) *Training*

In this context training involves the transfer of skills to the farmer, extension staff, administration staff and all those involved in the programme.

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In order for the above mentioned elements to be applied effectively, a broad variety of institutions and organizations will have to participate in the planning and implementation of the programme. Van Rooyen *et al* (1987), mention four categories of institutions that should feature in a FSP viz: the public sector or Government, quasi-government or parastatal, private sector and non governmental organisation (NGOs).

### 3.3.2. Determination of the effect of FSP on agricultural production and food security.

Although the FSP approach to peasant or subsistence farmer development is a relatively new concept, there are some studies which have been done to assess the rationale of this approach thus far and its influence on agricultural production and food self sufficiency for the participating farmers. Among these are studies done by Van Zyl et al (1991); Lyne and Ortman (1991); Kirsten and Satorious von Bach (1992); Dankwa (1992) and Singini et al (1992). Singini et al (1992), mention that among the questions that are being asked in these studies are:

- (a) *What effects can a FSP strategy have on small farmers who are predominantly on very small areas of one hectare and less in developing areas of South Africa?*
- (b) *Is FSP a deliberate strategy to perpetuate subsistence farming by black farmers to the detriment of the advantaged white farmers?*

- (c) *How sustainable and relevant will FSPs be in the post apartheid South Africa?*

Singini *et al* (1992), found that in Venda the farmers participating in the FSP had higher maize production, earned significantly higher amounts from the sale of livestock and crops, invested more in agriculture and are more productive land users than farmers who were not participating in the programme. With respect to farm inputs FSP participants used more seed and chemical fertilizers and less organic (manure) fertilizer than non-participants.

Dankwa (1992), in his study of Lebowa and Venda support the findings of Singini *et al* (1992). He found that FSP participants produced and consumed more maize and spent more on other goods than FSP non-participants. Dankwa's estimated elasticity of expenditures showed that the FSP group spent less on maize meal, but more on other food, durable household and farm expenses. The conclusion that could be drawn from this is that the farmers

participating in the FSP are in a better food security situation than those who are not participating.

Though the above studies depict a picture of success for the FSP strategy, this cannot be regarded as the case in all situations. Singini *et al* (1992), mention that in a certain area in Lebowa the non-FSP farmers were found to be better farmers than the FSP farmers.



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#### **3.4. The role of credit in developing agriculture**

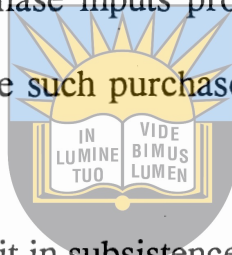
" Until recently the use of agricultural credit as a developmental tool seemed clear and straightforward. Most concerned people believed that increases in the volume of cheap credit were necessary to boost agricultural production, and that the rural poor could be brought into the mainstream of development through supervised credit programmes." (Von Pischke, Adams and Donald, 1983 :1).

As a result of this general belief there has been a concerted effort by governments in developing areas to supply rural credit through government institutions to help the poor, increase production, and displace or dilute the financial strengths of local rural power structures. In most cases credit has been used as an easy way of offering fast relief to a complex situation of old and difficult problems. Von Pischke *et al* (1983), mention that it is much easier to provide loans than to undertake land reform, get agricultural technology systems adopted, build rural roads, or install new irrigation and drainage systems.

#### 3.4.2. Arguments on the use of credit as an agricultural development tool in Developing areas.

Von Pischke *et al* (1983), argues that credit for the peasant or subsistence farmer is often not necessary and may even do more harm than good. This argument is based on the fact that the majority of the peasant farmers have a poor education background, low levels of income and stagnant production levels. Cochrane (1974), bases his support of this argument on the fact that a

subsistence type of agriculture does not have a great need for production credit. This is due to the fact that most of the inputs employed on a subsistence farm are produced on the farm hence there is no need to purchase inputs produced off the farm or to acquire financing to make such purchase.



As an alternative for credit in subsistence agriculture, Von Pischke et al (1983), proposes an emphasis rather on savings clubs. This is against the well accepted idea that peasant farmers can become more productive only if they are given the opportunity to borrow someone else's money. The advantage of a rural savings club is that it teaches the peasant farmers how to develop by using the resources they already have, and that gives them the confidence in their own ability to improve their status in society.

Mellor (1966), argues that the importance of internal financing is greater in low-income static agriculture than in high-income dynamic agriculture for the following reasons:

- (a) *In high-income agriculture, land transfers represent a very large financing burden while they rarely occur in low-income agriculture.*
- (b) *In low-income agriculture a static technological base does not provide the basis for expanding financial needs.*
- (c) *In a low-income agriculture the static income base does not provide the repayment basis for expanding borrowing.*



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In view of the above reasons it becomes apparent that in low-income static agriculture, which is characteristic of peasant agriculture, provision of institutional credit may increase future income problems. This is due to the burden of added interest, resulting in a spiral of increasing debt and declining spendable income. If this happens such a spiral increases the importance of external sources of financing relative to internal ones and

eventually leads to a loss of assets as the debt burden becomes too great to carry, and finally a change in status from a land owner to landless (Mellor, 1966).



Another problem associated with institutional credit for peasant farmers during early stages of development is highlighted by Cochrane (1974). This concerns the attitude of peasant farmers towards debt such that even cheap credit is unlikely to be a useful stimulus for growth. The effectiveness of credit depends on the ability and willingness of peasants to devote such additional funds to productive use. Since peasant farmers are mostly risk averse and also aware of their limited production potential they tend to view credit with scepticism. Government rural credit programmes in developing countries will remain ineffective until governments come to a better understanding of the role of credit in peasant economies, and the attitude of peasants towards savings, investment and debt (Cochrane, 1974).

Cochrane (1974), explains four reasons for the vigorous pursuit of credit programmes in developing areas when it should be clear from experiences of many countries that they are an expensive and a wasteful way of encouraging agricultural development, viz:-

- 
- (a) *Governments and many economists are unaware of the attitudes of peasants towards debt and credit and the unwillingness of many farmers to use credit developmentally at the time it is offered.*
- (b) *Governments see credit programmes as an easy way to increase the capital of the rural sector, but they forget that credit does not necessarily represent capital. Capital is not created merely by increasing the supply of money, nor can capital be used developmentally if farmers are permitted to use their borrowing for consumption.*
- (c) *Governments in many developing countries seem to feel that modern financial institutions who are*

*designed to serve farmers can be created with the stroke of a pen, they fail to realize that growth of such institutions are as much a result as they are a cause of development.*

- (d) *Governments do not recognise the powerful economic reasons for high nominal rates of interests charged in the so-called unorganized money markets*



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All the above mentioned arguments however do not deny the importance of credit in agricultural development, they are based rather on the premise that credit should be made available only when there has been some development or when the farmers themselves have taken some steps on the road to become commercial farmers. Mellor (1966) mentions that credit programmes for developing agriculture might better accompany or follow programmes of technical change, and not precede them as has been general in development programmes.

## CHAPTER 4

### RESEARCH METHOD

#### 4.1 The population



Since the objective of the research is to find out whether the Keiskamahoe FSP has made an impact on developing the rural farmers, it became imperative that the target population consists of all the farmers in the target area that had access to arable land irrespective of the type of land tenure. The population of farmers was subdivided into two i.e. farmers who had used credit facilities provided by the FSP ever since it was introduced and those who did not use it. The reason for this was to enable comparisons to be made between the two groups so as to determine whether the programme had the desired impact. The total number of farmers in the area who had access to arable land was eight hundred and fifty nine (859). Of these, two hundred and ninety eight (298) had used credit from the FSP whereas five hundred and sixty one (561) farmers had not used the credit facility.

## 4.2 The sampling method

The list of farmers who had participated in the programme was obtained from the Ciskeian Agricultural Bank which is the agency responsible for administering of the loans from DBSA. This list was then verified with the chairpersons of the farmers associations and Extension Officers in each village. The list of the farmers who never participated in the FSP credit facility was compiled from the information gathered from the community leaders in each of the villages. This list was then cross-checked with that of participants so as to avoid the mistake of including the same farmer on both lists.

### 4.2.2. Sampling procedure

A two staged stratified random sampling procedure was used. The first stratification was per village and the second per participation or non-participation in the FSP. The reason for stratification was firstly to accommodate the heterogenous nature of the population as they are from different villages and secondly

to enable each village to be represented in the final sample. Elements of participants and non-participants were drawn from the list of each village into the sample using a table of random numbers. A sample size of 100 elements was used. This consisted of 50 elements of participants and 50 elements of non-participants. This sample size was regarded as adequate for inferences to be made about the entire population especially when considering the time available and the cost involved in the survey. The number of participants and non-participants selected into the sample can be seen in Table 2



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**TABLE 2. SAMPLE FRAME AND SIZE: KEISKAMMAHOEK FSP**

	SAMPLE FRAME		SAMPLE SIZE			
	FSP	NON FSP	FSP		NON FSP	
VILLAGE	NO	NO	NO	%	NO	%
MBEMS	27	21	5	18.5	3	14.3
CATA	58	59	10	17.2	6	10.2
MNYAMENI	41	252	7	17.1	22	8.7
AMATOLA BASIN	97	189	16	16.5	15	7.9
RABULA	75	40	12	16.0	4	10.0
<b>TOTAL</b>	<b>298</b>	<b>561</b>	<b>50</b>	<b>16.8</b>	<b>50</b>	<b>8.9</b>

The overall sample size of farmers (Participants and non-participants) is 11.6%.

### 4.3. The survey

#### 4.3.1. The questionnaire

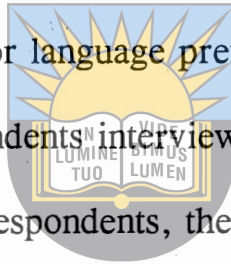


One questionnaire was prepared for both participants and non-participants. Some questions were for both participants and non-participants, other questions were specific to each category of the farmers. Questionnaires that have been used in other benchmark and felt needs surveys were consulted so as to improve the effectiveness of the questionnaire. After the questionnaire was completed a pilot survey was undertaken to test the validity of the questionnaire, after which certain changes were made. These changes included rephrasing as well as inclusion or deletion of certain questions. The questionnaire is included as appendix 3.

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#### 4.3.2 Interviewing procedure and quantitative reliability

All the interviews were conducted by the researcher. Though the questionnaire was written in English, questions had to be asked in Xhosa so as to cater for language preferences and proficiency in English of most respondents interviewed. In order to allay fears and suspicions of the respondents, the researcher was introduced by the Extension Officers responsible for each village.



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Due to the length and comprehensiveness of the questionnaire it took between one and a half hours and two hours to complete each questionnaire. Most of the respondents were very eager to respond to questions and they welcomed the opportunity of discussing their situation, problems and aspirations with the researcher. They also regarded the survey as an opportunity for them to discuss a range of issues regarding their well-being in the rural areas.

Five of the respondents that were selected into the sample were not available due to the fact that they were working in far-away cities and would only return to their households during the December holidays. These were replaced by redrawing some of the elements from the population.

#### 4.3.3. Coding and analysis

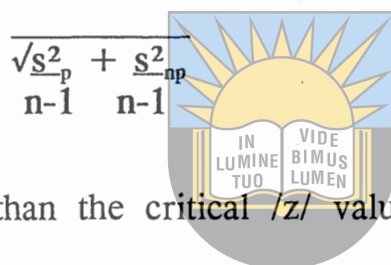


The coding of the questionnaire was done by the researcher. A preliminary and exploratory analysis of the data was performed using a PC Lotus 1-2-3 computer programme.

A two tailed Z test was used to determine whether there were any significant differences between the FSP and the non FSP farmers on some of the aspects tested for in the study. The null hypothesis for this test states that the aspects to be tested for are not associated with participation in the FSP. The alternative hypothesis states that these factors are associated with participation

in the programme. A 5% level of significance was chosen for this test. The null hypothesis will be rejected if the value derived from:

$$z = \frac{\bar{X}_p - \bar{X}_{np}}{\sqrt{\frac{s_p^2}{n-1} + \frac{s_{np}^2}{n-1}}}$$



is greater than the critical  $|z|$  value (1.96) derived from the statistical table, otherwise the null hypothesis will be accepted. If the hypothesis is rejected it means that there was a significant difference between the means of the two groups on the parameter considered. If it is accepted it means that there was no significant difference between the means of the two groups.

A Chi-square test was also used to determine the significance of the difference between FSP and non FSP farmers in some of the factors analyzed. The null hypothesis for this test is the same as that of the Z test. The null hypothesis will be rejected if the value

derived from  $X^2 = \frac{o - e}{e}$  is greater than the critical  $X^2$  value derived from the statistical tables. If the calculated  $X^2$  is less than the critical  $X^2$  derived from the statistical tables, the null hypothesis will be accepted. The data was also analysed by using descriptive statistics in the form of tables, graph presentations and percentages.



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## CHAPTER 5

DATA ANALYSIS AND INTERPRETATION5.1 PERSONAL FACTORS5.1.1. Sex of heads of households

The findings of the survey supports Bembridge's (1986) findings that the heads of households who are involved in agriculture in rural areas are predominantly women.

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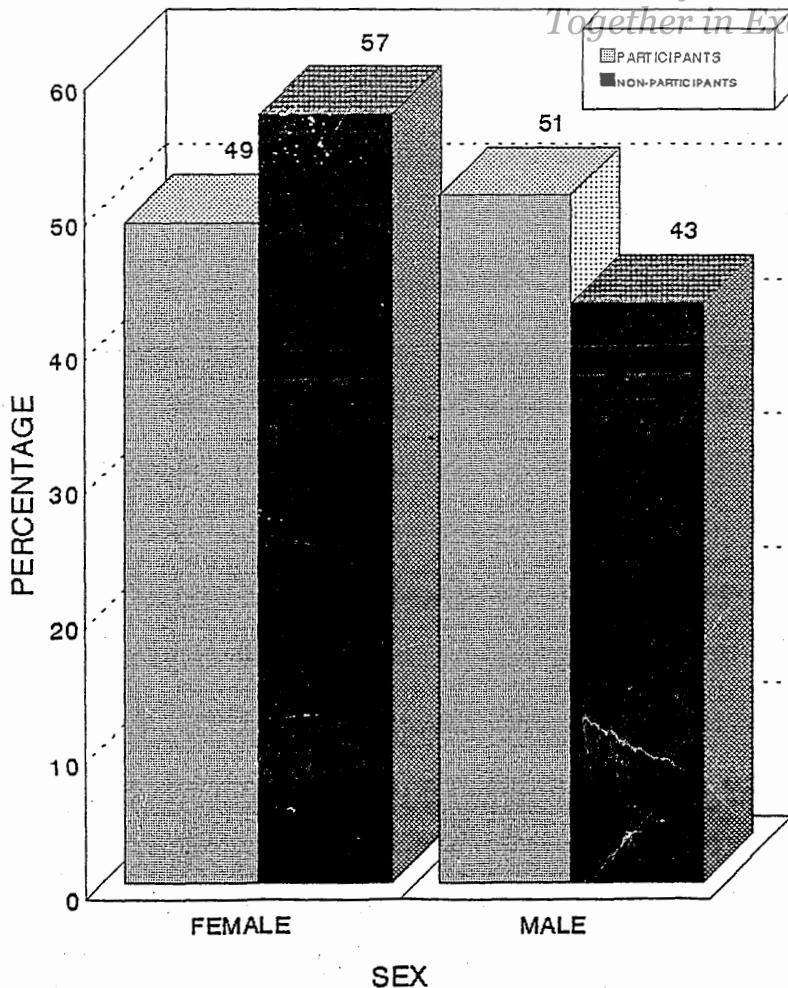


FIGURE 1: SEX OF HEADS OF HOUSEHOLDS

It can be seen in Figure 1 that FSP participants and non-participants comprised of 49% and 57 % women respectively. The overall percentage of women from both groups was 54%. A  $X^2$  test was used to find out whether there was a significant difference between the sex composition of participants and non-participants. The results of this are shown below.



TABLE 3: CHI-SQUARE TEST FOR SEX

		MALE	FEMALE	TOTAL
PARTICIPANTS	$f_o$	24	26	50
	$f_e$	23	27	
NON-PARTICIPANTS	$f_o$	22	28	50
	$f_e$	23	27	
TOTAL		46	54	100

$$X^2 = 0.16$$

Degrees of freedom = 1

The above table reveals that the calculated  $X^2$  value for sex is 0.16 which is less than the critical  $X^2$  value of 3.84 at 5% level of significance. The null hypothesis is therefore accepted meaning that the sex structure of the two groups was not significantly different.

### 5.1.1.1. Reasons for women to be heads of households

Deceased husbands formed the main reason for women to be heads of households (66.1%). The reasons given (Table 4) for women to be heads of households reflect the fact that traditionally, if the man is present and in good physical condition in rural areas, he is the one who makes decisions relating to agriculture.

TABLE 4: REASON FOR WOMEN TO BE HEAD OF HOUSEHOLD

REASONS	MATHO LE	MNYA MENI	CATA	RABU LA	MBE MS	TOTAL
Husband passed away	n 13 % 68	n 9 % 53	n 5 % 72	n 8 % 80	n 2 % 67	n 37.0 % 66.1
Husband working away	n 5 % 26	n 2 % 12	n 1 % 14	n 0 % 0	n 0 % 0	n 8.0 % 14.3
Husband sick	n 1 % 6	n 6 % 35	n 1 % 14	n 2 % 20	n 1 % 33	n 11.0 % 19.6
TOTAL	n 19 % 100	n 17 % 100	n 7 % 100	n 10 % 100	n 3 % 100	n 56.0 % 100.0

### 5.1.2. Age of heads of households

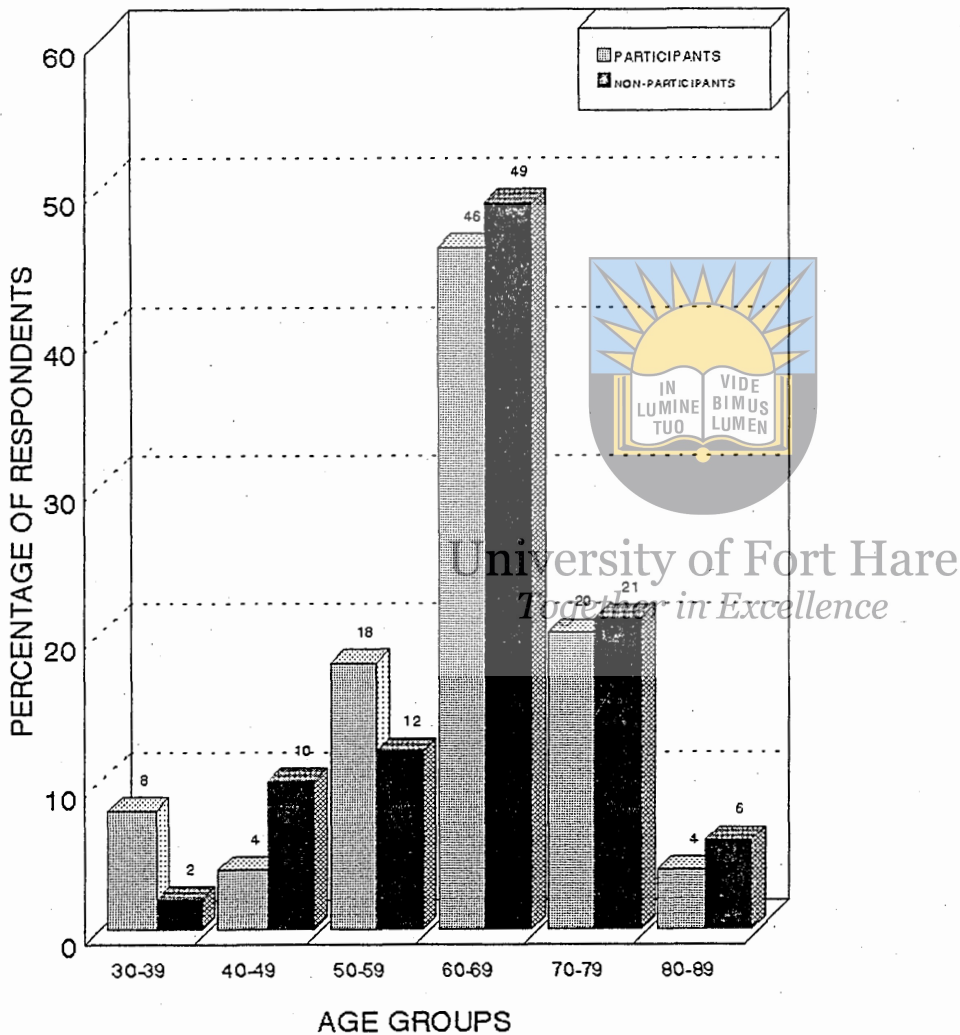
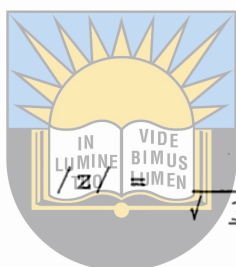


FIGURE 2: AGE OF HEADS OF HOUSEHOLDS

Figure 2 shows that the heads of households in the study area were predominantly (70% participants and 76% non-participants) above 59 years of age. According to Rose, Tapson and Williams (1986) the "active" age group is from 25 to 54 years. It can be seen in

Figure 2 that most of the farmers in the study area had exceeded this "active" age limit. The mean age and standard deviation were slightly higher for non-participants (63.6 and 64.5) than participants (61.1 and 62.3). The calculated z value for age was:



$$\frac{61.1 - 63.6}{\sqrt{\frac{3881.29}{49} + \frac{4160.25}{49}}} = -0.2$$

Since this value is between the critical z values of  $\pm 1.96$  at 5% level of significance the null hypothesis is accepted. This means that there was no significant difference between the age structure of participants and non-participants and thus the level of age was not associated with participation in the programme.

### 5.1.3 Education level of heads of households

According to Bembridge (1987) people with only four years of formal education are considered illiterate. The finding on the study

area on this aspect was that only 25% of the farmers had spent four years and below at school. With this view in mind it can therefore be argued that the literacy rate of the farmers (reading and writing mainly Xhosa) was 75% .

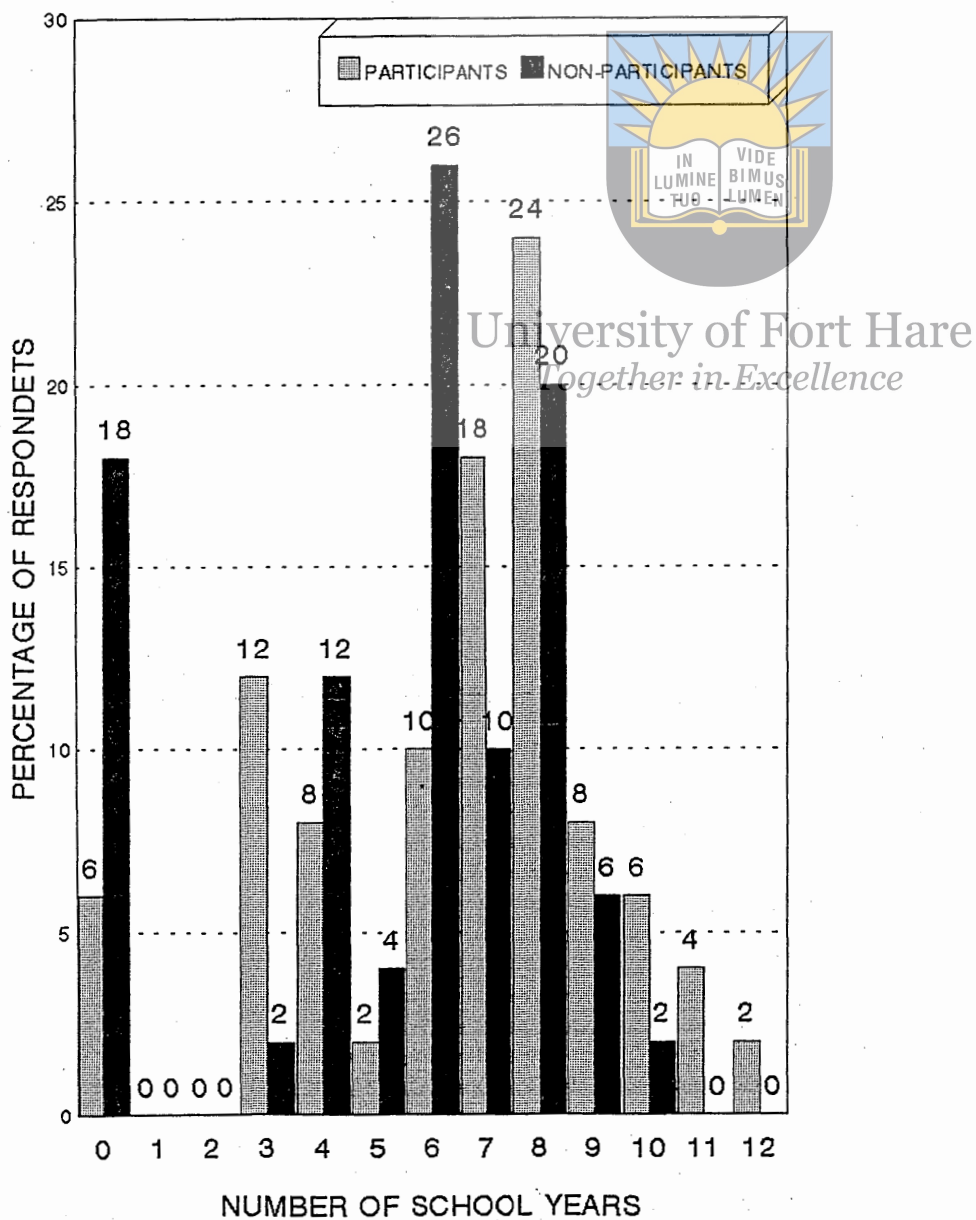


FIGURE 3: EDUCATION LEVEL OF HEADS OF HOUSEHOLDS

Although 6% of participants and 18% of non-participants have had no formal education, it is encouraging to note that 86% of participants and 68% of non-participants have spent five years or more at school. Participants had a mean education level of 6.6 school years and a standard deviation from the mean of 7.1 years as compared to a mean of 5.3 school years and standard deviation of 6.1 years for non-participants. It is however interesting to note that there were very slight differences in the mean number of school years between participants and non-participants within each village.

TABLE 5(a): EDUCATION LEVEL OF HEADS OF HOUSEHOLDS  
PER VILLAGE : Participants (n=50)

SCHOOL YEARS	MATHOLE	MNYAMENI	CATA	RABULA	MBEMS	SAMPLE	
X	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>f</i>	NUMBER	%
0	1	0	1	1	0	3	6
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	3	0	3	0	0	6	12
4	0	1	1	0	2	4	8
5	0	0	1	0	0	1	2
6	0	1	1	2	1	5	10
7	4	2	1	1	1	9	18
8	5	2	2	2	1	12	24
9	2	0	0	2	0	4	8
10	1	0	0	2	0	3	6
12	0	1	0	0	0	1	2
TOTAL	16	7	10	12	5	50	100
MEAN	6.6	7.4	4.7	7.9	5.8		

Note: *f* = Number of respondents per school year category  
Mean =  $\Sigma(Xf) / n$

TABLE 5(b): EDUCATION LEVEL OF HEADS OF HOUSEHOLD PER VILLAGE: Nonparticipants (n=50).

SCHOOL YEARS	MATHOLE	MNYA MENI	CATA	RABUL A	MBEMS	SAMPLE	
X		f	f	f	f	NUMBER	%
0	1	7	1	0	0	9	18
1	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0
3	0	0	1	0	0	1	2
4	0	4	1	0	1	6	12
5	1	0	0	0	1	2	4
6	6	4	2	1	0	13	26
7	1	4	0	0	0	5	10
8	5	3	0	1	1	10	20
9	1	0	1	1	0	3	6
10	0	0	0	1	0	1	2
11	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0
TOTAL			6	4	3	50	100
MEAN	6.5	4.2	4.7	8.3	5.7		

Note:  $f$  = Number of respondents per school year category  
Mean =  $\Sigma(Xf)/n$

The calculated z value for education was:

$$/z/ = \frac{6.6 - 5.3}{\sqrt{\frac{50.84}{49} + \frac{37.02}{49}}} = 0.97$$

This shows that there was no significant difference between the education level of participants and non-participants. This is because the /z/ value is not in the critical z region of  $\pm 1.96$  at the 5% level of significance thereby accepting the null hypothesis.

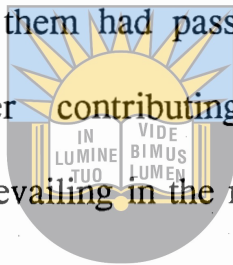
  
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#### 5.1.4 Residential and employment status of the heads of households

##### 5.1.4.1. Residential status

Forty two (84%) of participants and forty six 92% of non-participants were residing permanently at their respective households. All the participants that were working (16%) were daily commuters and the non-participants who were working (8%) were weekly commuters. The high percentage of farmers who

were residing permanently at their respective households was as a result of the high age group to which the majority belonged. This meant that most of them had passed the usual age of wage employment. Another contributing factor was the high unemployment rate prevailing in the rural areas.

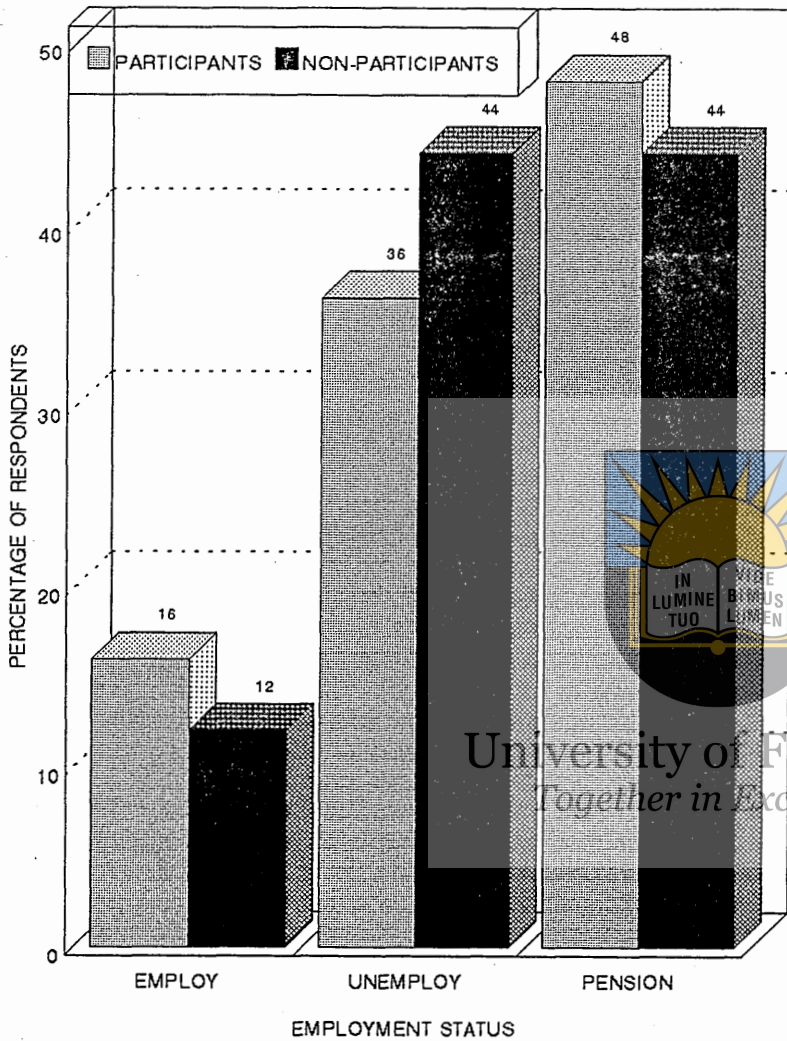


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#### 5.1.4.2. Employment status

Due to the fact that the majority of the farmers (78%) belong to the "non-active" age group of 55 years and older, a greater percentage of them were receiving old age pension (48% participants and 40% non-participants). The percentage of farmers who had never worked was the second highest (28% for participants and 38% for non participants). A breakdown of the employment of heads of households is shown in Figure 4.



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TABLE 4: EMPLOYMENT STATUS OF HEADS OF HOUSEHOLDS

TABLE 6: CHI-SQUARE TEST FOR EMPLOYMENT STATUS

		EMPLOYED	NOT EMPLOYED	TOTAL
Participants	$f_o$	8	42	50
	$f_e$	6	44	
Non-participants	$f_o$	4	46	50
	$f_e$	6	44	
Total		12	88	100

$\chi^2 = 1.5$

df=1

The  $X^2$  value of 1.5 is less than the critical  $X^2$  value of 3.84 at 5% level of significance. The null hypothesis is accepted here showing that there was no significant difference between the employment status of participants and non-participants.



#### 5.1.5 Vocational and skills training of heads of household

It is alarming to find that 84% of participants and 90% of non-participants never received any form of skills training (an average of 87% for both groups). It is however interesting to note that Rabula which had the highest level of education in terms of mean school years as compared to other villages, also had the highest percentage (31%) of people with some form of skills training of which 25% was in agriculture. Only 10% of participants and 6% of non-participants had some form of training in agriculture.

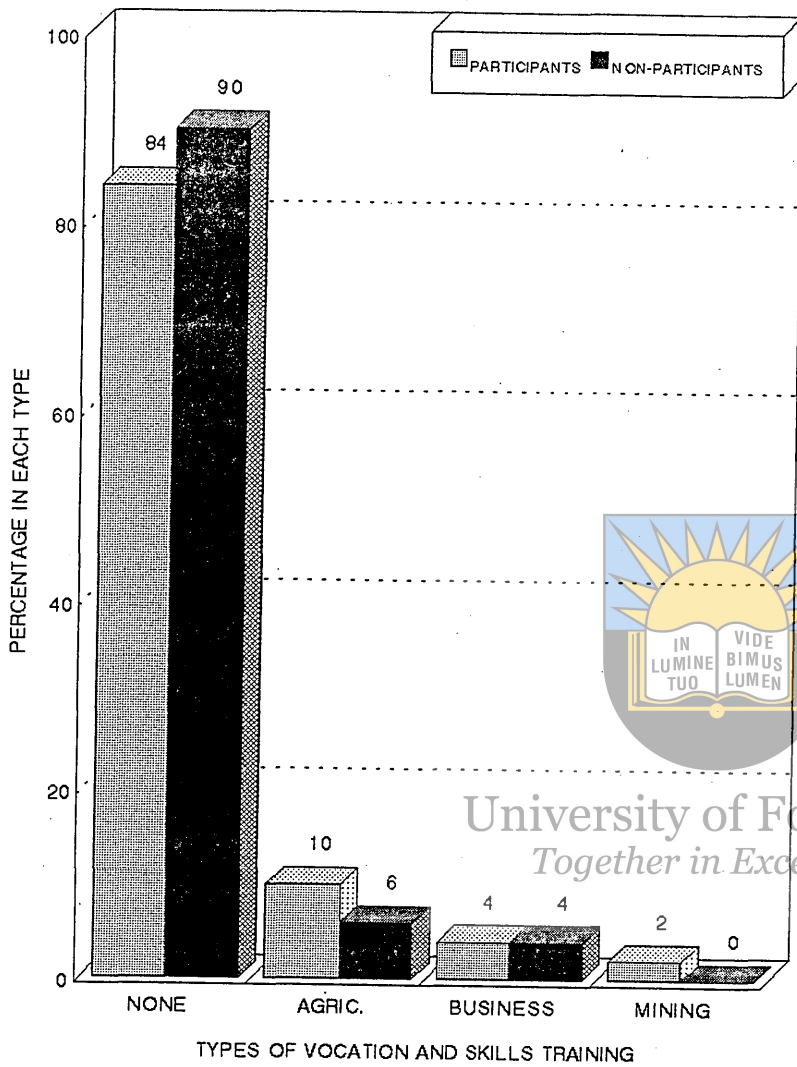


FIGURE 5: VOCATIONAL AND SKILLS TRAINING

TABLE 7: CHI-SQUARE TEST FOR VOCATION AND SKILLS TRAINING

		Skills	No skills	Total
Participants	$f_o$	8	42	50
	$f_e$	6.5	43.5	
Non-participants	$f_o$	5	45	50
	$f_e$	6.5	43.5	
Total		13	87	100

$\chi^2 = 0.8$

$df = 1$

Table 7 reveals that the calculated  $X^2$  value of 0.8 for vocation and skills training is lower than the critical  $X^2$  value of 3.84 at 5% level of significance. The null hypothesis is thus accepted meaning that there was no significant difference between the level of vocation and skills training of the two groups.

### 5.1.6 Family structure and size of households

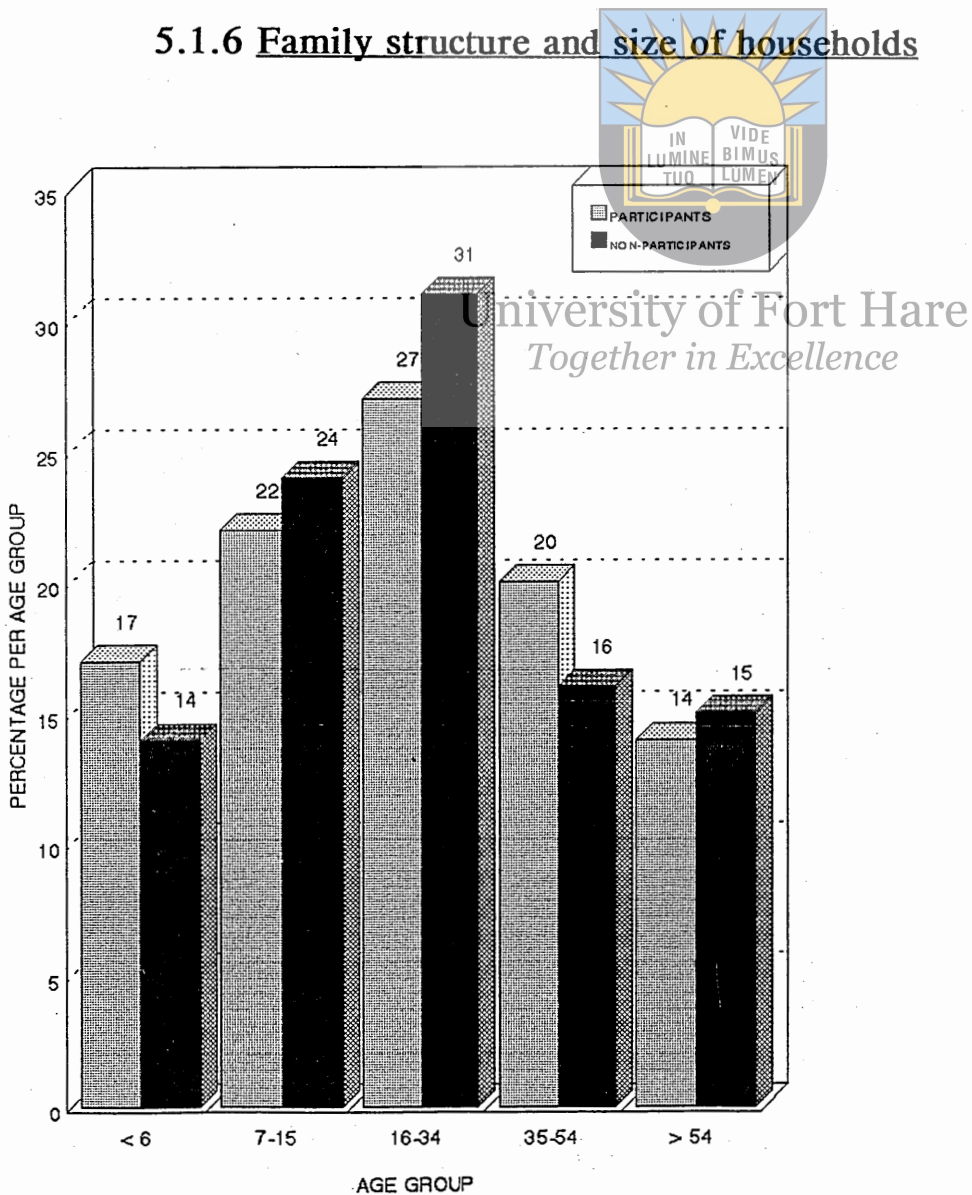


FIGURE 6: COMPOSITION OF MEMBERS OF HOUSEHOLDS

Figure 6 shows that the highest percentage ( 27% of participants and 31% of non-participants) belonged to the 18 to 34 years age group (young adults). Children (all below the age of 17 years) constituted 39% of the household members for participants and 38% of non-participants. This means that a greater percentage (61% participants and 62% non-participants) were adults. The mean size of the families of these households was 4.8 persons for participants and 5.1 persons for non-participants. The /z/ value for family size was:

$$/z/= \frac{4.8 - 5.1}{\sqrt{\frac{29.18}{49} + \frac{35.78}{49}}} = -0.26$$

Due to the fact that the /z/ value of -0.26 is less than the critical z value at of 1.96 at 5 % level of significance, the null hypothesis is accepted. This means that there was no significant difference

between the size of household members of participants and non-participants.



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## 5.2 Description of family holding *together in Excellence*

### 5.2.1 Agricultural implements

Coetzee (1979) mentions that a characteristic of the more successful rural farmers is the fact that they own more and better traction power, transport and agricultural implements than the less successful farmers. Apart from the conventional garden tools (Hand hoes, spades and shovels ) the households in the study were poorly equipped with the basic implements required for successful crop production.

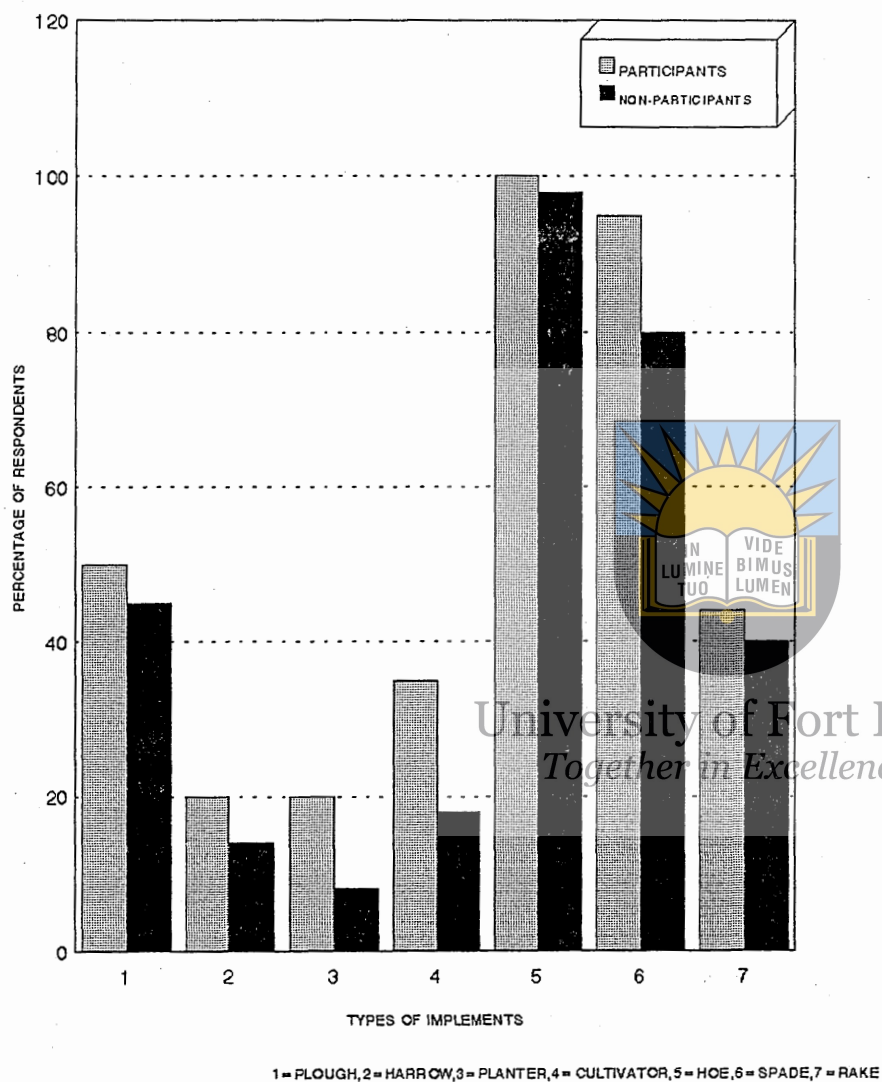


FIGURE 7: OWNERHIP OF AGRICULTURAL IMPLEMENTS

It is interesting to note that the FSP participants owned more than the FSP non-participants in all the types of implements covered in the survey (Figure 7). The overall high percentage ownership of

garden tools (Hoes 99%, spades 88%) might be an indication that the rural farmers concentrate more on cultivating their home gardens than their arable allotments. The low percentage ownership of implements like planters (23%) is a cause for concern as it implies that most of the households planted crops by hand, especially maize. This might be a contributing factor towards poor crop production. The mean number of implements owned per household and their corresponding  $|z|$  values are shown below.

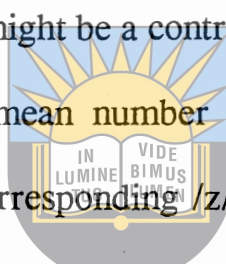


TABLE 8: MEAN NUMBER OF IMPLEMENTS PER HOUSEHOLD AND THEIR Z VALUES *Together in Excellence*

TYPE	n=50			n=50			/z/	Result
	PARTICIPANTS	NON-PARTICIPANTS						
	$\bar{x}$	s	s <sup>2</sup>	$\bar{x}$	s	s <sup>2</sup>		
Plough	0.58	0.86	0.74	0.40	0.63	0.40	1.18	Accept
Harrow	0.24	0.53	0.28	0.12	0.32	0.12	1.33	Accept
Plante	0.24	0.53	0.28	0.08	0.28	0.08	1.87	Accept
Cultiv	0.36	0.60	0.36	0.12	0.35	0.12	2.42	Reject
Hoes	2.22	2.47	6.10	2.42	2.66	7.06	0.73	Accept
Spade	1.62	1.89	3.58	1.30	1.63	2.66	0.90	Accept
Rake	0.54	0.81	0.66	0.54	0.86	0.74	0.00	Accept

Although the FSP farmers owned slightly more implements than the non FSP farmers, it is only with regard to cultivators that

there was a significant difference between the two groups. The null hypothesis is accepted for all the other implements as their  $|z|$  values were lower than the critical value of  $z$  at 5% level of significance.

### 5.2.2 Household appliances

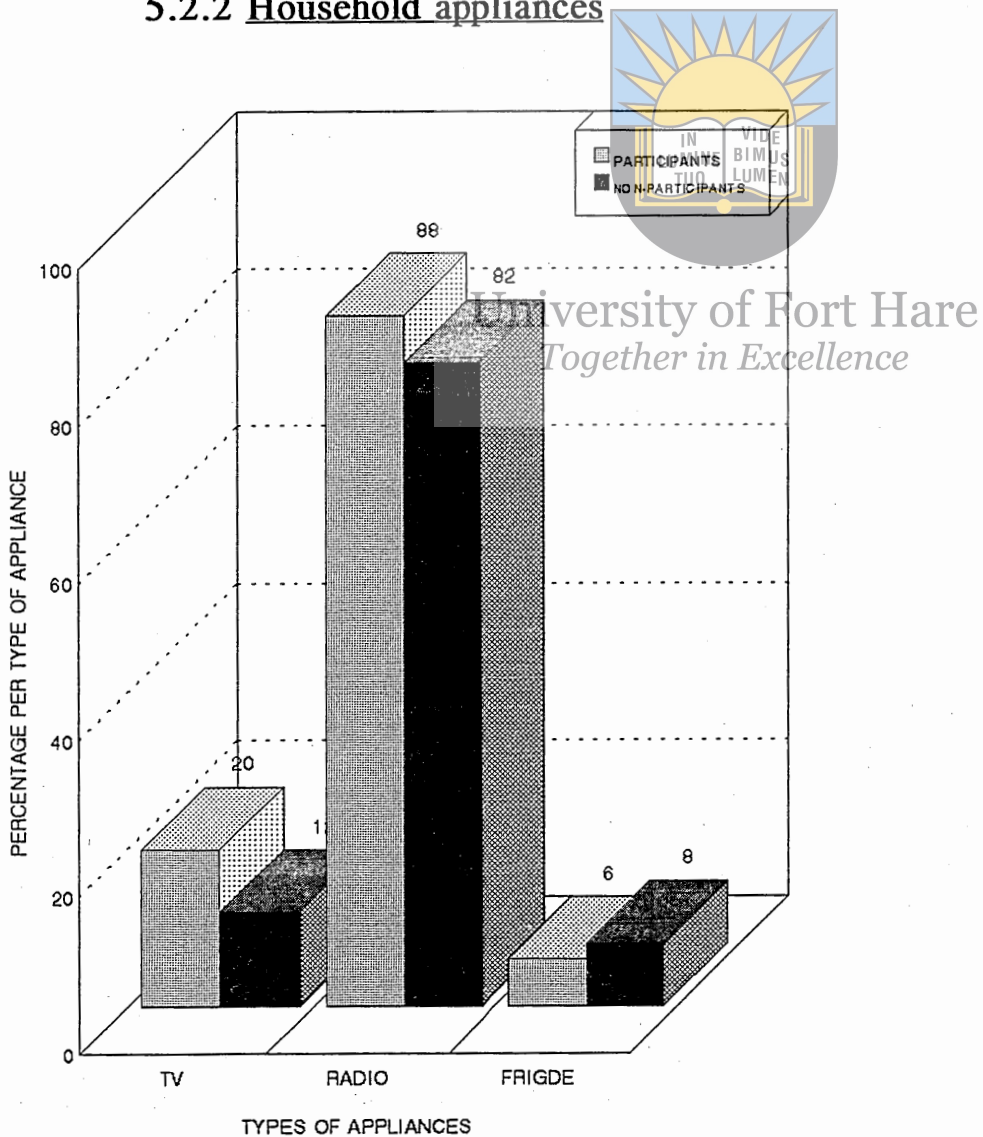


FIGURE 8: OWNERSHIP OF HOUSEHOLD APPLIANCES5

Forty four (88%) of participants and forty one (82%) of non-participants had radios as compared to only ten (20%) of participants and six (12%) of non-participants who owned TV sets.

This effectively means that the radio forms the most important media tool with which knowledge could be imparted to the farmers. As was the case with the implements, FSP participants owned slightly more of the household appliances included in the study than FSP non-participants.

TABLE 9: CHI-SQUARE TESTS FOR HOUSEHOLD APPLIANCES

(a) Ownership of radio

		Do not own	Own	Total
Participants	$f_o$	6	44	50
	$f_e$	7.5	42.5	
Non-participants	$f_o$	9	41	50
	$f_e$	7.5	42.5	
TOTAL		15	85	100

$$X^2 = 0.4$$

$$df=1$$

## (b) Ownership of TV sets

		Do not own	Own	Total
Participants	$f_o$ $f_e$	40 42	10 8	50
Non-participants	$f_o$ $f_e$	44 42	6 8	50
Total		84	16	100

$X^2=1.2$  df=1

## (c) Ownership of refrigerators

		Do not own	own	Total
Participants	$f_o$ $f_e$	43 44	7 6	50
Non-participants	$f_o$ $f_e$	45 44	5 6	50
TOTAL		88	12	100

$X^2= 0.4$  df=1

Tables 9 (a-c) show that in each case the sample  $X^2$  of 0.4 for radio, 1.2 for TV and 0.4 for refrigerators fall below the critical  $X^2$  value of 3.84 at 5% level of significance. The conclusion is that participation in the programme was not associated with ownership of the items mentioned.

### 5.2.3 Cooking facilities

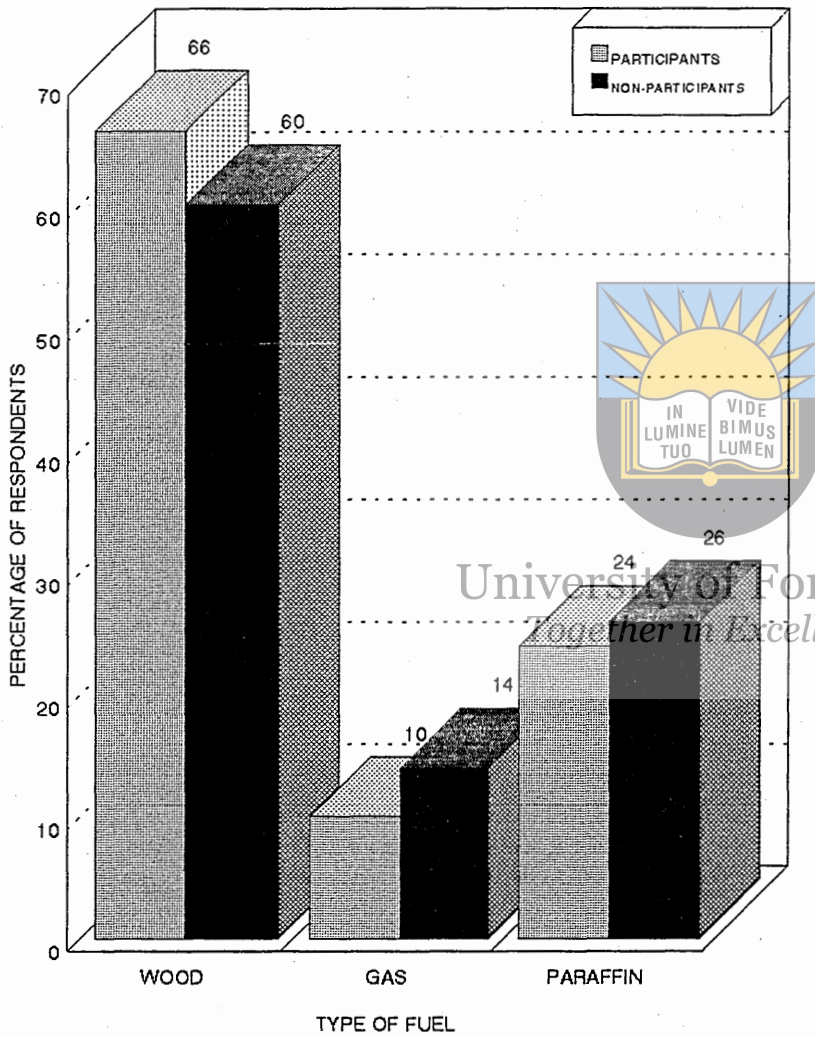


FIGURE 9: SOURCE OF FUEL

Most of the respondents (63%) used firewood as a source of fuel. Twenty five percent used paraffin and twelve percent used gas stoves. It is interesting to note that the respondents in the villages close to the Amatola mountain range with its indigenous forests

constituted a high percentage (Mathole 77%, Cata 62%) of respondents who used wood as a source of fuel as compared to Mbems where only 38% used wood. Another aspect that can be observed is that Mbems and Rabula which are close to the tarred main roads to King William's town and Keiskammahoek used more paraffin (Mbems 62%, Rabula 37%) as compared to the others who did not have good access to towns.

TABLE 10: CHISQUARE TEST FOR TYPE OF COOKING FACILITIES

		Wood	Gas	Parr afin	Total
Participants	$f_o$	33	5	12	50
	$f_e$	31.5	6	12.5	
Non-participants	$f_o$	30	7	13	50
	$f_e$	31.5	6	12.5	
Total		63	12	25	100

$$X^2 = 0.7$$

$$df = 2$$

The sample  $X^2$  of 0.7 is less than the critical  $X^2$  value of 5.99 at 5% level of significance therefore accepting the null hypothesis.

This means that participation in the programme was not

associated with the type of fuel used for cooking.

### 5.2.4 Housing

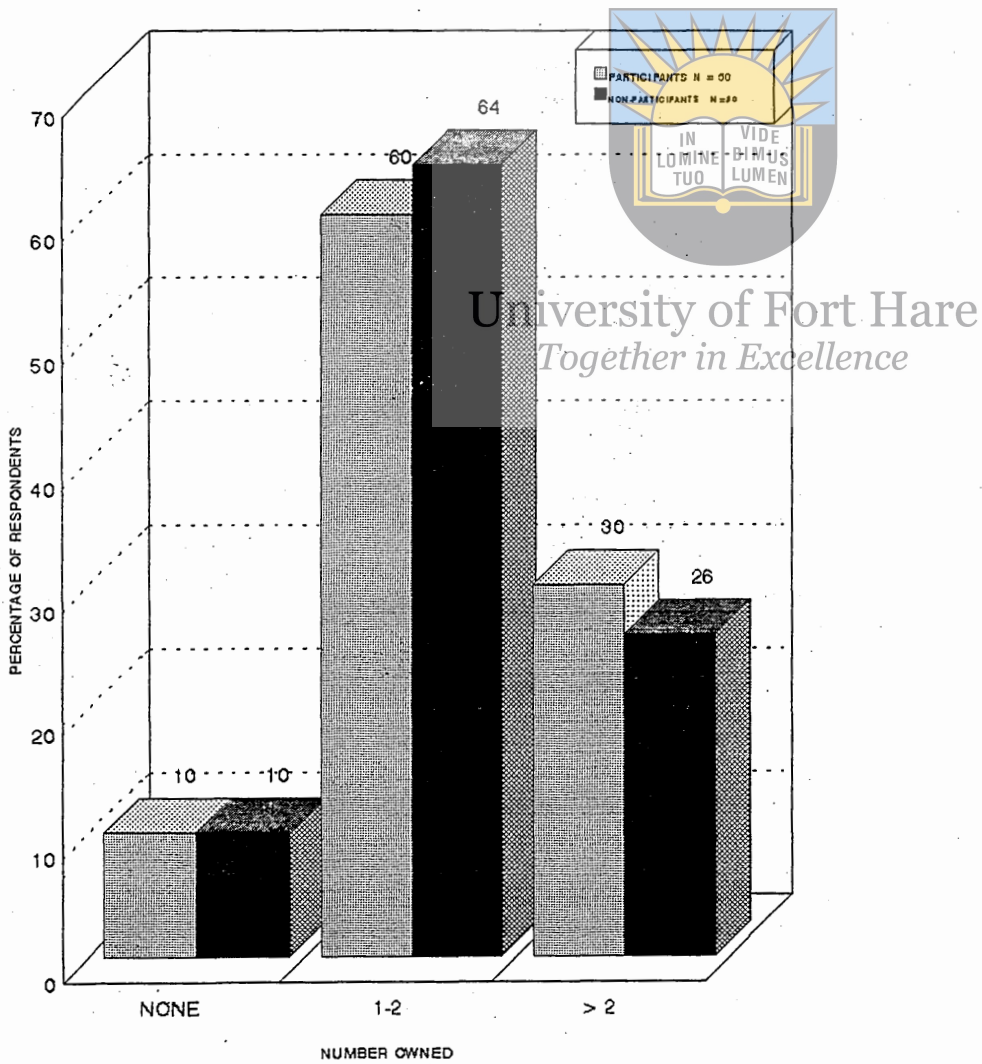
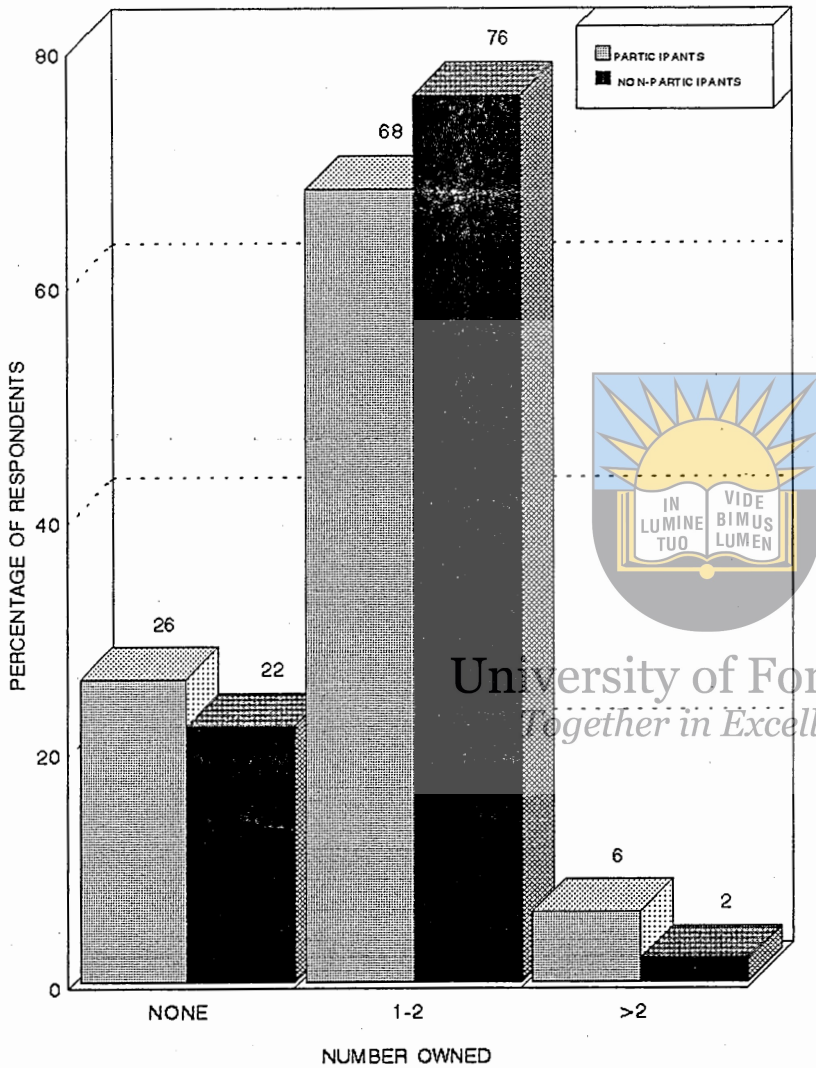


FIGURE 10: OWNERSHIP OF MODERN HOUSES



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FIGURE 11: OWNERSHIP OF TRADITIONAL HUTS

Figures 10 and 11 show that non-participants owned slightly more traditional and modern houses in the 1-2 houses category. The mean number of huts owned for participants and non-participants was 1.1 units and 0.9 units respectively.

**TABLE 11: CHI-SQUARE TESTS FOR NUMBER OF HOUSE STRUCTURES OWNED**

(a) Traditional

		None	1-2	>2	Total
Participants	$f_o$	13	34	3	50
	$f_e$	12	36	2	
Non-participants	$f_o$	11	38	1	50
	$f_e$	12	36	2	
Total		24	72	4	100

$$X^2=1.4$$

$$df=2$$

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(b) Modern

		None	1-2	>2	Total
Participants	$f_o$	5	30	15	50
	$f_e$	5	31	14	
Non-participants	$f_o$	5	32	13	50
	$f_e$	5	31	14	
Total		10	62	28	100

$$X^2=0.2$$

$$df=2$$

The sample  $X^2$  values for both types of structures falls below the critical  $X^2$  value of 5.99 at 5% level of significance. The null hypothesis is therefore accepted meaning that in terms of housing there was no significant difference between the participants and non-participants.

### 5.3 Income and expenditure pattern of households


#### 5.3.1 Source of income

**TABLE 12: SOURCES OF INCOME FOR HEADS OF HOUSEHOLDS (NON AGRICULTURAL)**

SOURCES	PARTICIPANTS				NON PARTICIPANTS			
	FIRST SOURCE		SECOND SOURCE		FIRST SOURCE		SECOND SOURCE	
	N	%	N	%	N	%	N	%
Old age pension	39	78	0	0	40	80	0	0
Work pension	1	2	0	0	1	2	1	2
Remittances	1	2	18	36	4	8	11	22
Disability grant	0	0	1	2	2	4	0	0
Work	7	14	1	2	3	6	1	2
Child maintenance	2	4	0	0	0	0	0	0
<b>Total</b>	<b>50</b>	<b>100</b>	<b>20</b>	<b>40</b>	<b>50</b>	<b>100</b>	<b>13</b>	<b>26</b>

Old age pension was the main source of income for the majority of households (78% for participants and 80% for non-participants). Income from wage employment (14%) was the second most important source of income for participants. For non-participants remittances from family members who are working in towns and cities constituted the second most important source of income at 8%. The fact that slightly more non-participants (80%)

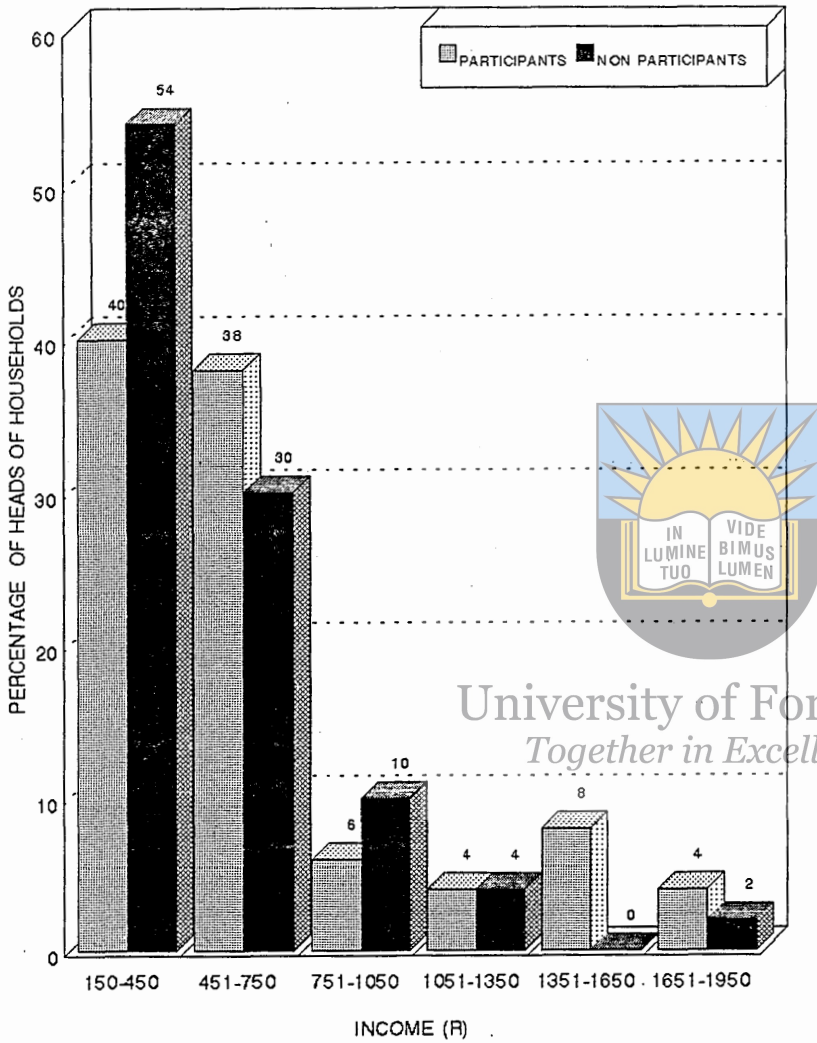
received old age pension as compared to participants (78%) confirms the slight age difference between the two groups. Table 12 indicates that 33% of households (40% participants and 26% non-participants) had a second source of income.

The logo of the University of Fort Hare, featuring a shield with a sunburst at the top, an open book in the center, and the motto 'IN LUMINE TUO VIDE BIMUS' on either side of the book. Below the shield is the text 'University of Fort Hare' and 'Together in Excellence'.

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### 5.3.2 Level of income

The income level of participants ranged from R150 to R1780 per month as compared to a range of R300 to R1670 per month for non-participants. Both groups (78% participants and 84% non-participants) were mainly concentrated between R150 and R750 income level per month (Figure 12).

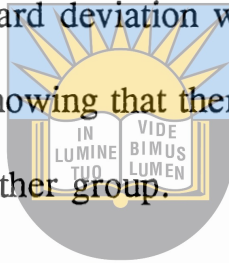


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FIGURE 12: DISTRIBUTION OF INCOME OF HOUSEHOLDS

Old age pension contributed the highest towards income (49% for participants and 72% for non-participants). Participants earned slightly more income per month (R693.50) than non-participants (R583.50). This difference is mainly due to the fact that 16% of

participants were wage earners as compared to only 8% of non-participants. Wages contributed 21.2% towards total monthly income of participants and 3.4% towards monthly income of non-participants. The standard deviation was greater for participants than non-participants showing that there was a larger variation in their income than the other group.



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The  $/z/$  value for non agricultural income was:

$$/z/ = \frac{693.50 - 583.50}{\sqrt{\frac{623258.25}{49} + \frac{411148.25}{49}}} = 0.76$$

Since the value of  $/z/$  (0.76) is less than the critical  $z$  value at 5% level of significance, the null hypothesis is accepted. This means that there was no significant difference between participants and non-participants as far as the level of non-agricultural income is concerned.

### 5.3.2.1 Agricultural income

It became obvious that the farmers in the study area produce mainly for household consumption. Only a small fraction of produce is sold. This occurs only when there is a bumper crop and production exceeds household requirements.

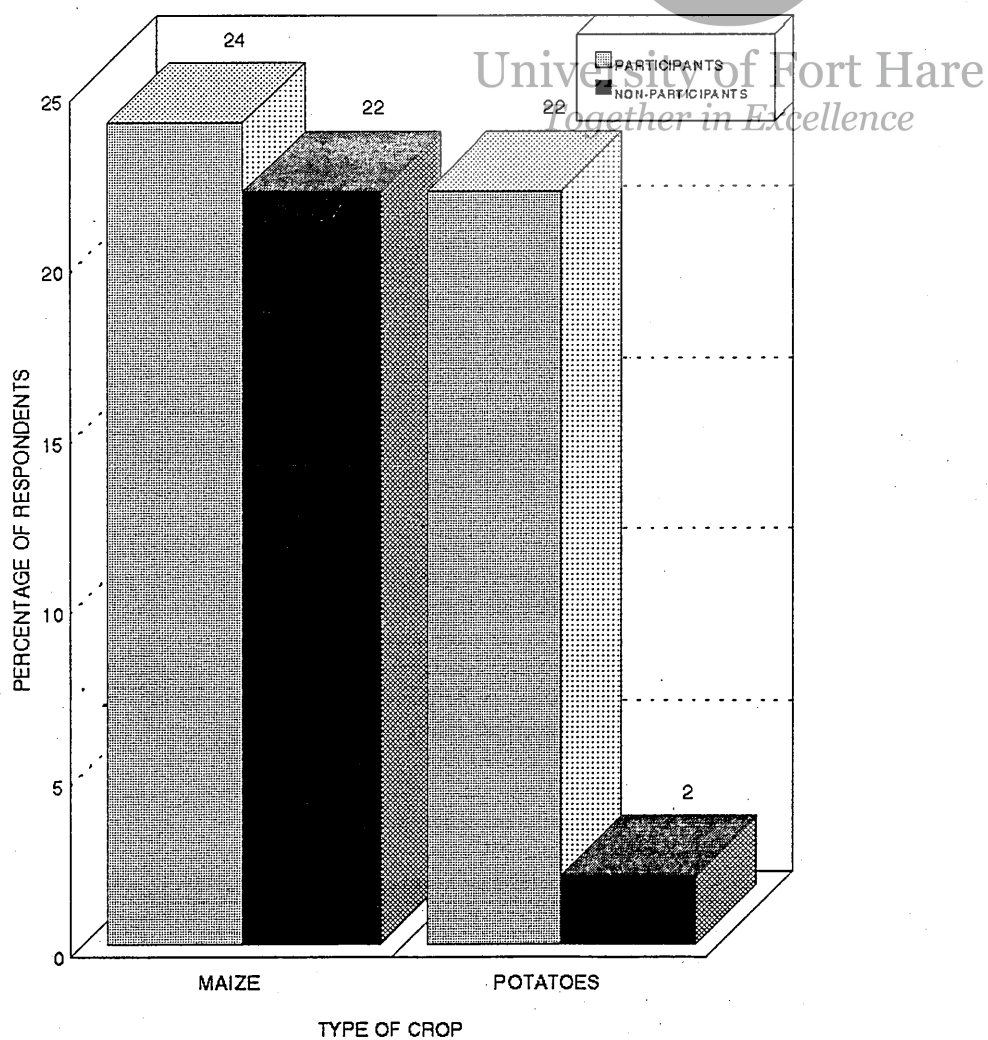


FIGURE 13: SALE OF CROPS

The data indicates that over the three years covered by the study, 44% of participants and 26% of non-participants sold some produce. Twenty four percent of participants and 22% of non-participants sold maize. The mean income received over the three year period was R73.70 for all participants and R24.60 for all non-participants. The other crop that was sold was potatoes. This was sold by 20% of participants and only 2% of non-participants. The mean income received for this crop was R24.30 for participants and R2.40 for non-participants.

**TABLE 13: CHI-SQUARE TEST FOR SALE OF CROPS**

		SOLD	NOT SOLD	TOTAL
PARTICIPANTS	$f_o$	22	28	50
	$f_e$	17.5	32.5	
NON-PARTICIPANTS	$f_o$	13	37	50
	$f_e$	17.5	32.5	
TOTAL		35	65	100

$$\chi^2 = 3.6$$

$$df=1$$

Table indicates that the calculated  $X^2$  value for sale of crops is 3.6. This is less than the critical  $X^2$  value of 3.84 at 5% level of significance. The null hypothesis is accepted meaning that there was no significant difference between participants and non-participants with regard to the sale of crops.



#### 5.3.4 Household expenditure

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The majority of households (26% participants and 32% non-participants) spent between R201 and R300 per month on household items. This is not surprising since most of the households depended on old age pension which averaged R370 per month. When the monthly expenditure on each of the expenditure items included in the study is expressed as a percentage of total expenditure, it can be observed that with the exception of food and education, participants spent relatively more on other expenditure items than non-participants.

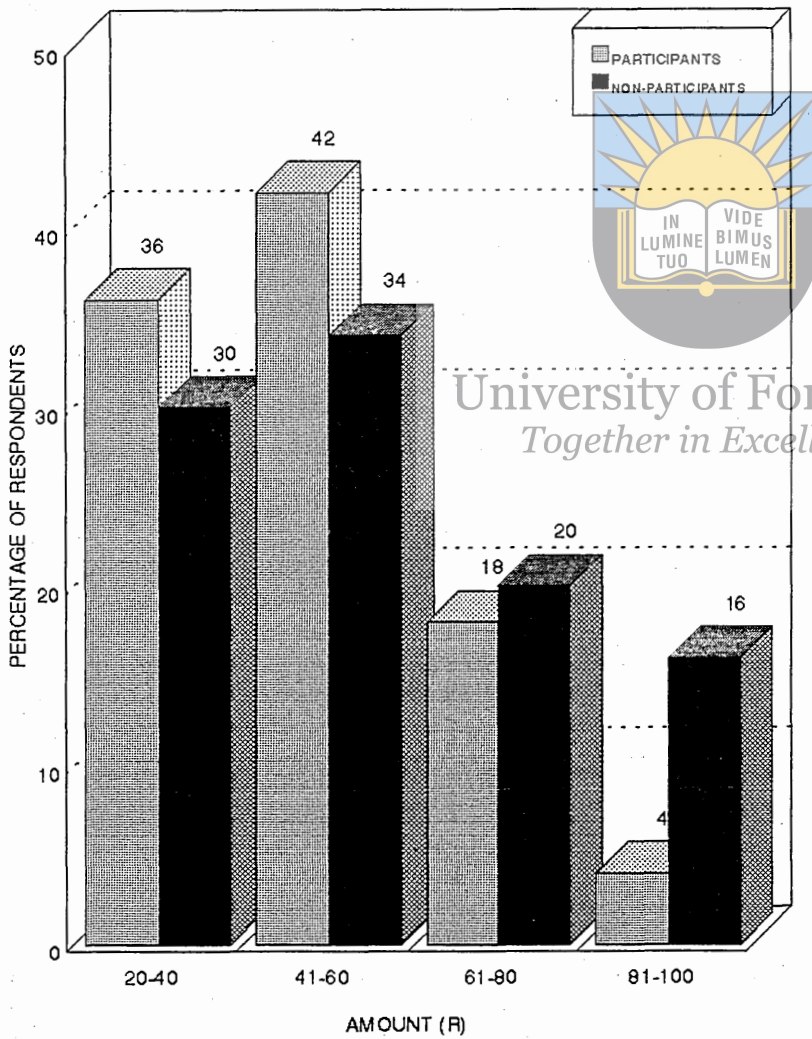
When considering the percentage of the household income spent on food, the finding is that the non participants spent 49% of their income on food as compared to 40.8% for the participants. The  $|z|$  value for total expenditure was:

$$|z| = \frac{460.5 - 402.5}{\sqrt{\frac{270560.25}{49} + \frac{185302.25}{49}}} = 0.6$$

Though the participants seem to have spent more than non participants each month, the  $|z|$  value indicates that the difference is not statistically significant since the calculated z value of 0.6 is lower than the critical z value of 1.96 at 5% level of significance.

Since maize is a staple food in the study area, it is grown mainly to fulfil family requirements. Maize sales therefore take place from any maize which exceeds family requirements. If maize produced is enough to meet family requirements no maize would be bought from other sources. The amount of money spent on purchasing maize thus gives a indication of the level of self sufficiency of the households with respect to maize.

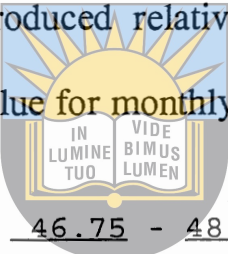
A comparison of the amount spent on maize purchased each month for participants and non-participants is shown in Figure 14.



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FIGURE 14: AMOUNT SPENT ON MAIZE PER MONTH

Figure 13 shows that participants generally spent less than non-participants on maize purchases each month. This might be an indication that they produced relatively more maize than non-participants. The  $z$  value for monthly expenditure on maize was:



$$z = \frac{46.75 - 48.1}{\sqrt{\frac{202.5}{49} + \frac{52.3}{49}}} = 0.25$$

The  $z$  value of 0.25 however shows that there was no significant difference between participants and non-participants with regard to the amount spent on maize purchases since this figure is lower than the critical  $z$  value of 1.96 at 5% level of significance. This means that participation in the FSP did not influence the amount of money spent on maize purchased (either whole or milled).

TABLE 14: MEAN MONTHLY EXPENDITURE VALUES FOR FSP AND NON FSP FARMERS

PARTICIPANTS		NON-PARTICIPANTS		/z/	Results	
Exp. Item	$\bar{x}$	s	$\bar{x}$	s		
Maize	75.6	23.1	78.1	27.5	-0.49	Accept
Food	193.9	105.7	181.3	74.5	0.68	Accept
Clothing	44.9	40.4	28.6	25.9	2.38	Reject
Education	35.2	29.5	35.4	28.5	-0.03	Accept
Transport	37.1	44.9	24.4	22.9	1.76	Accept
Durables	35.5	57.4	24.8	38.9	1.08	Accept
Savings	16.8	30.1	9.2	29.5	1.30	Accept

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When looking at each expenditure item it can be observed that the only significant difference was with regard to expenditure on clothing where the calculated /z/ value of 2.38 was more than the critical z value of 1.96 at 5% level of significance thus rejecting the null hypothesis.

### 5.3. Felt needs

The survey attempted to establish whether there were major differences in perceptions between participants and non-participants regarding developments required to improve their living conditions.

### 5.3.1. Community needs

The respondents were asked to rank the five most important needs of the community. The ranking of these needs are shown in tables 15a & b.



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TABLE 15 (a): COMMUNITY NEEDS (Expressed as ranked values) FOR THE FSP PARTICIPANTS.

PRI ORI TY	TOTAL N=50	MATHOLE N=16	MNYAMENI N=7	CATA N=10	RABULA N=12	MBEMS N=5
1	D.water (2.72)	D.Water (3.6)	Creche (2.57)	D.Water (3.2)	D.water (3.91)	Electr (3.8)
2	Creche (1.54)	Agric. (1)	Employ. (2.29)	Agric. (2.6)	Creche (1.08)	Creche (2.6)
g3	Agric. (1.20)	Roads (0.94)	Roads (1.00)	Creche (1.3)	Agric. (0.83)	Phones (0.6)
4	Roads (0.66)	Clinic (0.88)	Phones (0.86)	Roads (0.9)	Employ (0.75)	Eploy. (0.2)
5	Electr. (0.62)	Creche (0.81)	Agric. (0.71)	Employ (0.3)	Electr. (0.5)	--

TABLE 15 (b): COMMUNITY NEEDS (Expressed as ranked values) FOR THE FSP NON-PARTICIPANTS.

PRI ORI TY	TOTAL N=50	MATHOLE N=15	MNYAMENI N=22	CATA N=6	RABULA N=4	MBEMS N=3
1	D.water (5.14)	D.water (3.87)	Creche (1.6)	D.water (3.8)	D.water (3.00)	Electr. (3.00)
2	Creche (2.98)	Roads (1.33)	D.water (1.27)	Creche (2.17)	Agric. (1.75)	Creche (2.66)
3	Agric. (2.26)	Agric. (1.06)	Agric. (1.14)	Roads (1.00)	Roads (1.5)	Employ. (0.16)
4	Roads (1.56)	Clinic (0.87)	Employ. (0.95)	Agric. (0.83)	Creche (0.75)	--
5	Electr. (1.14)	Creche (0.46)	Clinic (0.86)	Employ. (0.5)	--	--

From tables 15 (a&b) it can be seen that there is no difference between the community felt needs of participants and non-participants. Domestic water, creches, agricultural inputs, roads and electricity formed the five most important needs of both groups. It is not surprising to find out that in each villages where source of domestic water is the river, this was cited as the first priority.

It is interesting to note that none of the villages considered agricultural input as the first priority. Contrary to other villages, Mbems rated electricity as the most important felt need. This might be as a result of the fact that this village is in close proximity to the main tarred road connecting King William's Town and Alice causing the felt needs picture to be similar to the amenities which would be expected as basic requirements in any planned semi-urban residential area.

### **5.3.2 Agricultural felt needs**

#### **5.3.2.1. Production requirements**

The respondents were asked to mention the most important requirements for improvement of their crop production according to their order of priority. These are shown in tables 16(a&b).

TABLE 16 (a): REQUIREMENTS TO IMPROVE CROP PRODUCTION FOR PARTICIPANTS (Expressed as a percentage of respondent replies).

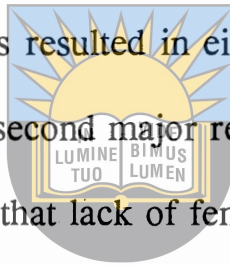
PRI ORI TY	TOTAL N=50	MATHOLE N=16	MNYAMENI N=7	CATA N=10	RABULA N=12	MBEMS N=5
1	Tractor (34)	Fencing (56)	Tractors (57)	Fencing (32)	Inputs (42)	Irriga (80)
2	Fencing (26)	Tractor (25)	inputs (29)	Tractors (30)	Tractor (42)	Tracto (20)
3	Inputs (24)	Inputs (19)	Irrigat. (14)	Inputs (28)	Irrigat (16)	-
4	Irrigat (16)	-	-	Irrigat. (10)	-	-

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TABLE 16 (b): REQUIREMENTS TO IMPROVE CROP PRODUCTION FOR THE NON-PARTICIPANTS (Expressed as a percentage of respondent replies)

PRI ORI TY	TOTAL N=50	MATHOLE N=15	MNYAMENI N=22	CATA N=6	RABULA N=4	MBEMS N=3
1	Tractor (40)	Tractor (53)	Tractors (36)	Inputs (50)	Tractor (75)	Irrig. (100)
2	Fencing (30)	Inputs (27)	Inputs (36)	Irrigat. (17)	Fencing (25)	-
3	Inputs (16)	Fencing (13)	Fencing (18)	Fencing (17)	Irrigat	-
4	Irrigat (14)	Irrigat (7)	Irrigat. (10)	Tractors (16)	-	-

Generally there was no difference between the agricultural needs of participants and non-participants. Timely availability of tractors for ploughing was cited by both groups as the major requirement. The main problem with tractors as expressed by the respondents was that they normally arrived late or were not available at all and this resulted in either delayed planting or no production at all. The second major requirement was for fencing. Respondents indicated that lack of fencing resulted in their crops being destroyed by animals.



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The mention of irrigation as one of their crop production requirements is a reflection of the drought which prevailed in the study area during the years covered by the study. This is shown by the fact that at Mbems only irrigation was cited as a crop requirement to improve production. This might be due to the fact that they were severely affected by drought which resulted in none of the non-participants in this village producing any crop during the period covered by the study.

### **5.3.2.2 Interest in undertaking other forms of production**

Twenty three participants (46%) and twenty seven non-participants (54%) showed an interest in undertaking other forms of production. Poultry production seemed to be the most desired type of production by the majority of farmers interested in other forms of production ( 57% participants and 44% non-participants).

## **5.4 Arable land and crop production**

### **5.4.1 Arable land allocation**

The arable land that farmers had access to ranged between 0.1 ha and 8 ha for participants and between 0.1 ha and 4 ha for non-participants. The mean size of land was 1.3 ha for participants and 0.9 ha for non-participants.

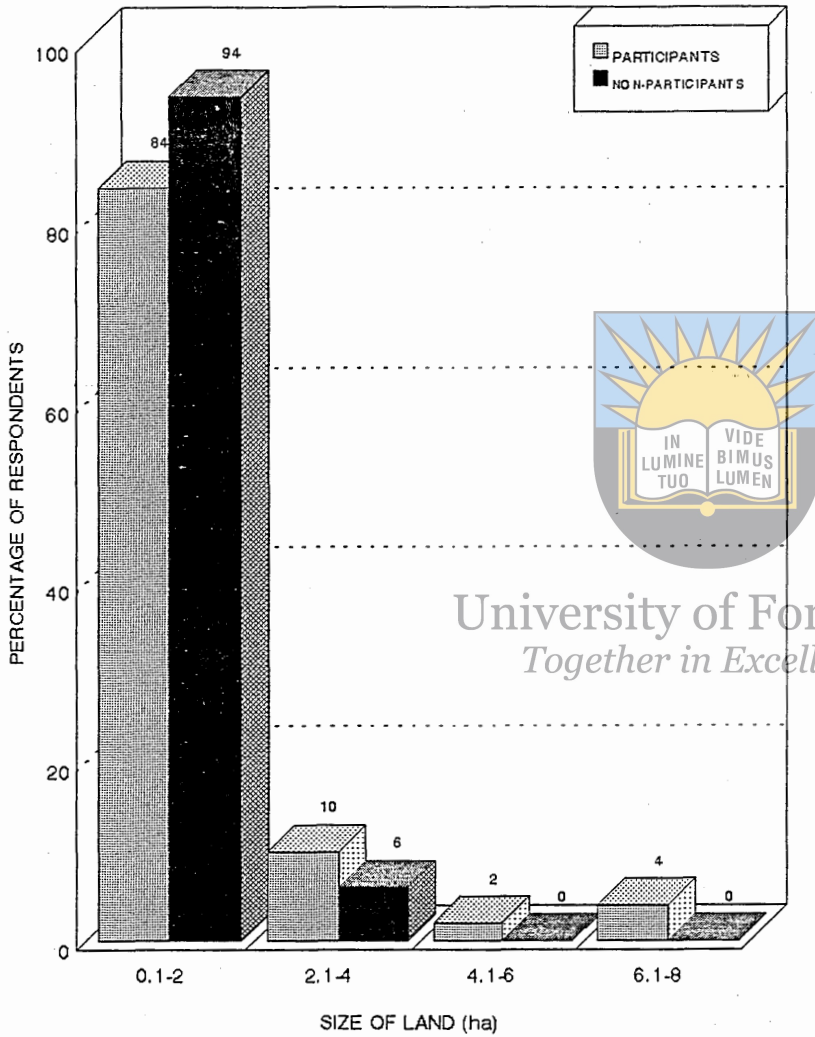


FIGURE 15: DISTRIBUTION OF LAND

Figure 15 shows that the majority of farmers (84% participants and 94% non-participants) had access to arable land ranging between 0.1 ha and 2 ha in size.

The z test for size of land owned is as follows:

$$/z/ = \frac{1.3 - 0.9}{\sqrt{\frac{8.48}{49} + \frac{0.89}{49}}} = 0.9$$

The /z/ value of 0.9 for size of land owned is less than the critical z value of 1.96 derived from the statistical tables. This means that the null hypothesis is accepted and therefore there was no significant difference between participants and non-participants with regard to size of land. Participants did not own significantly larger areas of land than non-participants.

#### **5.5.1.1 Satisfaction with the size of land**

Respondents were asked whether they were satisfied with the size of the land that they had access to. Contrary to the almost universal perception that the small areas of land constrains production in rural areas, only 14% of participants and 5% of non-participants were not satisfied with the areas of land that they had

access to. The majority (86% of participants and 95% of non-participants) were satisfied with the sizes of land that they were using.

### 5.5.2 Frequency of land use



Respondents were asked the number of years that they actually used their land during the three years covered by the study.

Figure 16 indicates that participants used their land more continuously over the three year period than non-participants.

Thirty three (66%) of participants used their land for the whole period as compared to 23 (46%) non-participants. Seventeen (34%) of non-participants had used their land for only one year out of the three years as compared to eight (16%) of participants who had used their land once in the three years covered by this study.

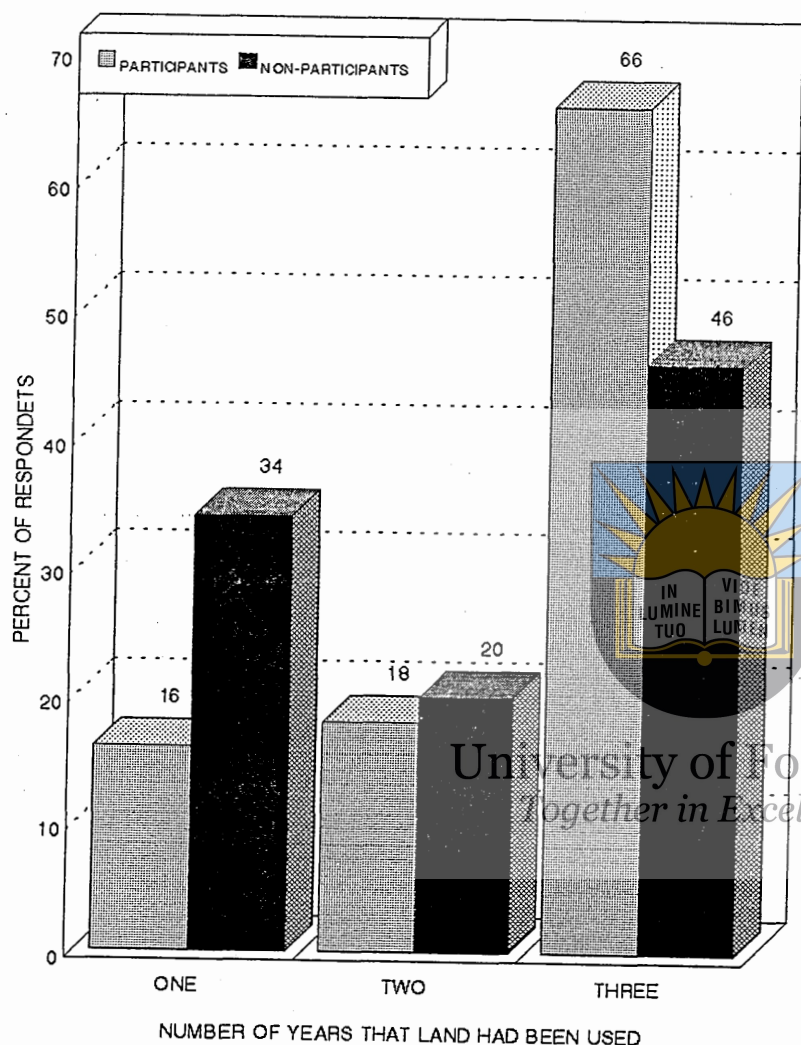


FIGURE 16: FREQUENCY OF LAND USE

TABLE 17: CHI-SQUARE TEST FOR THE FREQUENCY OF LAND USE

		One year	Two years	Three years	Total
Participants	$f_o$	8	9	33	50
	$f_e$	12.5	9.5	28	
Non participants	$f_o$	17	10	23	50
	$f_e$	12.5	9.5	28	
		25	19	56	100

$$X^2 = 5.07$$

$$df = 2$$

Though the participants have used land relatively more frequently than non-participants, the calculated  $X^2$  value of 5.07 denotes that the difference is not significant as it is lower than the critical  $X^2$  value of 5.99, meaning that the null hypothesis is accepted.

### 5.5.3 Fraction of available land used for production



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The total area of arable land which the farmers had access to for crop production purposes was 62.35 ha for participants and 46.2 ha for non-participants. The highest percentage of land used for crop production was in the first year of the Farmer Support Programme i.e 1990/91 production season. During this season participants used 64% of the total arable land at their disposal and non-participants used 45% as compared to 13% and 5% used in the 1992/93 season. This might be an indication that this was a better season in terms of rainfall than the other seasons. Figure 17 shows the percentage of land used for crop production over the years covered by this study.

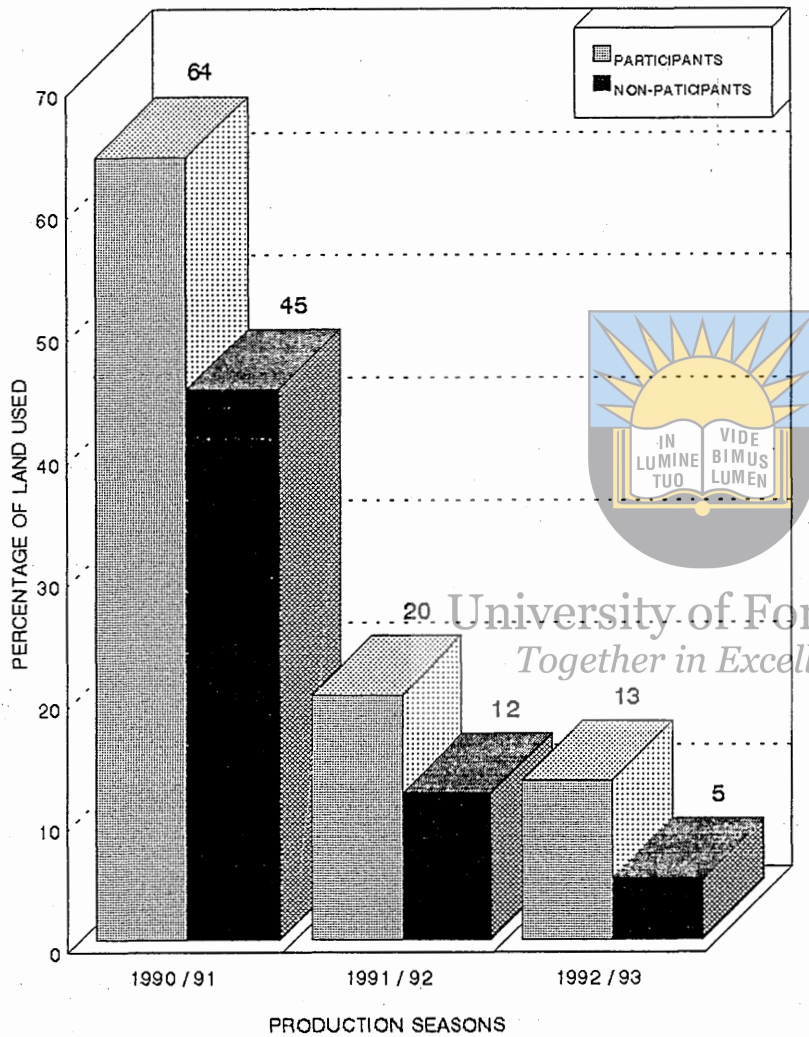



FIGURE 17: FRACTION OF LAND USED

Participants used a higher percentage of available arable land than non-participants in each of the production seasons. The use of land declined from as high as 64% for participants in the 1990/91

production season to as low as 13% in the 1992/93 production season. Table 18 below shows the /z/ tests for the fraction of land used for crop production purposes in each respective year.

Table 18: COMPARISON OF THE MEANS FOR THE FRACTION OF ARABLE LAND USED FOR PRODUCTION

n=50



SEASON	PARTICIPANTS			NON PARTICIPANT			/z/	Result
	$\bar{x}$	s	$s^2$	$\bar{x}$	s	$s^2$		
1990/91	0.8	0.9	0.8	0.4	0.5	0.3	2.67	REJECT
1991/92	0.2	1.4	1.9	0.1	0.2	0.04	0.5	ACCEPT
1992/93	0.2	0.8	0.6	0.04	0.1	0.01	1.4	ACCEPT

Table 17 shows that in the 1991/92 and 1992/93 production seasons there were no significant differences with regard to the fraction of total area of arable land used for production by participants and non-participants. This is because the /z/ values of 0.5 and 1.4 are below the critical z value of 1.96 at 5% level of significance thereby accepting the null hypothesis. It is interesting to note that the results of the /z/ test for 1990/91 show that

participation in the FSP was associated with the area of land used for crop production. The  $|z|$  value during this season was higher than the critical  $z$  value of 1.96 at 5% level of significance meaning that the null hypothesis is rejected.

#### 5.5.4 Types and variety of crops produced



The respondents were asked about the types of crops that they produced during the study period. The aim of this was to find out whether the FSP credit facility influenced the farmers to produce a greater variety of crops as compared to non-participants. The results of this question are shown in Table 19.

TABLE 19: TYPES OF CROPS PRODUCED DURING THE STUDY PERIOD

TYPE OF CROP	PARTICIPANTS		NON-PARTICIPANTS	
	NUMBER	%	NUMBER	%
MAIZE	50	100	50	100
BEANS	11	22	12	24
PUMPKINS	9	18	4	8
SORGHUM	1	2	0	0
POTATOES	16	32	1	2

All the farmers had produced maize during the three year period. Beans were the second most produced crop with an average of 23% of farmers having produced this crop. Participants produced five different types of crops as compared to four produced by non-participants. There was a big difference with regard to the production of potatoes. Only 2% of non-participants produced this crop as compared to 32% of participants. This might be due to the fact that potatoes require high input costs thus making it difficult for the farmers to plant this crop without outside financial assistance.

The majority of farmers (76% non-participants and 52% participants) produced only one crop type each. Forty eight percent of participants had produced more than one crop type each as compared to 24% of non-participants. The number of different crop types produced by each farmer over the three year period is

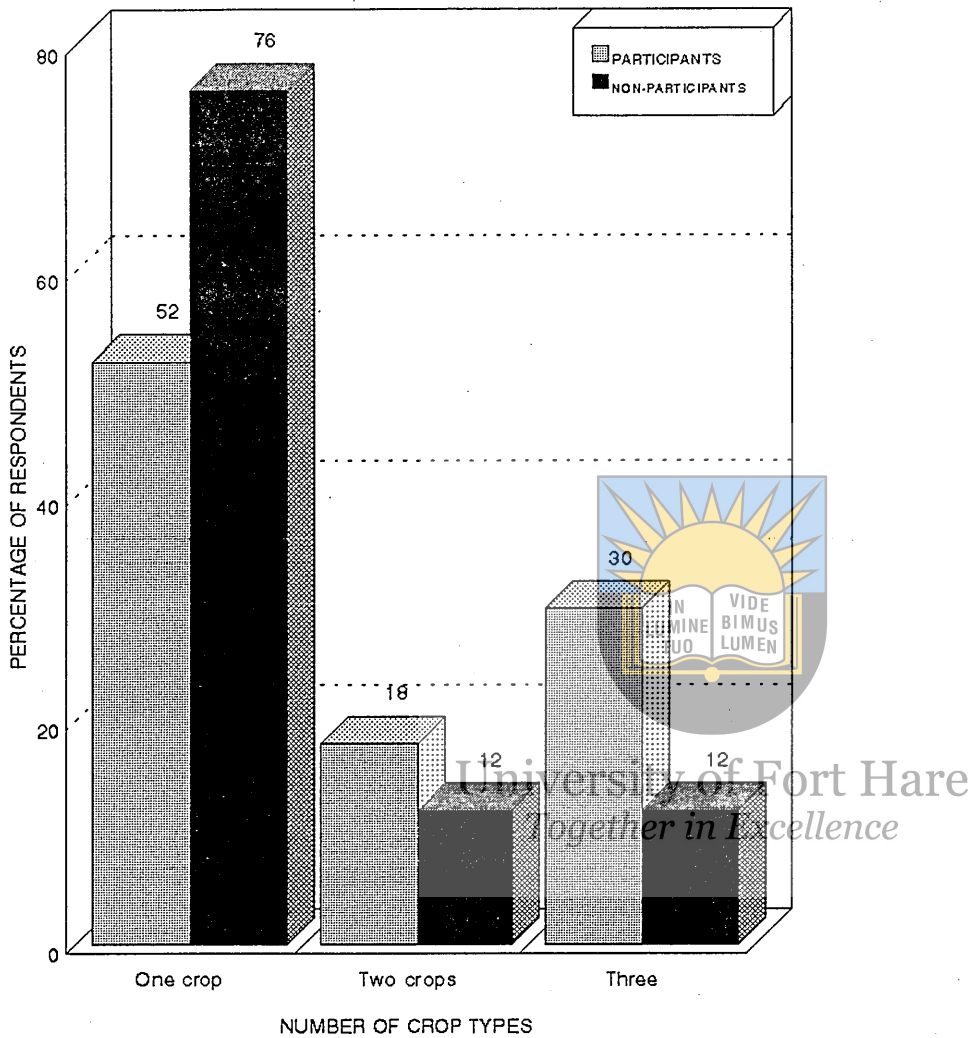


FIGURE 18: NUMBER OF CROPS PRODUCED

TABLE 20: .CHI-SQUARE TEST FOR NUMBER OF DIFFERENT CROPTYPES PRODUCED BY EACH FARMER.

		One crop	two crops	Three crops	Total
PARTICIPANTS	$f_o$	26	9	15	50
	$f_e$	32	7.5	10.5	
NON-PARTICIPANTS	$f_o$	38	6	6	50
	$f_e$	32	7.5	10.5	
TOTAL		64	15	21	100

$X^2 = 6.7$

$df = 2$

It can be deduced from Table 20 that there was a significant difference between the participants and non-participants with regard to the number of types of crops produced by each farmer. The reason for this is that the calculated  $X^2$  value of 6.7 is higher than the critical  $X^2$  value of 5.99 at 5% level of significance meaning that the null hypothesis is rejected. This implies that participants planted significantly more types of crops than non-participants. This shows that participation in the FSP did influence the variety of crops produced. However as indicated above, this was brought about entirely by the difference with regard to potatoes.

It is however interesting to note that the highest number of different crops produced per farmer was during the 1990/91 production season and the lowest during the 1992/93 production season.

### 5.5.5 Crop production practices and types of inputs used

The methods by which production practices were done as well as the type of inputs used was investigated to determine to what extent the farmers were using modern or traditional methods of crop production. Since all the farmers had produced maize, this crop was used to investigate these aspects.



The elements of production practices that were used in the analysis included the method of soil preparation and means of planting and weed control used. The respondents were also asked about the type of seed and fertilization that they used as well as whether they used chemicals for pest control or not. The results of this investigation are shown in Tables 21 to 26.

TABLE 21: CHI-SQUARE TEST FOR SOIL PREPARATION

		OXEN	TRACTOR	TOTAL
PARTICIPANTS	$f_o$	6	44	50
	$f_e$	11	39	
NON-PARTICIPANTS	$f_o$	16	34	50
	$f_e$	11	39	
TOTAL		22	78	100

$$X^2 = 5.8$$

$$df=1$$

The calculated  $X^2$  value of 5.8 for soil preparation is higher than the critical  $X^2$  value of 3.84 at 5% level of significance. This means that the null hypothesis is rejected. FSP participants tended to use mechanical soil preparation more than non-participants did.

TABLE 22: CHI-SQUARE TEST FOR METHOD OF PLANTING USED

		PLANTER	HAND	TOTAL
PARTICIPANTS	$f_o$	20	30	50
	$f_e$	16	34	
NON-PARTICIPANTS	$f_o$	12	38	50
	$f_e$	16	34	
TOTAL		32	68	100

$$X^2 = 2.47$$

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The calculated  $X^2$  value of 2.47 for method of planting is lower than the critical  $X^2$  value of 3.84 at 5% level of significance. The null hypothesis is therefore accepted meaning that participation in the FSP was not associated with method of planting used by farmers.

TABLE 23: CHI-SQUARE TEST FOR TYPE OF SEED USED

		CERTIFIED	HOME GROWN	TOTAL
PARTICIPANTS	$f_o$	36	14	50
	$f_e$	23.5	26.5	
NON-PARTICIPANTS	$f_o$	11	39	50
	$f_e$	23.5	26.5	
TOTAL		47	53	100

$$X^2 = 25.1$$

$$df = 1$$

The  $X^2$  value of 25.1 for type of seed used is far higher than the critical value of  $X^2$  of 3.84 at 5% level of significance. This rejects the null hypothesis and therefore means that more participants in the FSP used certified maize seed than did non-participants.



TABLE 24: CHI-SQUARE TEST FOR METHOD OF WEED CONTROL

		HAND HOE	CHEMICALS	TOTAL
PARTICIPANTS	$f_o$	39	11	50
	$f_e$	41.5	8.5	
NON-PARTICIPANTS	$f_o$	44	6	50
	$f_e$	41.5	8.5	
TOTAL		83	17	100

$$X^2 = 1.8$$

$$df = 1$$

The  $X^2$  value of 1.8 for method of weed control is lower than the critical  $X^2$  value of 3.84 derived from the statistical tables. This means that there was no significant difference between participants and non-participants with regard to the method of weed control used and thus the null hypothesis is accepted.

TABLE 25 : CHI-SQUARE TEST FOR FERTILIZATION

		ARTIFICI AL FERT.	MANURE	NONE	TOTAL
PARTICIPANTS	$f_o$	18	17	15	50
	$f_e$	16	17.5	16.5	
NON-PARTICIPANT	$f_o$	14	18	18	50
	$f_e$	16	17.5	16.5	
TOTAL		32	35	33	100

$$X^2 = 0.8$$

$$df = 2$$

The calculated  $X^2$  value of 0.8 for fertilization is lower than the critical  $X^2$  value of 5.99 derived from statistical tables. This means that the null hypothesis is accepted. Participation in the FSP did not have an influence on the type of fertilizer used.

TABLE 26 : CHI-SQUARE TEST FOR USE CHEMICALS FOR PEST CONTROL

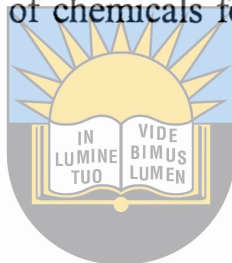
		CHEMICALS	NONE	TOTAL
PARTICIPANTS	$f_o$	17	33	50
	$f_e$	12.5	37.5	
NON-PARTICIPANTS	$f_o$	8	42	50
	$f_e$	12.5	37.5	
TOTAL		25	75	100

$$X^2 = 4.32$$

$$df = 1$$

The calculated  $X^2$  value of 4.32 for pest control is higher than the critical  $X^2$  value of 3.84 at 5% level of significance. The null hypothesis is therefore rejected meaning that participation in the FSP influenced the use of chemicals for pest control.

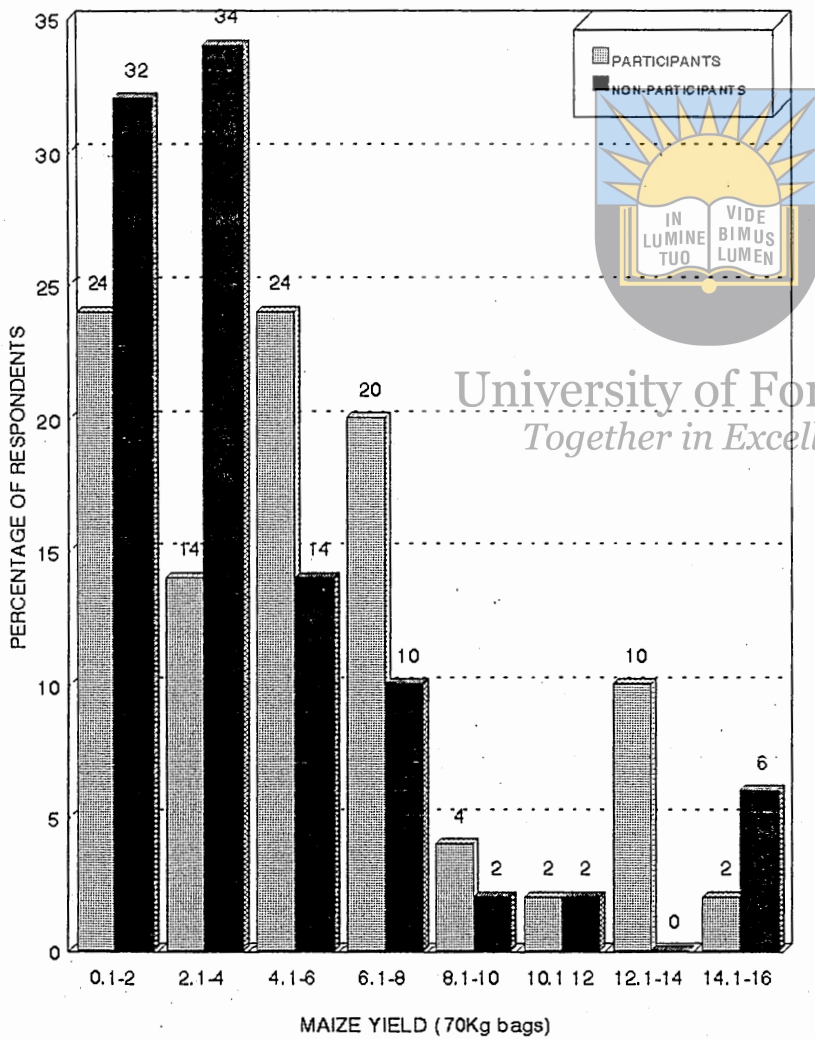
#### 5.5.6 Crop yields



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Since maize was the only crop that was produced by all the farmers used in the study, maize yields achieved were used to compare the difference which existed between participants and non-participants in the FSP. The average maize yield produced ranged between 0.07 t/ha (one 70kg bag) to 1.1 t/ha (sixteen 70kg bags). The highest number of nonparticipants (66%) were concentrated in the 1 - 4 bags/ha yield level as compared to 38% of participants who achieved similar yield levels.

Participants had a relatively higher mean (5.37 bags/ha) of maize yield as compared to 4.03 bags/ha for non-participants.



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FIGURE 19: AVERAGE MAIZE YIELD (1990/91-1992/93)

The /z/ value for maize yield was as follows :

$$/z/ = \frac{5.37 - 4.03}{\sqrt{\frac{14.44}{49} + \frac{12.25}{49}}} = 1.8$$

The /z/ value of 1.8 is lower than the critical z value of 1.96 at 5% level of significance. The null hypothesis is therefore accepted meaning that there was no significant difference with regard to maize yields between participants and non-participants.



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Almost all the farmers felt that the maize yield that they achieved was less than what they expected. Drought was mentioned as the major problem which led to this state of affairs. This concern was quite apparent when looking at the yields achieved in the individual seasons under study. The 1990/91 season was the best of the three seasons in terms of rainfall. The average yields achieved were also higher than all the others. The mean yield for the 1990/91 season was 9.34 (70kg) bags per hectare for participants and 6.74 (70kg) bags per hectare for non-participants.

## 5.6 Attitudes, perceptions and use of the FSP

Both participants and non-participants were asked questions to determine their attitudes and perceptions of the FSP. The majority of these questions referred to participants since they were the ones who had received assistance from the FSP and were therefore in a better position to assess it.



### 5.6.1 Non-participants

Non-participants were questioned as to whether they knew about the FSP, the source of knowledge, as well as the reasons for not using the finance provided in terms of the FSP.

#### 5.6.1.1 Knowledge of the FSP and reasons for not participating

TABLE 27: KNOWLEDGE ABOUT EXISTENCE OF FSP n =50

RESPONSE	NUMBER	PERCENTAGE
KNOW	37	74
DO NOT KNOW	13	26
TOTAL	50	100

Table 27 shows that the majority (74%) of non-participants did know of the existence of the FSP though they did not participate

in the programme. Cata and Mbems villages had the highest percentage of farmers (100%) who knew about the existence of the programme followed by Mnyameni (91%). Amatola Basin villages had the lowest percentage (40%) of non-participants who knew about the programme.

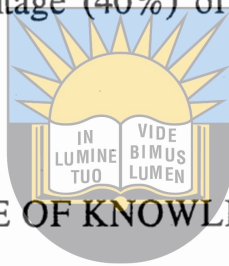


TABLE 28 : SOURCE OF KNOWLEDGE ABOUT FSP n = 37

SOURCE OF KNOWLEDGE	NUMBER	PERCENT
EXTENSION OFFICER	14	38
FRIEND	22	59
HEADMEN	1	3
TOTAL	37	100

Most of the non-participants had heard from friends about the existence of the FSP. Only 14 (38%) had received the information from the Extension Officers.

TABLE 29: UNDERSTANDING OF WHAT FSP IS ABOUT  
n = 37

	NUMBER	PERCENT
PROVIDE TRACTORS	5	13.5
PROVIDES FERTILIZER	18	48.6
DO NOT KNOW	14	37.9
TOTAL	37	100

From the responses in table 27 it can be seen that none of the non-participants had a clear understanding of what the FSP is about. The majority of them thought that it provides people with fertilizer. This coupled with the fact that most of these farmers received information people other than Extension Officers, shows a lack of proper extension service in the study area.

TABLE 30 : REASONS FOR NOT PARTICIPATING IN THE PROGRAMME n =37

REASONS	NUMBER	PERCENT
LACK INFORMATION	22	59.5
AFRAID OF DEBT	9	24.3
SICK OR VERY OLD	6	16.2
TOTAL	37	100.0

The majority (59.5%) of non-participants attributed non-participation to a lack of information regarding the programme. This is a reflection of a failure in the extension service as far as mobilisation of the farmers is concerned. The fact that 24% of the non-participants mentioned fear of debt as a reason for not participating might be due to the realisation that they would not be able to produce sufficient crops to cover their debt commitments as well as have something left for their own use.

### 5.6.2 Perceptions and attitudes of Participants towards FSP

#### 5.6.2.1 Understanding of the FSP

**TABLE 31: SOURCE OF KNOWLEDGE OF FSP BY PARTICIPANTS  $n = 50$**

SOURCE	NUMBER	PERCENT
EXTENSION OFFICER	37	74
FRIEND	8	16
HEADMAN	5	10
TOTAL	50	100

From Table 31 it is clear that the participants had a better contact with the Extension Officers than non-participants. Seventy four percent of participants received the information about FSP from Extension Officers as compared to only 38% of non-participants

This clearly shows that contact with extension had a big influence on participation in the FSP.

TABLE 32 : UNDERSTANDING OF THE FSP BY PARTICIPANTS n = 50

HOW IT IS UNDERSTOOD	NUMBER	PERCENT
PROVIDE TRACTORS	3	6
CREDIT AND EXTENSION FOR CROP PRODUCTION	34	68
DO NOT KNOW	13	26
TOTAL	50	100

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The majority (68) of participants had a fairly good idea of what the FSP was about. Most of these had received the information about the FSP from the Extension Officers. The big difference between participants and non-participants in understanding the purpose of the FSP, indicates that a proper knowledge of the FSP did (to an extent) have an influence on participation in the programme.

### 5.6.3 Use of the FSP credit facility provided by the FSP

The participants were asked questions to find out whether they had used the credit facility throughout the three year period, the

problems encountered, the amount used as well as the repayment of the credit facility they were granted.

### 5.6.3.1 Continuous use of credit

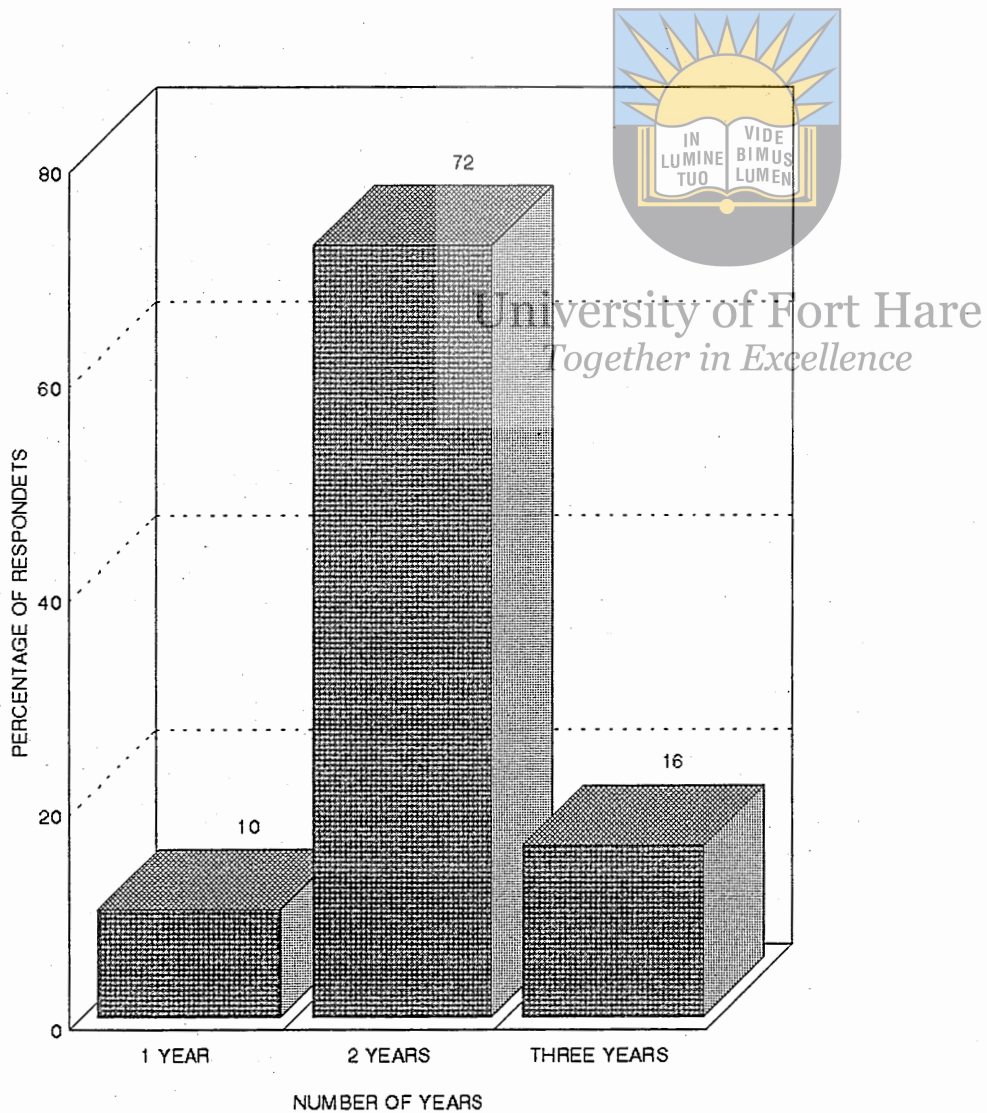


FIGURE 20: FREQUENCY OF CREDIT USE

Figure 20 shows that only 16% of participants had used the FSP credit facility continuously during the three years of its implementation. The majority (72%) had used it for two years and 10% had only used it only once. The reasons put forward for not utilising the credit facility continuously can be seen in Table 33.

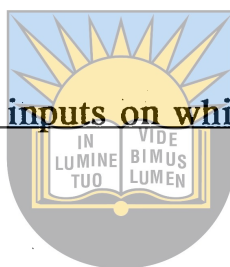
TABLE 33: REASONS FOR NOT UTILISING CREDIT CONTINUOUSLY n=42

REASONS FOR NON CONTINUOUS USE	NUMBER	PERCENT
DROUGHT	6	14.3
DIFFICULTY IN GETTING INPUTS IN TIME	5	11.9
DIFFICULT TO GET TRACTORS	1	2.4
THOUGHT THAT FSP HAD STOPPED	21	50.0
HAD PROBLEMS WITH REPAYMENTS	9	21.4
TOTAL	42	100.0

It can be seen from Table 33 that half of the participants who did not use credit facility throughout thought that the programme had stopped. The majority of these farmers fall into the group of those

who had used credit for two years. This is a reflection of the lack of follow up by the implementing agencies, especially extension services. The second most important reason mentioned was the difficulty in fulfilling repayments by farmers to the Ciskeian Agricultural Bank.

#### 5.6.3.2 Breakdown of inputs on which credit was used



The credit facility was used to hire tractors for ploughing as well as for the purchase of inputs, mostly consisting of seed and fertilizer. The breakdown of the percentage of farmers as per type of input on which credit was used is shown in Figure 20.

Figure 21 shows that fertilizer was the input on which credit was most frequently used. Forty seven (94%) of the participants used some of the credit to buy fertilizer. This was followed by the purchase of seed (58%) and tractor services (38%). It is interesting to note that none of the credit was used on purchasing chemicals for pest and disease control.

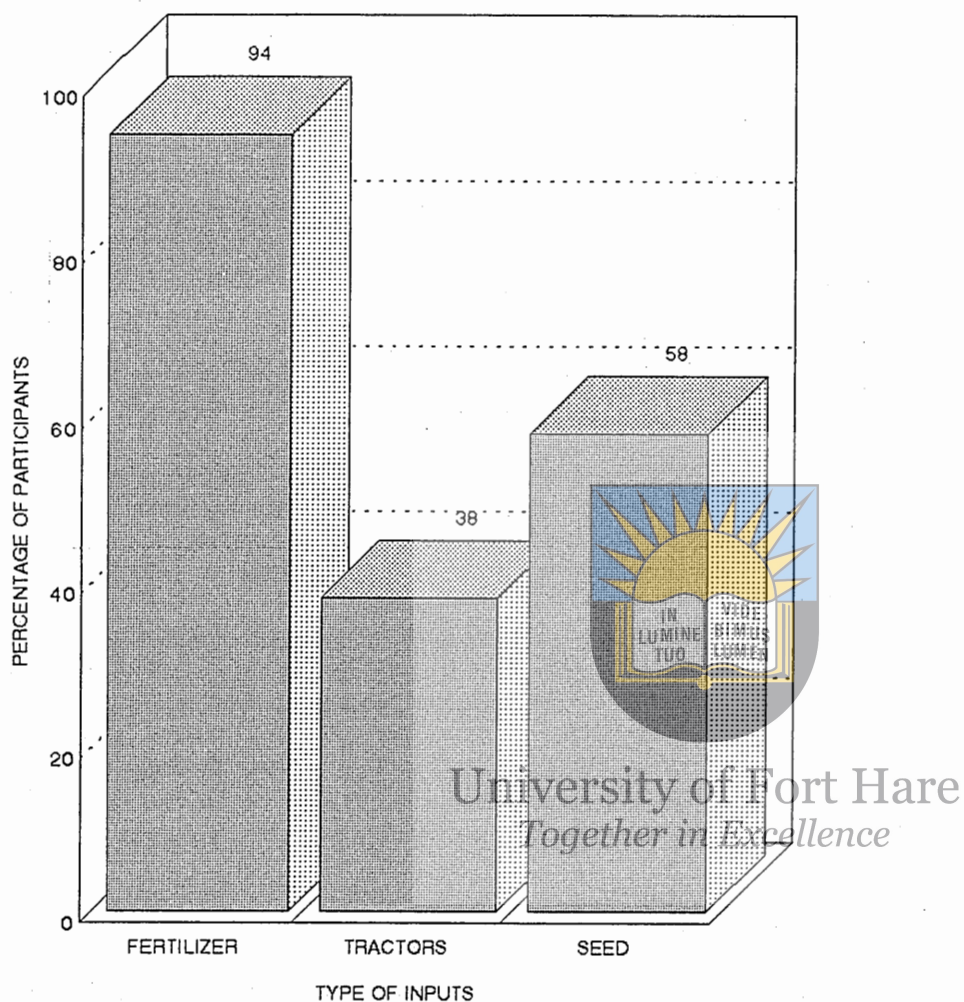


FIGURE 21: INPUTS ON WHICH CREDIT WAS USED

TABLE 34: COMBINATION OF INPUTS PER FARMER BOUGHT THROUGH FSP CREDIT

INPUT COMBINATIONS	NUMBER	PERCENT
FERTILIZER ONLY	13	26
FERTILIZER AND TRACTOR	8	16
FERTILIZER AND SEED	15	30
FERTILIZER, SEED AND TRACTOR	11	22
SEED ONLY	3	6
TOTAL	50	100

The highest number (30%) of participants made use of credit to finance a combination of fertilizer and seed. This was followed by those who used credit on fertilizer only (26%) and those who used credit for a combination of fertilizer, seed and tractor services (22%). Six percent had used the credit facility to purchase seed only.

### 5.6.3.3 Amounts of FSP credit facility used

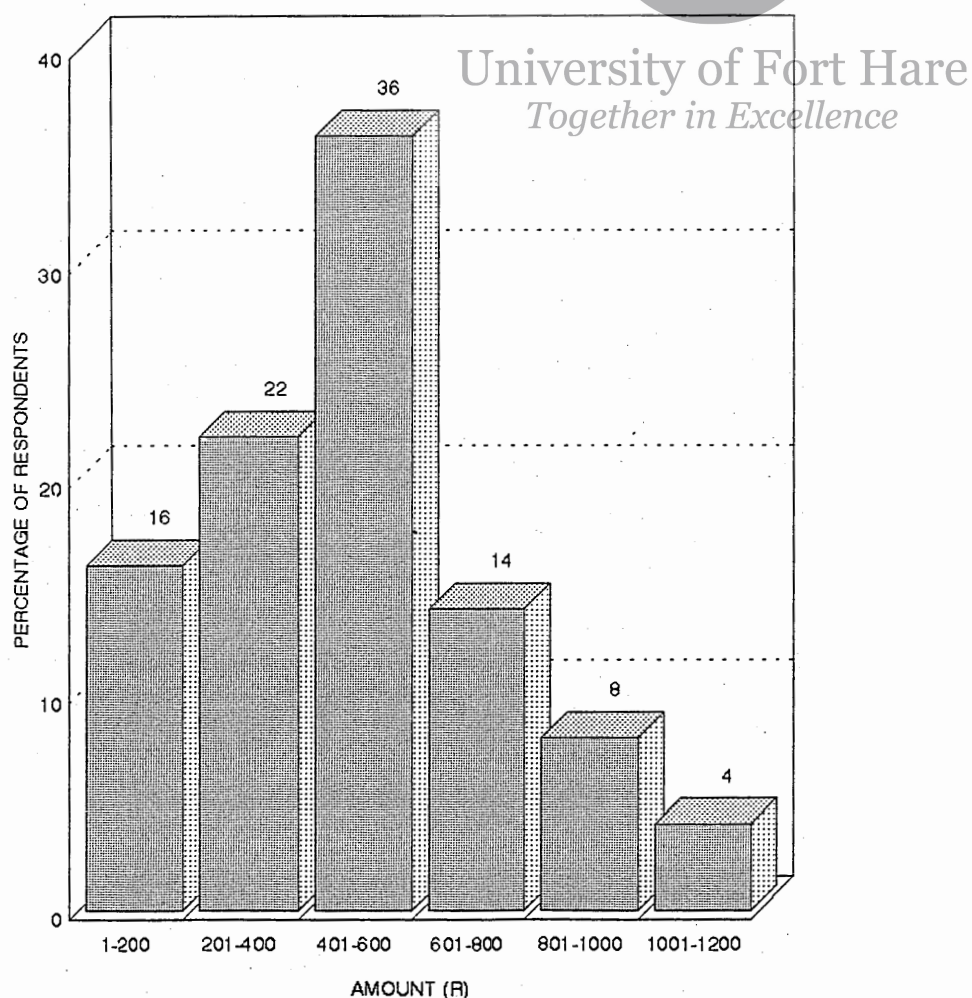


FIGURE 22: CREDIT USED FOR CROP PRODUCTION

The amount of FSP credit used by participants ranged from R65 to R1 200 over the three years that the project was implemented. The majority of participants (32%) had used amounts ranging between R400 and R599. The mean amount used over the three year period was about R600. This shows an average of about R200 per farmer per year.

#### 5.6.3.4 Repayment of the credit facility and reasons for default

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 TABLE 35: REPAYMENT POSITION OF THE CREDIT FACILITY  
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REPAYMENT	NUMBER	PERCENT
PAID IN FULL	15	30
PAID PARTLY	5	10
DID NOT REPAY	30	60
TOTAL	50	100

Table 35 shows that only 30% of participants paid back the amount borrowed from the FSP credit facility in full. Another 10% made part payments of the amounts and, 60% did not pay at all. This shows that the overall default rate of the credit facility was 70%.

TABLE 36: REASONS FOR DEFAULT n = 35

REASONS	NUMBER	PERCENT
Did not produce enough due to drought	6	17.1
Thought it was a government grant	26	74.3
Interest rates charged were high	3	8.6
Total	35	100.0

The highest percentage of the farmers who defaulted (74.3%) mentioned that they did so because they were under the impression that the FSP credit was a government grant, and therefore they were not liable to repay it. All the farmers who had this reason belong to the group which did not repay at all. This reason might be an indication of the lack of clarity given to the farmers during the inception of the FSP. The occurrence of drought was mentioned as the reason for non-payment by a further 17.1% of the defaulting farmers. They alleged that due to the drought they could not produce enough to sell so as to realize income that they would use for repayment. Only a minority of these farmers (8.6%) said they could not pay back the loaned money due to interest rates.

**5.6.4 Membership of Farmers associations**

Both the participants and non-participants were asked whether they belonged to a Farmers Association or any farmer group. This was asked to determine whether there were any linkages between participation in the FSP and the membership to a farmer grouping.

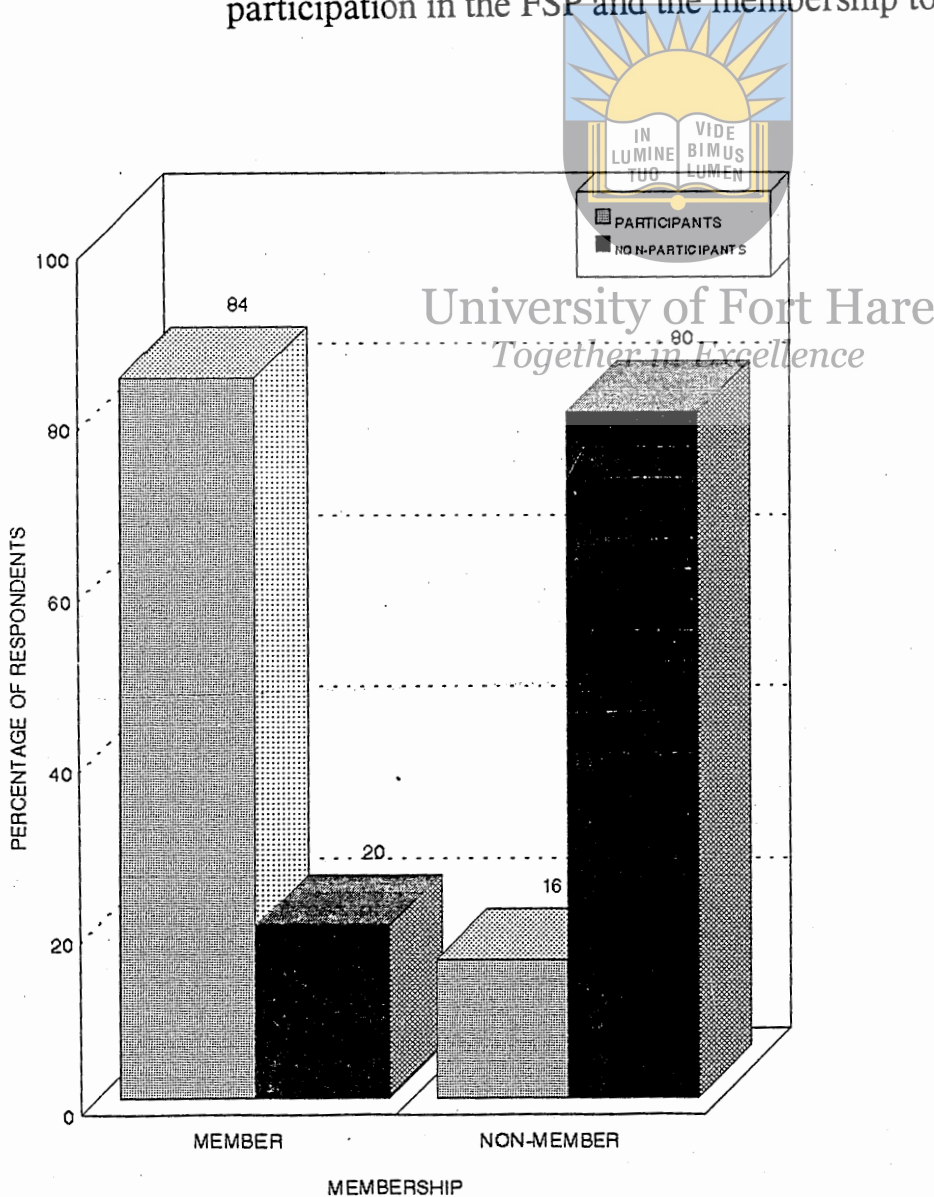


FIGURE 23 MEMBERSHIP OF FARMER'S ASSOCIATION

Figure 22 clearly shows that the majority of participants (84%) belonged to a Farmer's Association as compared to only eight (16%) of non-participants. Only 20% of participants did not belong to a Farmer's Association as compared to 80% of non-participants. This big difference is an indication that membership to a farmer group did have some kind of influence on the participation of farmers to the FSP. Table 37 attempts to determine whether this influence was significant or not. *Excellence*

TABLE 37: CHI-SQUARE TEST FOR MEMBERSHIP OF FARMER'S ASSOCIATION

		MEMBER	NON MEMBER	TOTAL
PARTICIPANTS	$f_o$	42	8	50
	$f_e$	26	24	
NON-PARTICIPANTS	$f_o$	10	40	50
	$f_e$	26	24	
TOTAL		52	48	100

$$X^2 = 41$$

$$df = 1$$

The calculated  $X^2$  value of 41 is far greater than the critical  $X^2$  value of 3.84 derived from the statistical tables. This means that the null hypothesis is rejected thus there is a significant difference

between participants and non-participants with regard to membership of Farmer's Associations. The implication of this finding is that being a member of Farmer's Association did influence participation into the Farmer Support Programme.



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## CHAPTER 5

DATA ANALYSIS AND INTERPRETATION5.1 PERSONAL FACTORS5.1.1. Sex of heads of households

The findings of the survey supports Bembridge's (1986) findings that the heads of households who are involved in agriculture in rural areas are predominantly women.

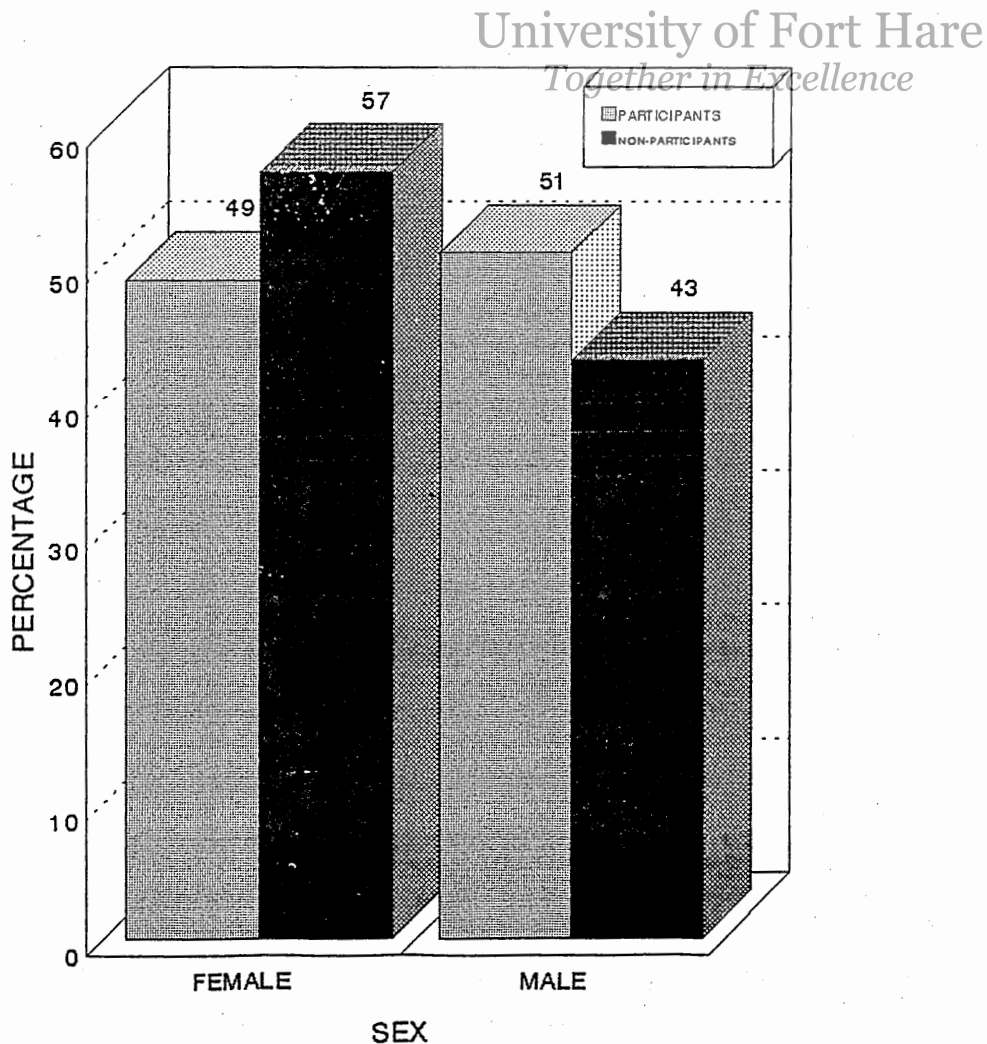
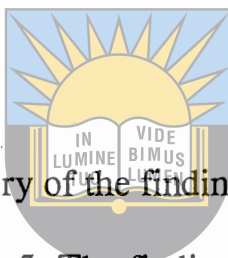


FIGURE 1: SEX OF HEADS OF HOUSEHOLDS

## CHAPTER 6

### FINDINGS AND CONCLUSIONS

#### 6.1. Findings



This section provides a summary of the findings made from observations during data analysis in Chapter 5. The findings are further interpreted to give a better understanding of the issues being discussed.

#### 6.1.1 Personal and Socio-economic aspects

##### 6.1.1.1 Personal aspects

TABLE 38: SEX COMPOSITION, EMPLOYMENT STATUS AND SKILLS TRAINING OF PARTICIPANTS AND NON-PARTICIPANTS.

CHARACTERISTICS	df	$\chi^2$		RESULTS
SEX COMPOSITION	1	0.16	0.05	ACCEPT
EMPLOYMENT STATUS	1	1.5	0.05	ACCEPT
SKILLS TRAINING	1	0.8	0.05	ACCEPT

TABLE 39: MEAN AGE, EDUCATION LEVEL AND FAMILY SIZE

CHARACTERISTIC	FSP	NON-FSP	/z/	$\alpha$	RESULTS
AGE	61.1	63.6	-0.2	0.05	ACCEPT
EDUCATION	6.6	5.3	1.4	0.05	ACCEPT
FAMILY SIZE	4.8	5.1	-0.2	0.05	ACCEPT

The results in all the personal characteristics included in the study have accepted the null hypothesis. This means that none of the above characteristics were associated with participation in the Keiskammahoeck Farmer Support programme.

#### 6.1.1.2 Socio-economic aspects

The results on Socio-economic aspects have shown that none of the aspects considered were significantly different between participants and non-participants. There were very similar trends between participants and non-participants in respect of the sources of non-farm income. Seventy eight percent of participants and 80% of non-participants had old age pension as their first source of income. The mean income for participants per farmer per month

was R693.50 for participants and R583.50 for non-participants.

The results show that there was no significant difference between the two mean incomes.

TABLE 40: CHI-SQUARE RESULTS FOR HOUSEHOLD ASSETS

TYPE OF ASSET	df	X <sup>2</sup>	$\alpha$	RESULTS
OWNERSHIP OF RADIO	1	0.4	0.05	ACCEPT
OWNERSHIP OF T.V	1	1.2	0.05	ACCEPT
OWNERSHIP OF FRIDGES	1	0.4	0.05	ACCEPT
COOKING FACILITY	1	0.7	0.05	ACCEPT
MODERN HOUSING	2	0.2	0.05	ACCEPT
TRADITIONAL HOUSING	2	1.4	0.05	ACCEPT

There was no significant difference between the two groups with respect to the ownership of any of the household appliances considered in Table 40.

TABLE 41: HOUSEHOLD EXPENDITURE

EXPENDITURE ITEMS	FSP	NON-FSP	/z/	$\alpha$	RESULTS
MAIZE	75.6	78.1	-0.9	0.05	ACCEPT
FOOD	193.9	181.28	0.68	0.05	ACCEPT
CLOTHING	44.9	28.6	2.38	0.05	REJECT
EDUCATION	35.2	35.4	-0.03	0.05	ACCEPT
TRANSPORT	37.1	24.4	1.76	0.05	ACCEPT
DURABLES	35.5	24.8	1.08	0.05	ACCEPT
SAVINGS	16.8	9.2	1.30	0.05	ACCEPT
FARMING	36.1	18.1	1.98	0.05	REJECT

The results show it was only with regard to clothing and farming where there was significant differences with regard to monthly expenditure between participants and non-participants. The reason that participants spent more on farming than non-participants might be attributed to the fact that they used the FSP credit facility.



#### 6.1.2. Agricultural implements and income


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**TABLE 42: MEANS FOR OWNERSHIP OF AGRICULTURAL IMPLEMENTS**

IMPLEMENT	FSP	NON FSP	/z/	$\alpha$	RESULT
PLOUGHS	0.58	0.40	1.18	0.05	ACCEPT
HARROWS	0.24	0.12	1.33	0.05	ACCEPT
PLANTERS	0.24	0.08	1.87	0.05	ACCEPT
CULTIVATORS	0.36	0.12	2.42	0.05	REJECT
HOES	2.22	2.42	0.73	0.05	ACCEPT
SPADES	1.62	1.30	0.90	0.05	ACCEPT
RAKES	0.54	0.54	0.00	0.05	ACCEPT

The finding with regard to the number of agricultural implements owned per farmer was that it was only with cultivators that there


was a significant difference in ownership between the two groups. In all the other implements included in the study there was no significant difference between the two groups.



The finding with respect to the sale of crops was that only 44% of participants and 26% of non-participants had sold some crops. Although a higher number (22) of participants had sold crops, compared to only 13 of non-participants this difference was not found to be statistically significant at 5% level of significance.

The difference between participants and non-participants in respect to agricultural income was significant. The mean amount of money from the sale of crops over the three year period was R73.70 for participants and R24.60 for non-participants. This might be an indication that participants produced better quality crops than participants and were thus able to fetch better prices from their crop sales.

### 6.1.3 Felt needs assessment




Both groups of farmers had the same priorities with regard to most felt needs, both for the community and agriculture. It was interesting to find that neither the participants or non-participants had improving agriculture as their first priority in their needs. Drinking water was the first priority followed by establishment of creches, and agriculture featured in the third spot.

Participants and non-participants had also the same priority listing with regard to agricultural felt needs. Availability of tractors was the first priority followed by fencing, the provision of agricultural inputs was the third and irrigation became the last priority. The listing of the provision of tractors as the first priority symbolises the inefficiencies of the tractor contractors which were part of the Keiskammahoek FSP.

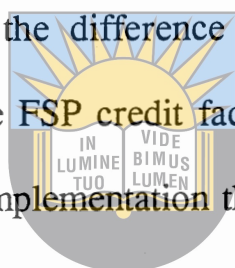
#### **6.1.4. Agricultural production**

##### **6.1.4.1. Size and use of arable land for crop production**



Analysis of the data shows that though participants had access to relatively larger areas of arable land than non-participants (mean size of 1.3ha for participants and 0.9ha for non-participants), there was no significant difference between the two groups. Participants had used land more frequently than non-participants over the three year period, with 33 (66%) having used their land continuously over the three year period, as compared to 23 (46%) of non-participants. The results however show that this difference with regard to frequency of land use was not significant at 5% level of significance.

When land used in each of the production seasons was expressed as a fraction of the total available arable land, the result showed that participants used significantly a higher fraction of land than non-participants. The null hypothesis was accepted for the last two seasons meaning that the difference was not significant. This finding implies that the FSP credit facility was most used in the first year of the FSP implementation than the other years.



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#### **6.1.4.2 Types of crops produced and production practices**

FSP participants had produced five types of crops (Maize, beans, pumpkins, sorghum and potatoes) and non-participants had produced four (Maize, beans, pumpkins and potatoes). Seventy six percent of non-participants had produced only one crop as compared to 52% of participants. The results show that there was a significant difference between participants and non-participants with regard to number of different crops produced meaning that a significant number of participants produced different crops than non-participants.

TABLE 43: PRODUCTION PRACTICES AND INPUT USE

PRACTICE/INPUT	df	X <sup>2</sup>	$\alpha$	RESULTS
SOIL PREPARATION	1	5.8	0.05	REJECT
PLANTING METHOD	1	2.47	0.05	ACCEPT
TYPE OF SEED USED	1	25.1	0.05	REJECT
WEED CONTROL	1	1.8	0.05	ACCEPT
SOIL FERTILIZATION	2	0.8	0.05	ACCEPT
DISEASE AND PEST CONTROL	1	4.32	0.05	REJECT

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The results show that significantly more participants used tractors, certified seed and chemicals for maize production as compared to non-participants. With regard to use of inorganic fertilizer, method of planting and weed control there was no significant difference between the two groups.

#### 6.1.5 Maize yields

The mean number of 70kg bags produced per hectare was slightly higher (5.37) for participants as compared to 4.03 for non-participants. The results however show that there was no

significant difference between the two groups with regard to maize yields achieved during the production seasons covered by this study. A comparison of the yields achieved in each season showed that the first season of FSP implementation was better than the rest in terms of maize yields.



#### **6.1.6 Implementation of the FSP**

##### **6.1.6.1. Aspects which influenced participation and the level of understanding of the FSP.**

The data show that only 26% of non-participants did not know about the existence of the FSP. The most important reason for not participating in the FSP was due to lack of information and clarity regarding the FSP (59%). Twenty four percent had mentioned that they did not participate because they were afraid of debt. This was due to the uncertainty on these farmers as to whether they would be able to produce enough to meet their debt commitments. It was interesting to find that friends of non-participants (59%) were the

greatest source of information about FSP, compared with only 16% of participants who had got information from friends. Seventy four percent of participants had received the information from Extension Officers as compared to 38% of participants. This means that contact with Extension Officers was an important aspect in participation in the FSP. Another interesting finding was that 84% of participants belonged to a Farmer's Association as compared to only 20% of non-participants. The difference between the two groups with regard to membership of a Farmer's Association was highly significant. This means that membership to a Farmer's Association was an important determinant of participation into the FSP.

The level of understanding of the FSP even among the participants was found to be poor. None of the farmers could give an answer which showed a clear understanding of what the FSP was about. This lack of understanding is a reflection of poor clarity given to the farmers by the implementing agencies, especially extension.

#### 6.1.6.2 Use of the credit facility

Most of the farmers (94%) had used the credit facility on fertilizers, while seed was the second highest input (58%), followed by tractors at 38%. Most of the participants had used credit between R401 and R600 during the three years of the FSP. The highest amount used was only R1200. The mean amount of R600 used for the whole three year period shows that the average used per farmer per year was only R200. These small amounts used reflect a poor usage of the FSP credit facility. It was also alarming to find out that only 16% of the participants had used the credit facility continuously with the rest using it only once (10%) and twice (72%). The main reason for not utilising it continuously was that farmers had thought that the FSP had been stopped.

The default rate for the credit facility was extremely high (70%). The most important reason put forth for not repaying the debt was that the farmers thought that the money was a government grant and thus they were not obliged to pay it back.

## 6.2 Conclusions

This section attempts to draw conclusions from the findings of this study. The conclusions relate to the research sub-problems stated. This is done by attempting to provide answers to each of the research questions asked in chapter one. Reference is made to the findings of the literature survey in chapter two as well.



### 6.2.1. Compatibility of the development objective of the Keiskammahoek FSP with the needs of the rural farmers

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**(a) *Did the farmers regard farming as a means of improving their living conditions in the study area?***

The development objective of the Keiskammahoek FSP as stated in the chapter one implies that agricultural development was viewed as an important way of improving the living conditions of the rural farmers in the study area. This was to be achieved by promoting structural change away from subsistence agriculture by the provision of comprehensive support services to the rural farmers.

The findings from the study however indicate that the development of agriculture was not regarded as a priority by the farmers in the study area. According to the rural farmer's priority listing of their felt needs agriculture appeared on the number three spot below clean drinking water, creches and roads. This finding agrees with other findings on felt needs surveys in the rural areas of South Africa.



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**(b) Was the targeting of the FSP for dryland crop production appropriate?**

The finding in the literature survey indicates that the study area has a good potential for rainfed crop production in terms of soils and climate. The frequent droughts however makes rainfed cropping very risky. The prevalence of drought is what might have been overlooked when selecting the area for the FSP on dryland crop production. Unfortunately two of the production seasons (1991/92 and 1992/93) were affected by a severe drought and this had a negative impact on crop production in the area.

### 6.2.2 Aspects which might have influenced participation in the Keiskammahoek Farmer Support Programme.



- (a) *Were there any aspect either personal, socio-economic or any other which might have resulted in farmers participating in the FSP?*

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The findings in this study indicates that none of the personal or socio-economic aspects can be regarded as having contributed to the participation in the Keiskammahoek FSP. Both participants and non-participants were very much identical with regard to the aspects considered. The conclusion which can be drawn in this regard is that both groups came from the same population.

It is however clear from the findings that the availability of extension service had a big influence on the participation in the programme. The evidence for this conclusion is firstly that 74%

of farmers who participated in the programme had received the information from the Extension Officers. Secondly the villages (Rabula, Mbems and Cata) who had extension officers assigned for the FSP had the highest percentage of farmer participation. The percentage farmer participation in these villages was 65%, 56% and 51% respectively. Out of a total of 575 farmers with access to arable land at Mnyameni and Amathole Basin villages (no extension officer for FSP) only 138 (24%) of the farmers participated in the programme. These two villages had 14% and 34% farmer participation in the FSP respectively.

The other aspect which appears to have contributed to participation in the programme was membership to Farmer's Associations. This is shown by the fact that the majority (84%) of participants belonged to a Farmer's Association as compared to only 20% of non-participants. It can be concluded that the Extension Officers

played a role in the formation of the Farmer's Associations. This is proven by the fact that the Farmer's Association were only found in villages which had Extension Officers.

- (b) *Was the non participation of the other farmers in the programme a result of the manner of implementation of the programme or their attitude towards the FSP?*

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The findings in this study indicate that out of a total of 859 farmers who had access to arable land only 298 farmers participated in the programme. This amounts to only 34.69% of the total population of farmers meaning that the majority of farmers (65.31%) did not participate in the FSP programme.

The findings from this study indicate that thirty seven (74%) of non-participating farmers have heard of the existence of the FSP. Out of this total only 38% of the farmers got the information about the existence of the FSP from Extension Officers, the rest got the

information from friends (59%) and headmen (3%). Seventy four percent of the farmers who knew of the existence of the FSP did not participate due to lack of information about the programme. These findings indicate that there were weaknesses in the dissemination of information regarding the programme to the farmers in the study area. According to the project description of the FSP programme as explained in chapter two the mobilisation of farmers as well as informing them about the programme was the responsibility of the Former Ciskei Department of Agriculture and Forestry through its Extension and Farming Development directorates. The conclusion which can be drawn from the findings regarding non participation of the majority of farmers is that this was as a result of poor implementation of the programme. The reason for this conclusion is firstly that the findings have clearly indicated that in all the other aspects (personal and socio economic) both groups were the same. Secondly from the response of the farmers there was only 24% of farmers who did not participate in the programme because of their negative perception of agricultural credit.

**6.2.3. Improvements in agricultural productivity, and food self-sufficiency which can be attributed to the FSP.**

*(a) Was the credit support service used continuously and effectively by the participating farmers?*

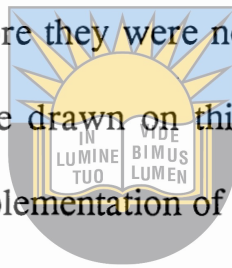


The findings in this study indicate that only 16% of the participants had used the credit facility continuously during the three years covered in this study, 10% and 72% had used the facility for one and two years respectively. The fact that 50% of the farmers who had used the facility for one and two years claim to have thought that the programme had been discontinued and that 14.3% of farmers claim to have experienced difficulties in getting production inputs and tractor services in time reflects negatively on the implementation of the programme.

The repayment of the credit facility was very poor (70% default).

All the loan amounts in default had to be written off by the CAB.

The reason put forward by the majority (74%) of the farmers who defaulted was that they thought the inputs that they received through the programme were a government grant to assist in their upliftment and therefore they were not liable for repayment. The conclusion that can be drawn on this finding is that there were problems with the implementation of the FSP in Keiskammahoek.



- (b) *Were there any improvements in crop production and agricultural income and which can be attributed to the FSP?*

(i) **Crop production**

**Use of available land:** The findings of this study indicate that the FSP had an impact in the use of arable land only during the first year of its implementation. Although the participants had used relatively more area of land in relation to the total available land, the difference was not such that this could be regarded as having been attributed by FSP participation.

**Frequency of land use:** According to the findings in this study no FSP contribution could be found with respect to the frequency of land use.



**Variety of crops produced:** The findings indicate that the FSP contributed to the variety of crops produced. Participants produced a wider variety of crops than non-participants. This can be attributed to the cash injection resulting from the FSP credit facility.

**Crop production practices:** It can be concluded that the FSP had some contribution with regard to crop production practices mainly as a result of the FSP credit facility. This is evidenced by the following aspects:

- A large number of participants had made use of mechanical operations for soil preparations as compared to non-participants who used mainly ox drawn ploughs for this operation.

- The data indicate that the majority (72%) of participants had used certified seed for maize production as compared to 78% of non-participants who used home grown seed for maize.

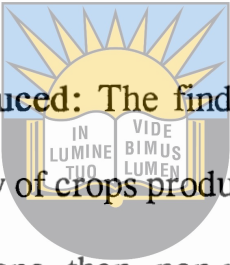
- Thirty four percent of participants had used chemicals for pest and disease control as compared to only 16 percent of non-participants.

  
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The data indicate that the FSP had no contribution to the other production practices such as fertilisation, method of planting and weed control.

**Ownership of implements:** The only significant difference between participants and non-participants was with the ownership of cultivators. Though participants owned more of all the agricultural implements than non-participants the data indicate that this difference could not be attributed to the FSP.

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**Maize yields:** The data indicate that participation in the FSP programme did not result in any significant improvement in the yields achieved for the maize crop. The average maize yield was 5.37 bags/ ha for participants and 4.03 bags/ha for non-participants.

**(ii) Agricultural income and expenditure**



**Crop production income:** The findings in this study indicate that the FSP had made some contribution towards income generated from crops. A greater percentage of participants (44%) had sold some crops as compared to 26% of non-participants. The average income from the sale of crops was R74 for participants and R24 for non-participants.

**Production expenditure:** The results in this study show that participants spent more on farming than non-participants.

Participants spent an average of R36 per month on farming related operations as compared to R18 for non-participants. The fact that the participants spent more on farming was a result of the FSP credit facility.

### (iii) Food self-sufficiency



The data indicate that the FSP did not result in a better food self sufficiency situation for the participating farmers. The amount spent of buying the staple food (Maize) was not found to be significantly different between the two groups.

### **6.2.3 An evaluation of the FSP implementation aspects**

This section attempts to make an evaluation of the key elements of the FSP implementation strategy and draw conclusions with regard to their effectiveness. In drawing these conclusions reference is made to the findings in the study.

### 6.2.3.1 The supply and funding of production inputs

It is clear from the findings in this study that there were problems with the supply of inputs to the farmers. The farmers who participated in the FSP mentioned the late arrival of production inputs as one of the major problems they experienced with the FSP. According to the FSP project description, the Ciskei Farmers Co-op was to be responsible for the supply of inputs at the right time and place. This was to be done through depots as well as farmer service centres that were to be established.

Unfortunately the Ciskei Farmer's Co-op was closed down by the former Ciskei Government in 1991. The farmer service centres and depots were never put in place either. There were no alternative structures that were put in place to take over the functions that were to be performed by these defunct structures. As a result there were no

mechanism for ensuring that the inputs were brought to the farmers in the right form and at the right time and place. It was left to the Extension Officials to find ways of doing this as the CAB was only responsible for paying suppliers of the inputs and not to ensure delivery. It is clear from the findings that the input supply system of the FSP collapsed due the above stated reasons.



Another problem related to the inputs was with funding. Part of the delay in getting inputs to the farmers was that it took time before the loans were approved by CAB. Some of the farmers indicated that the fertilizer they required at the beginning of the season arrived five months later, hence they had problems with repayments.

#### **6.2.3.2 Mechanization support services**

According to the FSP project description the mechanization services were to be provided by private contractors

composed of people within the study area who bought tractors from the discontinued government tractor services. The findings from the farmers indicated that the lack of tractor services for ploughing was one of the problems they experienced, this led to late planting or in some cases no planting at all despite the fact that the farmer had acquired some of the production inputs (seed, fertilizer and chemicals) already. The reason for this was firstly that there were very few tractor contractors that were established. These were only in the Keiskammahoek magisterial area covering mainly Cata, Mnyameni and Rabula. No tractor contractors were established through the programme to service Mbems and Amathola Basin villages. Secondly, there was no binding arrangement which was agreed with the contractors which enforced them to give priority to the farmers with FSP credit for ploughing services.

### 6.2.3.3 Marketing services

Marketing services were non-existent for the Keiskammahoek FSP. According to the project description, marketing arrangements were to be done by the Ciskei Farmer's Co-op. When it was closed down, no structure was put in place to cater for marketing. Since marketing has the effect of "pulling" production, it can be argued that lack of this facility, as well as lack of a clear marketing plan that was understood by the farmers even before production, might have led to the poor participation of farmers in the FSP as well as contributed to the poor performance of the farmers who participated in the programme. The smaller quantities that some of these farmers managed to sell were sold among their communities at very low prices making it difficult for them to repay the credit that they had used. It can also be concluded that the lack of marketing might have acted amongst other things as a disincentive for further production and involvement in the FSP by the farmers.

#### 6.2.3.4 The Extension service and farmer training

The project description of this FSP states that the provision of extension was the responsibility of the former Ciskei Department of Agriculture and Forestry. The findings in this study however indicate that some of the villages (Mnyameni and Amatole Basin) had no Extension Officers assigned to them. This happened even though 70% (575) of the total number of farmers with access to arable land were residing in these villages. Discussions with the Extension Officers which were assigned for the FSP have shown that no or very few guidelines were given to them regarding what was expected of them in the FSP. The lack of these guidelines had a negative effect on the FSP.

According to the project description, the directorate of Farming Development of the former Ciskei Department of Agriculture together with the Extension directorate were to be responsible for farmer training.

The findings in this study however indicate that only 10% of the participants had some kind of training in agriculture. All these farmers had received the training from their previous places of employment.



From the above evaluation of the key elements of the FSP implementation strategy, it can be concluded that there were major problems with the implementation of the FSP mainly as a result of the apparent collapse of the institutional arrangement as outlined in the project description of the programme.

#### **6.2.4 The impact of the FSP on farmer development**

This section attempts to draw conclusions on the overall impact of the Keiskammahoek FSP in developing the farmers in the study area. This is done by measuring the findings in this study against

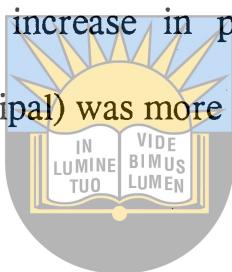
some specific agricultural development objectives which are aimed at developing South African agriculture as outlined in chapter three.

- (a) *To structure agri-support systems, promoting equitable or fair access of all farmers to opportunities in agriculture.*



The above aspects form the basis of the Keiskammahoek FSP. It is clear from the findings in this study that the FSP had very limited impact with regard to these aspects in the study area. The only support system where the FSP had managed to provide with some success was the provision of the credit facility. The success of the credit facility though cannot be determined only in terms of its accessibility but in terms of its effect towards improving the agricultural productivity as well as financial position of the farmers who have used it. The findings of this study indicate that the net returns from the use of this facility in effect had put the

farmers in a worse off position as compared to the farmers who did not use the facility. This was due to the fact that the percentage increase in production costs (including interest on principal) was more than the percentage increase in their yields.



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### *(b) To promote entrepreneurial activity in agriculture*

Apart from the provision of services to farmers, entrepreneurship in agriculture in rural areas cannot be promoted without the provision of skills training. The study indicates that the level of skills in agriculture and related aspects was very low. In spite of this however, there was no skills training provided to the farmers by the FSP contrary to what was outlined in the FSP project description.

- (c) *To reach large numbers of the rural population by supporting small-scale farming and by creating employment opportunities.*

It is clear from the findings that there was very little if any spill-over effect which can be attributed to the FSP. The fact that out of a total of 859 farmers with arable land only 298 (34.7%) participated in the FSP credit facility indicates a failure in the FSP to reach the target population itself.

Beside the tractor contractors which formed a negligible portion of the population there were no employment opportunities both in farming and off farming which can be attributed to the FSP.

- (d) *To increase the level of household food production to at least secure reasonable subsistence and nutritional levels for poor rural families.*

The findings in this study indicates that there was no significant difference in the yields achieved by both participants and non-participants in relation to maize yields

achieved during the three years covered by the study. This implies that there was no increase in food production despite the credit facility provided through the FSP. The fact that the expenditure on maize by both group of farmers was not significantly different means that the food self-sufficiency position of the participants was not better than that of the non-participants.



- (e) *To promote market related, commercialised farming by optimally utilising available resources, production factors and market opportunities*

Although the project proposal of the FSP had made some considerations with regard to the above issues, it became clear in this study that these issues were not pursued at all in the implementation of the FSP.

When measuring the performance of the Keiskammahoek FSP against the above objectives for agricultural development, an overall conclusion can be drawn that the programme did not have

any impact on farmer development in the study area. It is clear that this was mainly as a result of poor implementation of the programme rather than its planning.

### 6.3 Recommendations



This section attempts to make recommendations with regard to considerations that need to be taken in future rural and/or agricultural development initiatives in the developing areas of South Africa.

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- (a) *The importance of a clear definition of a farmer in the developing areas of South Africa.*


It is the belief of the author that the reason for failure of most of agricultural development initiatives is linked to the failure by development planners to clearly define the target population they are planning to develop. There seems to be an assumption that all the people who live in the rural areas are farmers or are interested in farming. Even in cases where an attempt is made to define the target farmers, a

variety of names (Subsistence farmers, Sub-subsistence farmers, Emerging farmers, Peasant farmers, Resource-poor farmers, Small-scale farmers, etc.) is used without any yardstick to differentiate between the different categories.

The question that needs to be asked is whether some of these rural people should be regarded as farmers at all.

It is recommended that developers must make a distinction between those rural people who live in the rural areas through preference or circumstances on the one hand (Rural dwellers) and those rural people who live there because they want to derive their livelihood from agriculture.

*(b) Developing the Farmer versus developing agriculture.*



If the purpose of agricultural development in the rural areas is to promote agricultural productivity and make the process self sustaining, then the emphasis of agricultural development initiatives should be to develop the farmer. In this context, the farmer becomes the beginning of the process as well as the end, and agriculture becomes the means to that end.

It is recommended that the first phase of any agricultural development initiatives should start with training of the targeted farmers before other support services (especially credit) are provided. Such training should continue through extension support as part of the project implementation, and a system of evaluating such

(c) *Importance of felt needs assessment as part of development planning in the Rural areas*

It is the belief of the author that one of the reasons which lead to the failure of development initiatives in the rural areas is that they fail to take cognisance of the felt needs of the people targeted for such development (Top down approach). Most case studies that have been done in rural areas have shown that physical infrastructural requirements such as roads, water, communication, health services etc. supercede any expressed requirement for agricultural production improvement. It is clear therefore that for such people, agricultural development is inconsequential. Such people fall under the category of "rural dwellers" rather than farmers as their main interest is that the rural areas should be more acceptable to live in.

**It is recommended that a felt needs assessment be the**

first step which is undertaken by development planners


so as to have a development initiative that would include  
the those needs which the rural communities regards as  
important.



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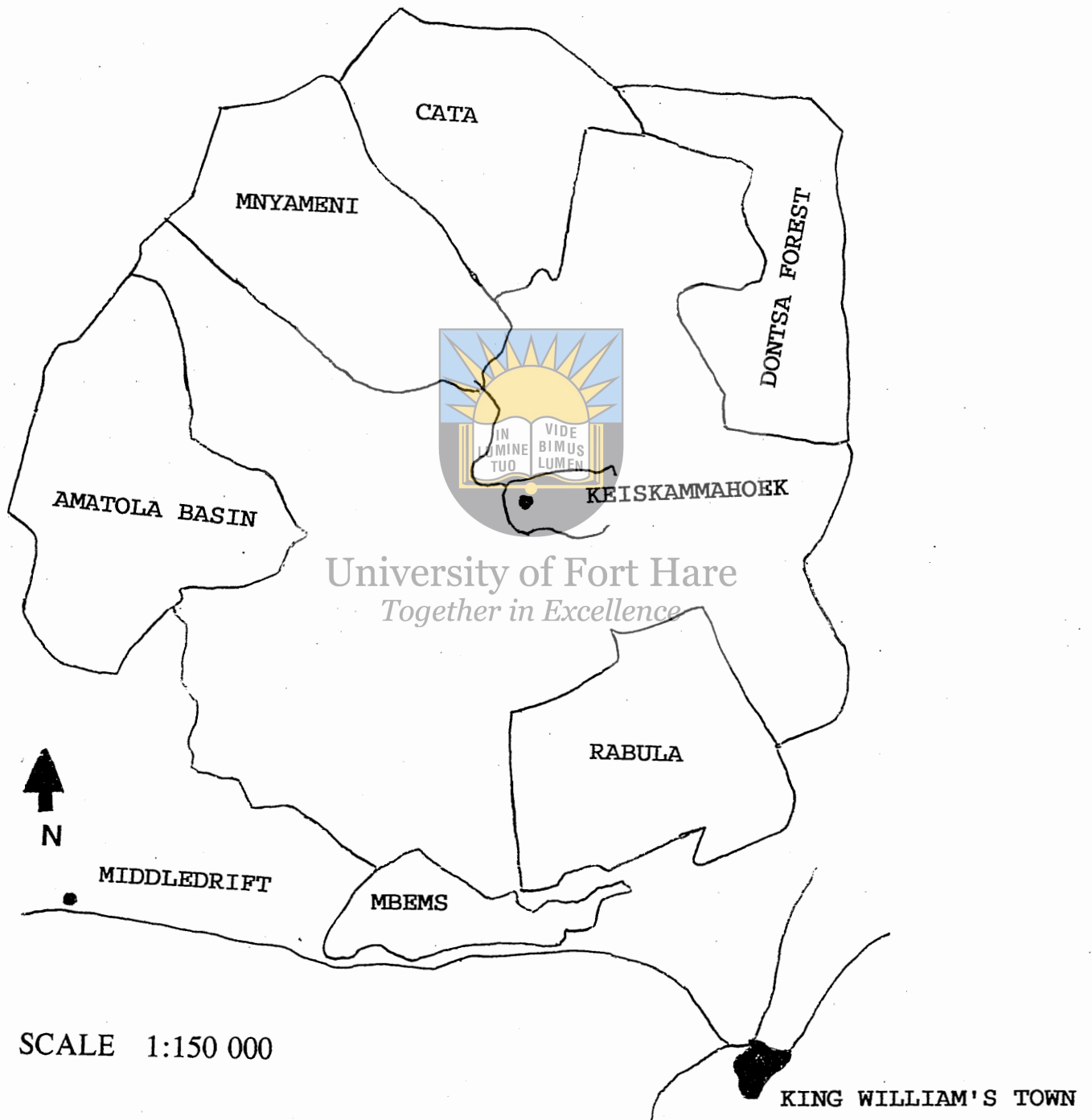


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**APPENDIX 1 : MAP OF THE STUDY AREA**



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MAP SHOWING THE LOCATION OF THE STUDY AREA (Adapted from Loxton and Venn, 1988:59)

## APPENDIX 2: RAINFALL DATA OF THE STUDY AREA



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MEAN MONTHLY AND ANNUAL RAINFALL (mm) AND DURATION OF RECORDS FOR EACH LOCATION (Austin (1988):31-40)

79/215 ; 32°35'S , 27°08'E ; 975m ; CATA (FOR) (Cata and Mnyameni)

MONTH:	J	F	M	A	M	J	J	A	S	O	N	D	YEAR
MAX	363	319	366	215	193	173	203	346	223	225	386	275	1410
90%	45	52	48	14	8	3	2	4	15	34	35	46	688
80%	62	69	66	24	14	6	4	9	24	45	52	62	757
75%	69	77	74	28	17	9	5	12	28	52	59	69	785
70%	75	84	82	32	19	11	7	15	32	57	66	76	810
60%	88	98	97	41	25	16	11	20	40	67	80	88	857
50%	102	112	113	51	32	21	16	26	49	78	95	102	903
40%	116	127	131	62	39	27	21	34	59	90	111	117	950
30%	133	146	152	75	48	34	29	43	72	104	131	134	1003
20%	155	169	179	94	60	44	39	56	88	122	156	156	1066
10%	189	205	222	123	80	60	59	77	114	151	197	190	1159
MIN	0	15	14	0	0	0	0	0	4	7	0	14	546
MEAN	111	122	126	62	39	27	23	35	59	87	108	112	915
SD	60	59	66	45	34	28	30	44	41	48	66	57	189
YEARS	85	86	87	87	87	88	86	84	83	86	84	85	72

79/316 ; 32°46'S , 27°11'E ; 792m ; RHABULA (FOR)

MONTH:	J	F	M	A	M	J	J	A	S	O	N	D	YEAR
MAX	217	223	251	247	230	136	256	452	179	221	452	258	1129
90%	20	22	27	8	5	0	0	2	11	22	20	13	478
80%	31	33	41	15	13	5	4	4	13	34	32	25	540
75%	36	38	48	20	15	8	5	6	21	38	38	31	554
70%	41	43	54	24	19	10	7	8	25	43	43	36	587
60%	50	53	67	32	25	15	12	15	33	51	51	46	630
50%	50	53	80	41	32	21	18	23	40	62	67	57	672
40%	71	75	96	51	40	27	25	33	42	74	82	70	715
30%	95	90	114	64	50	34	37	45	60	87	99	85	754
20%	102	102	139	81	64	44	52	66	75	105	123	106	824
10%	130	140	178	110	85	61	72	105	100	132	161	138	911
MIN	0	4	5	0	0	0	0	0	1	0	2	0	225
MEAN	69	74	94	52	41	27	30	37	49	72	81	69	685
SD	42	47	59	45	42	29	41	63	39	46	65	49	170
YEARS	72	69	72	72	73	73	72	73	72	71	72	71	64

79/260 ; 32°50'S , 27°09'E ; 508m ; DEBE NEX. (Mbems villages)

MONTH:	J	F	M	A	M	J	J	A	S	O	N	D	YEAR
MAX	130	190	179	144	223	78	204	95	134	132	205	211	957
90%	23	27	32	0	4	0	0	0	8	23	23	12	482
80%	34	40	45	0	9	5	0	3	15	41	34	24	539
75%	39	46	52	9	12	7	3	4	13	45	39	22	552
70%	45	52	58	13	15	10	4	4	22	50	44	34	583
60%	55	64	70	25	21	15	8	9	30	59	54	42	623
50%	65	77	82	35	27	20	15	14	38	67	64	53	661
40%	72	91	95	46	35	25	23	20	41	77	77	63	702
30%	94	108	112	59	44	33	34	29	51	98	91	75	746
20%	114	131	133	76	57	43	43	40	72	102	110	92	801
10%	145	167	157	104	72	59	76	60	109	132	140	119	881
MIN	8	8	14	0	0	0	0	0	1	0	13	0	401
MEAN	77	89	92	45	35	26	27	23	50	72	75	61	674
SD	47	51	49	42	42	22	42	24	45	40	51	44	154
YEARS	29	29	25	30	31	31	32	30	29	29	27	30	18

78/879 ; 32°39'S , 27°00'E ; 1067m ; WOLFRIDGE (FOR) (Amatola Basin)

MONTH:	J	F	M	A	M	J	J	A	S	O	N	D	YEAR
MAX	284	329	322	256	228	134	217	342	248	259	348	275	1514
90%	66	63	57	22	9	4	3	6	24	47	48	54	816
80%	81	80	76	33	16	9	7	12	35	63	65	71	893
75%	88	88	84	38	20	12	9	15	40	69	73	79	923
70%	94	95	92	43	23	14	11	18	45	76	80	86	951
60%	106	109	108	53	31	19	17	25	54	88	94	100	1003
50%	119	123	124	63	39	25	23	32	65	101	110	114	1053
40%	132	138	141	75	49	32	30	41	76	115	126	130	1104
30%	147	155	162	89	62	41	40	53	90	132	146	148	1161
20%	166	178	189	108	79	52	53	69	108	153	171	172	1231
10%	194	212	230	137	107	71	77	96	136	186	210	209	1331
MIN	41	7	16	0	1	0	0	0	7	12	4	20	582
MEAN	126	132	136	73	50	33	32	43	74	111	121	124	1065
SD	52	55	65	49	44	28	37	47	47	57	61	61	196
YEARS	86	85	86	86	88	86	88	86	86	85	85	85	83

**APPENDIX 3: THE QUESTIONNAIRE**



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UNIVERSITY OF FORT HARE

DEPARTMENT OF AGRICULTURAL ECONOMICS

FARMER SUPPORT PROGRAMME IMPACT SURVEY

ENUMERATOR: \_\_\_\_\_

DATE: \_\_\_\_\_

A. DEMOGRAPHIC ASPECTS

A1. Name of head of household: \_\_\_\_\_

A2. Village

Mnyameni	1
Cata	2
Rabula	3
Mbems	4
Amatola Basin	5

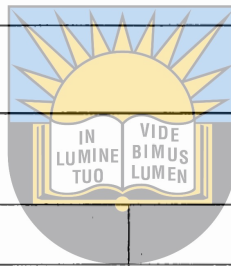
A.3. Sex of head of household

Male	1
Female	2

A4. If female why?: \_\_\_\_\_

A5. Marital status

Married	1
Single	2
Divorced	3
Widowed	4
Staying together	5



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1-2

3

4

5

**A6. Residential status**

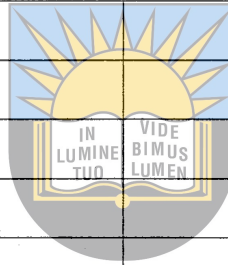
Home	1
Daily commutor	2
Weekly commutor	3
Monthly commutor	4
Away employed	5

6

**A7. Age**

Under 29	1
30 – 34	2
35 – 39	3
40 – 44	4
45 – 49	5
50 – 54	6
55 – 59	7
60 – 64	8
65 and over	9

7



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**A8. What School standard did head of household achieve if unknown how many years did he spend at school?:** \_\_\_\_\_

8-9

**A9. Employment**

Nil	1
Trade	2
Agriculture	3
Commerce	4
Mining	5
Industry	6
Civil service	7
Other ( Specify)	8

10

**A10. Vocational training**

Agriculture	1
Business	2
Technical	3
Mining	4
None	5
Other (Specify)	6

11

**A11. Family size at the time of interview**

	Number
6 years and under	
7 – 15 years	
16 – 34 years	
35 – 54 years	

12

13

14

15

16

**A12. How many household members are dependent?:**

**B. DESCRIPTION OF FAMILY HOLDING**

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**B1. What mode of transportation do you own?.**

	NUMBER
Bakkie or lorry	
Sedan car	
Tractor	
Animal drawn wagon or cart	
Sledge	

1

2

3

4

5

**B2. Which agricultural implements do you own?**

	Animal drawn	Tractor drawn
Plough		
Harrow		
Planter		
Cultivator		
Hand hoe		
Spade/ shovel		
Rake		
Other(specify)		

6-7  
   
 8-9  
   
 10-11  
   
 12-13  
   
 14-15  
   
 16-17  
   
 18-20  
   
 21-22

**B3. Amenities owned by members of household**

	NUMBER
T.V. sets	
Radios	
Refrigerators	
Generators	
Other (Specify)	

23  
  
 24  
  
 25  
  
 26  
  
 27

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**B4. Housing details**

Owned	1
Rented	2

28

**B5. Number of structures**

	number	Roof material	wall material
Traditional huts			
Modern/improved			

29 - 31  
    
 32-34

B6. Do you have a telephone?

Yes	1
NO	2

35

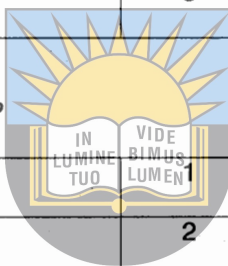
B7. What is the source of water supply?

River	1
Dam	2
Piped water supply	3
Windmill	4
Fountain	5
Other (Specify)	6

36

B8. Is it clean for drinking purposes?

Yes	1
No	2



37

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B9. If not at the homestead how far from your house is the source of water?

Less than 100m	1
100 – 500m	2
0.51 – 1km	3
1.1 – 1.5km	4
1.51 – 2km	5
More than 2km specify	6

38

39

40

41

42

43

B10. Is water supply sufficient for household use?

Always sufficient	1
Sufficient at times	2
Not sufficient	3

44

B11. Major type of fuel used by household

45

Wood	1
Coal	2
Gas	3
Cow dung	4
Electricity	5
Parrafin	6
Other (specify)	7

**C. EXPENDITURE PATTERN AND FOOD SECURITY**

C1. Not counting the head of household how many other household members contribute towards income? \_\_\_\_\_

1

C2. What is the total household income per month? \_\_\_\_\_

2

C3. Does your household receive any income from any outside source (Pension, remittances etc.)

SOURCE	FREQUENCY	AMOUNT
1		
2		
3		
4		

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2-4

5-7

8-10

11-13

C4. Approximately how much money is spent on the following items each month?

	AMOUNT
Food	
Education	
Clothing	
Transport	
Household durables	
Savings	
Personal items	
Farm expences	

14

15

16

17

18

19

20

C5. How much money is spent on maize (grain, meal or stamped) each month? \_\_\_\_\_

21

C6. What is the size of arable land of the household? \_\_\_\_\_ ha

22

C7. Are you satisfied with this size?

23

Yes	1
No	2

24

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C8. If not satisfied what size would like to have? \_\_\_\_\_ ha

25

C9. How do you think this can be achieved? \_\_\_\_\_

26

C10. What is the form of ownership of your land?

27

Freehold	1
Tribal land	2
Hired land	3
Share cropped	4
Ownland leased	5
Other (specify)	6

C11. What summer crops did you grow over the past three years?

	1
	2
	3
	4

28

C12. Does this differ from what you would normally grow?

Yes	1
No	2

29

C13. If yes why?

\_\_\_\_\_

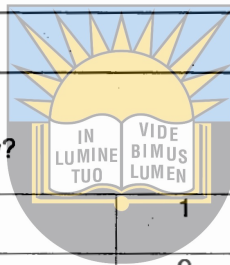
\_\_\_\_\_

30

C14. What winter crops did you grow?

	1
	2
	3
	4

31



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C15. Do you usually harvest enough crops for your household food requirement?

	1
	2

32

C16. If not how much of your requirements do you produce?

Grain	
Beans and peas	
Leaf crops	
Root crops	
Pumpkins and melons	
Other (Specify)	

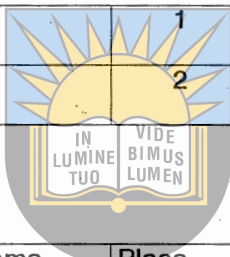
33-34  
   
 35-36  
   
 37-38  
   
 39-40  
   
 41-42  
   
 42-43

C17. How much maize (Whole, mealed or stamped) do you usually need to buy or borrow per month for your household requirements? \_\_\_ Kg.

45  
  
 46

C18. Did you sell any crop during the past three years?

Yes	1
No	2



C19. If yes which crop did you sell?

Crop	Quantity (50 kg)	income	Place sold
1			
2			
3			

47-50  
     
 51-54  
     
 55-58  
     
 59-62

**D. FELT NEEDS**

D1. What do you need to improve the quality of life (standard of living) of your household and community? ( List in order of importance)

	HOUSEHOLD	COMMUNITY
1		
2		
3		
4		
5		

1-2  
   
 3-4  
   
 5-6  
   
 6-7  
   
 8-9

D2. What are the main problems connected with maize production on arable land in your area (list in order of importance)

1	<input type="checkbox"/>	10
2	<input type="checkbox"/>	11
3	<input type="checkbox"/>	12
4	<input type="checkbox"/>	13
5	<input type="checkbox"/>	14

D3. What do you need in order to improve your crop production? state in order of preference.

1	<input type="checkbox"/>	15
2	<input type="checkbox"/>	16
3	<input type="checkbox"/>	17
4	<input type="checkbox"/>	18
5	<input type="checkbox"/>	19



D4. Are you interested in undertaking any particular form of production which you are not presently undertaking?

Yes	1	<input type="checkbox"/>	20
No	2	<input type="checkbox"/>	

D5. If yes what type of production? (give priorities)

1	<input type="checkbox"/>	21
2	<input type="checkbox"/>	22
4	<input type="checkbox"/>	23

D6. If what can be done to help you achieve you objective and by whom?

ACTION NEEDED	BY WHOM
1	
2	
3	

23

24

25

26

27

D7. Do you consider farming a good way of life?

Yes	1
No	2

28

D8. State one important reaason for your answer

\_\_\_\_\_

\_\_\_\_\_



**E. AGRICULTURAL SUPPORT SERVICES**

E1. How do you finance your production activities?

Self financing	1
Through FSP	2
Borrow from private sources	3
Other (Specify)	4

1

E2. Are you satisfied with this?

Yes	1
No	2

2

E3. Give a reason for your answer

\_\_\_\_\_

3

E4. If not satisfied how do you prefer to finance your production?

\_\_\_\_\_

\_\_\_\_\_

4



E5. Give reasons for your answer

1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>

5

6

7

E6. If you have been financed through the FSP state for which and amount borrowed in the last three years

CROP	AMOUNT
1	
2	
3	

7-8

9-10

11-12

E7. Have you managed to repay all this money?

Yes	<input type="checkbox"/>
NO	2 <input type="checkbox"/>

13

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E8. If not why?

---



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14

E9. Beside financial support what other services do you require for crop production? State reason for each in order of preference.

SERVICE	REASON
1	
2	
3	

15

16

17

E10. Are there any problems within the FSP that hinders your performance?

Yes	1
No	2

18

E11. If yes state the problem and your suggested solution

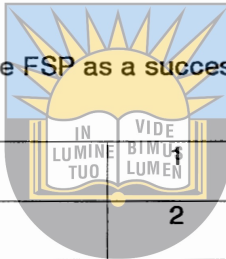

19

20

21

E12. In your opinion do you regard the FSP as a success thus far?

Yes	1
No	2



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22

E13. Give one important reason for your answer

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E14. Have you used FSP credit facility continuously for the past three years? \_\_\_\_\_

23

E15. If not how many years did you use this facility? \_\_\_\_\_

24

E16. If not give one important reason

25

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---

E17. Are you a member of a farmer's association? \_\_\_\_\_

26

**F. PRODUCTION PRACTICES**

F1. Who ploughs your land? \_\_\_\_\_

1

F2. If you do not plough your land yourself how much do you have to pay to get your land ploughed?

2

F3. Did you use your arable land continuously in the past three years?

3

F4. If not for how many years did you use your land? \_\_\_\_\_

4

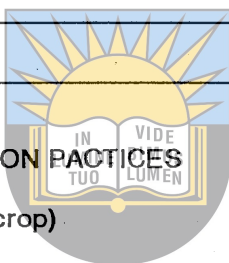
F5. If you have used land in the past three years even if its once complete the proforma

5

F6 If no in F3, what made you not to use your land? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**PROFORMA FOR CROP PRODUCTION PRACTICES**

(To be filled in for each crop)

PRODUCTION PRACTICE	1992/93	1991/92	1990/91
1. Area planted			
2. Soil preparation			
3. Means of planting			
4. Type of seed used			
5. Method of weed control			
6. Why this method			
7. Fertilizer used			
8. Why this crop			
9. Deases and pest control			
10. Method of harvesting			
11. Total yield achieved			

6-8

7-9

10-12

13-15

16-18

19-21

22-24

25-27

28-30

31-33

34-36

F7. List three main problems which you experienced with this crop

1	<input type="checkbox"/>
2	<input type="checkbox"/>
3	<input type="checkbox"/>

37

38

39