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AN EVALUATION OF A TRAINING AND VISIT (T & V) EXTENSION PROGRAMME IN THE KEISKAMMA DISTRICT OF CISKEI

BY

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F O R E W O R D

This study evaluates a pilot scheme of the Training and Visit agricultural extension system in the Keiskammahoek District of Ciskei.

The findings show deficiencies in institutional support and infrastructural development. Attention is also focussed on human development problems as well as the agro-ecological situation.

My grateful thanks are extended to my supervisor Prof T J Bembridge, for his friendly, stimulating and valuable tutorial guidance throughout all phases of the study.

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Finally my sincere gratitude and thanks to Him who makes all things possible.

J L H Williams

January 1986

A B S T R A C T

This study evaluates the implementation of an adapted version on a trial basis of the Training and Visit (T & V) system of agricultural extension as developed by Benor and Harrison (1977) in the Keiskammahoek District of Ciskei, Southern Africa.

The study focusses on a maize growing programme for the 1981/82 and 1982/83 growing seasons. The potential of the participants as farmers and the efficiency of the local extension personnel were also studied.

From an agro-ecological point of view the area was suitable for dryland crop production. The characteristics of contact farmers showed many constraints to agricultural development. Illiteracy, poor health and old age were major inhibiting factors to crop production. The land tenure system, small uneconomical arable units and the absence of able-bodied men employed outside the area, were other important constraints.

Institutional factors such as poor staff management, lack of Subject Matter Specialists, ineffective communication, lack of transport facilities, as well as a generally ineffective and

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Warnings are sounded with regular monotony by various writers and authorities on agricultural matters that famine is spreading as the gap between agricultural production and human consumption widens. Hunger and poverty occur on a large scale, mainly in less developed countries (LDCs), where drastic action is needed.

In Ciskei it has been part of the President's development policy to direct efforts towards providing every person in Ciskei with at least one meal per day (Department of Agriculture & Forestry, 1985, p 11). The President's policy gives some indication of the seriousness of the food situation in Ciskei. It is therefore essential that those living on the land should not only produce food for themselves, but also for those living in the towns and cities.

Arnon (1981, p 5) stated that increased agricultural productivity is the basis of industrial development and growth.

Agricultural development must be aimed at:

(i) increased food production and existing nutrition levels in quantity and quality for an expanding population,

(ii) provide work opportunities,

(iii) produce export crops to earn foreign currency,

(iv) support industrial development.

These developments have usually failed in the past and it is necessary to determine what factors are regarded as essential for sound agricultural development. Mosher (1966, p 61) listed five factors essential for successful agricultural development:

(a) markets for farm products,

(b) constantly changing technology,

(c) local availability of supplies,

(d) production incentives for farmers,

(e) transportation.

A much more detailed list is given by Bembridge (1984a, pp 9 - 12) who listed twelve key factors. These are neither exhaustive nor exclusive.

These factors, which were derived from reports on successful rural development projects in some 55 countries, are:

(i) Total community participation

All age groups and levels of the community should be involved in the planning, decision-making and execution of the project or programme.

(ii) Comprehensive pilot demonstrations

The assumption is that new programmes in one community will have a 'ripple' effect on other communities and institutions. A development project concentrated in one village or cluster of villages as a demonstration may have a developmental influence on neighbouring communities.

(iii) Committed grass roots planning

The community itself analyses its own needs, identifies its problems and goals, plans and implements a programme on its own and conducts its own evaluation and monitoring. In this way everything is done by the local people themselves.

(iv) Cohesive community identity

Any development project should strive to maintain the identity of the community and to uphold the community culture, values and norms. Celebrations and other cultural festivals are

methods to maintain the local heritage.

(v) Project leadership

Local leadership is essential to motivate and drive the community into action and to urge them to carry out the next stage of the plan. The women are often a vital factor in this leadership.

(vi) Motivation in implementation

It is not sufficient to build up enthusiasm for only the initial stages of a programme. Motivation should be built into the process of implementation for the duration of a project.

(vii) Resource management

It is essential that the available resources should be recognised and utilised as far as possible.

(viii) Viable local economy

An important element of viability is access to capital in order to become self-sufficient. An assured market for additional produce is another pre-requisite for development.

(ix) Community structure approach

Where possible, full use should be made of the existing organisational structures in the community.

(x) Educational and skills training

Education is a key factor to development and a necessity to improve the quality of life. It also equips people for economic intensification.

(xi) Institutional support and co-operation

Public and private involvement in projects is essential for success. Resource inputs may be in the form of capital funding, technology, resources or expertise.

(xii) Improved communication

A regular basis for the exchange of information and communication is essential. The community should be informed regularly of what is happening and has been achieved.

One possible way of increasing agricultural production is by means of improved agricultural extension. In recent years the Training and Visit (T & V) extension system introduced by the

World Bank has been implemented in a number of less developed countries (LDCs). The system was designed mainly to introduce accepted management principles into extension organisations (Cernea, 1981, p 222).

The T & V system has not previously been implemented in South Africa and the experiment in the Keiskammahoek District of Ciskei was the first attempt to implement the system on a trial basis.

The basic principle of the system is a systematic time-bound training programme for the field level extension workers, combined with a fixed regular schedule of visits to groups of farmers on specific days of the week or month. Visits are planned under the close supervision and guidance of senior officers.

The fundamental objective of the T & V system is to promote and accelerate the adoption of appropriate technology by a target group of farmers in order to reduce the gap between research findings and farmer's production efforts (Silva, 1983, p 13).

Coupled with the above, are links with research which will enable the extension officers to provide applicable guidance and advice on technology which is appropriate to the farmers concerned.

The so-called 'green revolution' of the sixties was designed to eliminate food shortages by using modern high yielding varieties (HYVs) of maize, rice and wheat together with fertilizer.

These strategies, among others were part of the philosophy introduced in the maize improvement programme in the Keiskammahoek district. The programme operated for only two successive maize production seasons 1981/82 and 1982/83. Unfortunately the 1982/83 season was a phenomenal drought year resulting in a complete crop failure.

Some important concepts concerning the T & V system show that:

- The introduction of the system has had numerous teething problems which had to be overcome (Anon, undated, p 2).
- Before the system can be effectively introduced, the existing extension system of the country concerned should be intimately studied and constraints be identified. The adaptation of the T & V system with the existing system in order to improve the latter can then be established (Anon, undated, p 2).
- It is essential to implement the system for the first time on a trial basis in order to solve unpredicted problems and to prove the efficacy of its value before replicating the system

(iv) extension staff were on average relatively young and inexperienced. They generally had inferior formal education (91% had 3 years secondary education). They had low levels of technical knowledge and very little contact with research institutions or Subject Matter Specialists,

(v) it was further found that they generally had low morale and achievement motivation. Paradoxically they had an over-optimistic perception of their own efficiency. They spent too much time in the office and too little time on field extension work.

The recommendations of Bembridge and Penberthy (1980, pp 34 - 48) can be summarised as follows:-

(i) Departmental organisation and objectives

The extension service should be re-orientated to work within a detailed policy approved by the Cabinet. Plans and objectives should be formulated at national, regional and local level. Policy should be reviewed annually according to circumstances. A single line of command should be established from Head Office to Regional and District offices.

Graduate Subject Matter Specialists (SMSs) should be appointed to function as training officers and specialist advisors.

(ii) Service conditions and facilities

Provision should be made for adequate housing and office facilities which will increase the status of officers in the community. Transport facilities should be improved. The salary structure should be elevated to be equitable with the other Government Departments.

(iii) Development of individual extension workers

Attention should be given to the training of women extension officers. Selection procedures should be improved and qualifications for agricultural college admission should be raised from three to five years of secondary education.

Job descriptions should be reviewed to ensure that each staff member has a clear conception of his duties, his role in relation to other staff, and what his work objectives should be.

(iv) Communication within the extension service

A Research and Extension Committee should be instituted to improve communication and liaison between research and extension. Liaison between the different development agencies in Ciskei should be implemented within the overall development

plan.

(v) Extension strategy

The Ciskei extension service should be organised according to a systematic time-bound programme which is tied to regular in-service training. The following principles were recommended:-

(a) an analysis should be made of each ward to enable the extension officer to concentrate on informal leaders who will assist in spreading information to other farmers,

(b) extension work should be focussed on selected co-operator farmers who are willing to co-operate with extension workers and allow farmers to visit them. These farmers should be selected in consultation with the extension committees set up by Tribal Authorities,

(c) the extension officer/farmer ratio should be at a manageable level,

(d) intensive training should be given at Regional level in the specific seasonal agricultural practices once a month or fortnight, for half a day or a full day duration, depending on circumstances.

(e) schedules of work should be clearly specified and supervised at all levels. One senior officer should be able to supervise six to eight field officers,

(f) the emphasis should be to achieve rapid results by removing production constraints on the most important crop,

(g) extension officers should devote three to four days per week to visiting farmers and co-operator farmers according to a fixed systematic schedule. Any farmer, however, is free to contact the extension officer for advice and information. The remaining one or two days per week should be spent on training, office days, etc,

(h) extension officers should be aware of the availability of inputs, credit, marketing and the general policy regarding such matters, but they should not be responsible for the distribution of such commodities,

(i) each officer at all levels should keep adequate records of his activities,

(j) continuous evaluation and monitoring is essential in order to modify and adjust programmes to meet changing conditions.

(vi) Information sources and extension aids

The establishment of an Agricultural Information Centre at Head Office to supply information, literature, extension aids, etc and to act as a co-ordinating body to co-ordinate radio programmes and film shows with the needs of extension programmes.

(vii) Staff training

In addition to in-service subject-matter training, a systematic in-service training programme should be followed to equip the extension officers to give sound advice on the whole farming enterprise.

(viii) Extension methods

Simple leaflets and bulletins, radio programmes and film shows should be used to support the field extension programme. Group media should constitute small group discussions and demonstrations. Individual and group contacts should be planned on a programmed basis and directed at the 'middle majority' category of farmers.

The report was presented to the Ciskei Government in 1980 and tabled in the House of Assembly. The Secretary for Agriculture at that time decided that because of a scarcity of resources the recommendations should be implemented on a trial basis in the Keiskammahoek District. If the system proved successful it would be extended to the whole of Ciskei. Planning for the implementation of the programme commenced in April 1981. The programme was based on experiences gained from research conducted in Ciskei and surrounding areas together with

applying management principles in extension based on an adaptation of the T & V system of agricultural extension.

In the first year, all efforts were concentrated on production of the staple food crop of maize (Davidson, undated, p 2).

It was envisaged that programmes aimed at improving health, vegetable and livestock production would be implemented as a second phase.

Monitoring and evaluation is an important component of any extension programme. Because the Keiskammahoek programme was a pilot one, monitoring and evaluation was particularly important.

One feature of the Training and Visit system is that it has a built-in system of monitoring. Apart from the internal evaluation system, provision is often made for a more comprehensive evaluation of programmes by an external agency or local evaluation unit (Cernea & Tepping, 1977, p v).

1.3 STUDY OBJECTIVES

The problem to be investigated in this study was how to implement an effective extension programme based on what could be learned from international experience, as well as from an

initial evaluation of a pilot extension project in the Keiskammahoek District of Ciskei.

The objectives of the study were to:-

(i) evaluate extension programmes in LDC's, with special reference to the T & V System,

(ii) evaluate the effectiveness of the implementation of the pilot extension programme in the Keiskammahoek District, Ciskei,

(iii) make recommendations for implementing future extension programmes in Ciskei.

CHAPTER 2

METHODOLOGY

2.1 INTRODUCTION

This chapter deals with the theory of monitoring and evaluation and outlines the methodology used to monitor and evaluate the application of the Training and Visit (T & V) system in the Keiskammahoek District. The choice of sampling areas, orientation and planning of the different data gathering exercises, sampling and interviewing procedures, as well as the analysis of the data are discussed.

2.2 METHODS OF EVALUATION AND MONITORING

The study entailed an initial literature study which covered literature on the T & V system as well as monitoring and evaluation techniques.

A number of recent works on evaluation were consulted including those of Bembridge (1980b), Rossi and Williams (1972), Rossi and Freeman (1982), Freeman et al (1979), and Imboden (1978 and

1980). Cernea and Tepping (1977) deal exclusively with the monitoring and evaluation of T & V projects.

Literature on the T & V system was difficult to obtain, firstly because the system has only been in operation in some parts of the world for approximately 10 years since it was first implemented. Secondly, because the system is new in Southern Africa no local information was available. In other countries such as Turkey, Sri Lanka and the Phillippines, where the system has been in operation for some years, reports were not readily available and had to be obtained from overseas, sometimes with great difficulty.

Other writers apart from Benor and Harrison (1977), Cernea et al (1983), Benor et al (1984), who made substantial contributions to the literature, include Cernea (1981 and 1982), Howell (1982 and 1983), Luning (1982), Ray et al (1982), Davidson (undated), Von Blanckenburg (1982) and Moore (1984). A number of students at the University of Reading in England, including Khayer (1979), Malik (1981), Silva (1983) and Sooksanguan (1980) have carried some studies of the T & V system. Some other evaluation studies were carried out in India.

In South Africa only two unpublished articles on the system could be found (Murton, undated) which was incorporated in a

handbook on extension used by extension staff of KwaZulu. A general overview of the system is given as well as a short summary of how it can be applied in a few districts of KwaZulu.

One of the basic principles of Agricultural Extension is that programmes should be periodically evaluated. The importance is stressed by many writers including Kelsey and Hearne (1955, p 219), Mosher (1979, pp 108 - 113), van den Ban (1977, p 182), Bembridge (1980, p 39) and Russell (1981).

The advantages of evaluation of extension programmes as stressed by Kelsey and Hearne (1955, p 219) are as follows:-

(i) evaluation enables the extension worker to establish the effectiveness of his work in order to know what improvements or alterations should be made,

(ii) it helps to identify needs for a concentrated effort.

(iii) it gives extension workers assurance and confidence,

(iv) by giving rational facts, it creates public confidence,

(v) in the long term, staff will be able to realise and judge which methods and approaches are the most suited for a specific situation,

(vi) it aids teaching by forcing staff to clearly define objectives,

(vii) it gives an indication whether the teaching and teaching aids are effective.

Chelunski as quoted by Rossi and Freeman (1982, p 32) states that a variety of reasons are responsible for evaluation including:

(a) assessing the appropriateness of programme changes,

(b) identify ways to improve the scheme or project,

(c) enable donors to establish the financial viability of a scheme or project, and

(d) testing whether a particular social science hypothesis is right or not.

In general it is necessary to evaluate and monitor extension programmes in order to ascertain whether the project or system functions as efficiently as intended and to determine if any alterations and modifications are necessary. Evaluation studies are often neglected, especially in the National and Independent States of Southern Africa.

Writers such as Cernea and Tepping (1977, p 13), Imboden (1978, p 123) and Bembridge (1980b, p 39) agree that evaluation serves eventually to produce improvements in the extension system as well as in the overall agricultural policy, planning and management.

Monitoring is "the continuous gathering of information on

project inputs, outputs and effects, and on conditions that are critical to the success of the project" (Imboden, 1980, p 17). It is based on information collected during the design phase and continues throughout the project's lifetime.

The purpose is to provide project management at an early stage with information on what is happening. The comparison of actual achievements with the original targets and objectives will enable project management to make immediate corrections if necessary (Imboden, 1980, p 17; Cernea and Tepping, 1977, p 11).

Rossi and Freeman (1982, p 34) gave two reasons for the necessity of monitoring extension programmes, namely:

(a) management and administration should be informed of what was paid for and whether the desired action, which was planned, was in fact taken,

(b) the impact or outcome of a particular project can only be evaluated if it did take place and served the purpose for which it was intended. It must be established whether the program was implemented according to the original plan.

A large number of possible ways to generate evaluation data are known and as no single method could be used in this study, the applicable methods had to be carefully selected.

variables should be measured.

The following are a few methods which could be used:

(a) Questionnaires

Questionnaires are the most commonly used instrument to gather information (Lynch, 1976, p 10). A questionnaire is not just a list of questions or a form, but a scientific instrument which has to be carefully designed according to particular specifications and with specific aims in mind (Oppenheim, 1966, p 2).

(b) Interviews

- In-depth interviews

Personal interviews are an acknowledged method of obtaining anthropological data. In-depth interviews can be used for any type of data collection in the field of the human sciences (Coertze, 1982, p 1). Freeman et al (1979, p 60) also mentions the key informant approach where interviews are conducted with knowledgeable leaders and experts after they have been identified.

- Structured individual interviews

This is also a personal interview, the difference being that the questions to be asked have to be determined in advance and the interviewer is not supposed to deviate from the predetermined questions (Schlemmer, 1982; Freeman et al, 1979, p 60).

- Group discussion

Group discussion is regarded as a useful qualitative method to gather data at various stages of a research project (Godsell, 1982, p 1 and Lynch, 1976, p 12) and also to validate individual interviews.

(c) Participant observation

According to this method a researcher has to live among the people, who are to be studied, for a period of time. During this time the researcher makes observations and participates with the local people in what they are doing (Cernea and Tepping, 1977, p 61).

(d) Diary of the Village Extension Worker (VEW)

The most suitable basic tool for internal monitoring at field

level is the diary of the extension officer (Cernea and Tepping, 1977, p 30 and Lynch, 1976, p 11).

(e) Existing data

Murphy and Sprey (1982, p 25) list existing data as their first step towards gathering information. This can be found at various places and not only at project headquarters.

(f) Trials

In order to obtain certain data, farmers can be requested to follow a certain specified number of practices in order to establish how they are suited to the specific area (Murphy and Sprey, 1982, p. 28).

Certain variables can be employed to measure extension impact. The following are a few examples:

(i) Enterprize management

Bembridge (1980b, p 42) quotes Burger and others who devised a managerial aptitude scale to determine the managerial aptitude of farmers. Managerial aptitude is regarded as probably the most important factor in successful farming. The scale is determined by a five-point scale to categorise each of six

factors. It is easy to apply, simply by observation or informal questions.

(ii) Adoption of practices

An important criteria to ascertain whether extension messages are reaching the farmers, is to establish the adoption rate of the recommended practices.

(iii) Efficiency

Farm production level per unit is an important way of expressing farming efficiency. It is often difficult to obtain accurate data especially when subsistence farmers are involved where no records are kept.

(iv) Profitability

For commercial farmers, farm profitability or production per unit is a valuable method of evaluation.

(v) The quality of living

The final objective of agricultural development is to improve the quality of life. A number of simple variables can be used to give an indication of the standard of living such as the

type of house, income, education, type of food, etc. These are all easy to establish.

(vi) Social indicators

If statistical information is gathered regularly at certain intervals, important observations can be made. Sudden changes in certain phenomena can point towards predictable problems which may emerge. If it is found for instance that the unemployment ratio has increased sharply, a high incidence of malnutrition can be the direct result (Freeman et al, (1979, p 66).

After viewing the different definitions of indicators, the next step in a monitoring and evaluation exercise will be to choose the specific indicators for the project which has to be evaluated. The data generation system in an extension project is basically composed of two parts. The first, refers to an internal functional reporting system from the lower levels of the administrative structure to the upper levels. This is normally referred to as the internal reporting system. The second, which is referred to as the external monitoring and evaluation system, entails a set of special monitoring and evaluation studies which generate additional information on their own (Cernea and Tepping, 1977, p 27).

The data gathered through the internal reporting system is complemented by data generated by means of special in-depth surveys and studies. Despite their effectiveness, the built-in monitoring systems are not sufficient and have to be supplemented.

In order to gather the necessary information for this study, a combination of methods were used. Lynch (1976, p 11) recommends a combination of methods because:

(a) it is possible to check the accuracy of the information gathered,

(b) the methods can supplement each other,

(c) in-depth studies may necessitate the use of specific methodologies, and

(d) some methods may be appropriate only for gathering certain types of data.

Information was obtained from contact farmers and extension staff using the following techniques:

(i) Questionnaire surveys

Three questionnaire surveys of varying amplitude were conducted (See par 2.5) which can be regarded as the crux of the study.

(ii) Structured individual interviews

A number of structured interviews were conducted during June 1984 in various locations (administrative areas) in the study area.

The purpose of these interviews was mainly to check on the work of the extension staff. Such information could not be obtained from the questionnaires completed by extension officers themselves.

(iii) Group discussion

Initially a group discussion was used in the Gwili-Gwili location. However, the discussion aroused suspicion and consequently the validity of the information was suspect. Consequently it was decided not to use this method during the course of the study. An interpreter is unable to interpret

everything which is said during a group discussion. It was also found that the group discussion or meeting is not a very reliable method if the researcher is not absolutely fluent in the language of the participants. As information was not solely dependent on this method, its elimination did not jeopardise obtaining valid information through other sources.

(iv) Records of the extension officers

The extension officers were issued with sheets (Appendices 1 and 2) on which they were required to record the necessary information on each contact farmer group. The information obtained from these sheets was analysed by hand.

(v) Observation

Observation was regarded as being a very important source of information during the study because many important facts can only be accurately recorded by observation. The disadvantage is that observations cannot always be quantified.

(vi) Existing data

Very little existing data was available and most data had to be collected by means of interviews and questionnaires.

2.3 CHOICE OF RESEARCH AREA

If the T & V system as recommended by Bembridge and Penberthy (1980) proved successful in one district, it would be extended to other districts and other States in Southern Africa. The decision to implement the programme in the Keiskammahoek District was taken by the Ciskei Department of Agriculture and Forestry and was thus a fait accompli.

The Keiskammahoek District can be regarded as being representative of a typical rural area in Ciskei. The population is fairly homogeneous in terms of origin, socio-economic and cultural factors.

The farming enterprises are also typical of Ciskei. Maize is the most important crop in the country. Small vegetable gardens are found in certain villages or localities. Cattle, goats and sheep are also found in every location (village). Mixed farming is practised throughout the district at subsistence level which is typical of Ciskei. The data and findings obtained in the District can therefore be considered applicable to the whole of Ciskei.

The proximity of the district to the University of Fort Hare facilitated contact with the staff of the Faculty of Agriculture.

2.4 ORIENTATION AND PLANNING

The programme in the Keiskammahoek District commenced during May, 1981. From the outset records were kept of the progress of the project.

During the planning stage the monitoring and evaluation role of the Fort Hare staff was cleared with the Department of Agriculture and Forestry. At the same time the co-operation of local extension staff in the district was also agreed upon with the Department of Agriculture and Forestry.

As far as possible all steering committee meetings, which were held monthly in Keiskammahoek were attended, as well as the orientation meetings with extension officers.

An important function held on 24 September, 1981 at Keiskammahoek was also attended by the writer. At this gathering the two Tribal Authorities which represented the whole district gathered together to meet with the extension staff. The programme was discussed and approved.

Visits were made approximately twice a month to the district office at Keiskammahoek, and/or some of the extension officers with the object of making observations on the progress being

made, as well as to discuss problems. Where problems occurred, they were reported to the departmental authorities in Zwelitsha and/or raised at the Steering Committee meetings.

When an extension officer was visited in a location, he was approached directly. However, when interviews were planned with farmers or other individuals, the headman of the location was approached prior to the visit and the purpose of the visit explained by means of an interpreter who was aware of the habits and culture of the local people. This procedure was adopted because it is a generally accepted practice that the headman must know what is going on in his area. The extension officer is a government official and it was not considered necessary to contact the headman as he was not regarded as being responsible for the extension officer. This arrangement worked well and was not questioned by any headman. All the headmen were found to be co-operative and aware of the programme. They willingly suggested certain individuals who could give a balanced view of the programme.

2.5 QUESTIONNAIRE OBJECTIVE AND DESIGN

This study necessitated information from various sources, particularly the contact farmers and extension staff. Different questionnaires were designed for each group.

In compiling the questionnaires, works of Oppenheim (1966), Murphy and Sprey (1982) and Cernea and Tepping (1977) were consulted. These authors suggested that the set of indicators to guide the collection of information for monitoring and evaluation should be limited as far as possible, in order to obtain only the absolute minimum of information necessary which could easily be collected and fed back to the project management at low cost and on a timely basis.

The three most important points which are regarded as the essence of the T & V system are as follows:

(i) the visits by the extension officer to the contact farmers were regarded as the most important aspect of any T & V programme,

(ii) the yields of the contact farmers will reflect whether or not the programme had any effect,

(iii) the recommended practices are regarded as the link between the visits and the yields (Cernea and Tepping, 1977, pp 19 - 20).

2.5.1 Questionnaire to contact farmers

A comprehensive questionnaire (Appendix 3) was compiled to gather the necessary information from contact farmers. The purpose of this questionnaire was to obtain information on

personal characteristics, attitudes towards agriculture in general, socio-economic problems, knowledge and practices concerning agriculture, as well as information on the maize extension programme.

The use of extension staff as enumerators prohibited questions concerning farmers's attitudes towards the extension staff, and this information was gathered by means of interviews.

Three questionnaires were tested initially on contact farmers who were not selected for interview and a few minor adjustments had to be made to the original questionnaire.

2.5.2 Questionnaires to the extension staff

A short questionnaire (Appendix 4) was used on 27 April 1982, that is, after the programme had been in operation for one year, to obtain information from the extension officers. Only nine extension officers, however, attended this meeting. The data was analysed manually.

During April, 1983, after the programme had been in operation for two years, another questionnaire (Appendix 5), directed at the extension staff, was completed by the researcher personally and was also analysed manually.

2.6 TRAINING OF THE ENUMERATORS

Eight extension officers were used to complete the farmer questionnaires.

At the time of the survey one village had an extension officer as well as a trainee extension officer who agreed to complete half the questionnaires in that village, leaving the other half to the extension officer.

A meeting was arranged on 4 July 1983 where all the enumerators were present and a whole afternoon was spent on instructing them how to complete the questionnaires. Every question was discussed in order to ascertain that they understood the meaning and necessity for the question. They were also instructed to explain the purpose of the questionnaire to the farmers and to let them feel at ease before they commenced asking questions. The questions were in English but they were translated into Xhosa when not clear to the farmers. This did not present any problem, because the extension officers had a good command of the English language and they were well briefed on the content and meaning of the various questions.

Each enumerator was given a list of the names of contact farmers who were to be questioned. They were informed that

they would be visited individually in the field and that they should not proceed with the work if they experienced problems which needed attention. During the follow-up visits no major problems were experienced and only a few minor problems had to be solved. The last completed forms were returned on 20 September 1983.

2.7 THE FIELD SURVEY

During June 1984 the researcher conducted personal interviews with a limited number of 17 contact farmers recommended by the headmen of different locations. The extension staff were not consulted during these interviews and an independent translator was used. These informers were identified as objectively as possible in order to avoid the favourites of the extension officers who might be biased favourably towards them.

2.8 NORMS FOR SUCCESS

The most important norm for farming success is considered to be the nett income per unit of land or per livestock unit (Bembridge, 1984b, p 28).

In this study, however, the emphasis is not so much on the performance of extension staff. Indirectly the staff performance could be measured by the farmers achievements, but

where subsistence farming is implicated there may be too many other factors involved which may have an influence and cause a wrong impression. The two year study period was too short to determine whether practices were permanently adopted. Variations in climatic conditions often cause fluctuations in yield especially over short periods of time.

A case in point is that the 1981/82 crop was a partial failure while the 1982/83 crop was a total failure. This was due to a very severe drought and not because of extension problems *per se*. It was consequently decided to ignore production figures, as this would have given an unbalanced view.

2.9 SAMPLING PROCEDURE

According to the records of the District Office at Keiskammahoek, during the 1981/82 season there were 324 contact farmers in the 15 wards. Seven wards were eliminated due to transfers or resignations of staff which resulted in villages not being properly served by the extension staff and which would therefore give an unbalanced view of the situation.

In the remaining eight wards, a stratified random sample of 50 per cent of the contact farmers was selected for the survey and 97 contact farmers were interviewed. As the population of the district is considered to be homogeneous, this sample could

have been smaller in order to obtain reliable data.

The extension officers who were working in the wards at the time were requested to act as enumerators.

Rural people will tend to give wrong answers if they do not know the enumerator (Rossouw, 1985). As the enumerators were thus well known to the people the validity of the results were considered to be fairly reliable.

2.10 SAMPLE LOSS

Six of the selected respondents had died before they could be interviewed. They were not replaced as the sample was regarded as being large enough for such a homogeneous population. All the other questionnaires could be used.

2.11 INTERVIEWING PROCEDURE

All the selected respondents were interviewed in one session. The fairly long time allowed for the enumerators to complete the interviews enabled them to reach every respondent.

The length of the interviews varied, but on average took from one and a half hours to two hours to complete.

2.12 QUALITATIVE RELIABILITY

Every effort was made to ensure that the data should be as accurate and objective as possible, but it is always likely that some bias and errors may occur. An enumerator for instance may err in his translation of a question to influence the respondent to be biased in one way or another.

Some information obtained from the questionnaires, was also recorded by the extension staff on the record forms which they were required to keep for each contact farmer. It was impossible to cross check all information. However, spot checks carried out revealed no serious discrepancies.

It can thus be concluded that while possible errors and bias may have occurred in evaluating the programme, the information obtained on the whole can be regarded as being reliable.

2.13 CONCLUSION

The objectives of a study determine the information which is needed for those specific circumstances. Certain factors and conditions may also play a particular role, for example the time and money available for a study may be found to be limiting factors.

The methods used in this study are considered suitable to the objectives of the study.

CHAPTER 3

THEORETICAL BACKGROUND TO THE STUDY

3.1 INTRODUCTION

In this chapter attention is given to the concept of agricultural extension and the success it has achieved in the LDCs. Emphasis is placed on the theory and success achieved by the T & V system.

3.2 HISTORY OF AGRICULTURAL EXTENSION

Various writers have provided definitions for agricultural extension including Van den Ban (1977, p 12), Maunder (1973, p 3) and Savile, quoted by Maunder (1973, p 3). The most comprehensive definition is perhaps the one given by Chang (1962) as quoted by Bembridge (1978, pp 2 - 3) as being "... an informal out-of-school educational service for training and influencing land holders (and their families) to adopt improved crop and livestock production practices, management, conservation and marketing. Concern is not only in teaching

and achieving adoption of a particular improved practice but with changing the outlook of land holders to the point where they will be receptive to and on their own initiative continuously seek means of improving their livelihood and homes". The basic philosophy of agricultural extension is thus to help farm people to help themselves by using and preserving the available resources.

The first modern agricultural "extension service" was possibly established in Ireland during the great potato famine from 1847 to 1851 which resulted from proposals contained in a letter from the Earl of Clarendon, the Lord Lieutenant of Ireland to the President of the Royal Agricultural Improvement Society of Ireland. This led to the institution of instructors to work among the small-scale peasant farmers worst affected by the famine (Jones, 1982, p 11).

The term Agricultural extension became widespread in the USA towards the end of the nineteenth century. Programmes later called "Agricultural Extension" were introduced in different parts of the USA in response to different needs and under different circumstances (Mosher, 1978, p 4).

During that time, most families in North America were engaged in labour-extensive agriculture, had a poor education and lived under isolated rural conditions with very poor infrastructure

(Abell, 1981, p 12). Those conditions are very similar to the situation in most LDCs today.

The need for scientific knowledge to increase agricultural productivity led to the establishment of the Land Grant College System in the USA and the creation of provincially supported schools, colleges, and institutes of agriculture and home economics in Canada (Abell, 1981, p 12).

The farmers in the USA took the initiative in improving their situation. In Iowa for example, the farmers put pressure on the college of agriculture to send some lecturers to the farmers to teach them directly, instead of farmers going to the college.

In the same state a railway carriage was converted into a mobile exhibition and lecture room, the "Seed Corn Train", as it was known. It went from town to town, while College Staff and senior students gave talks and demonstrated the selection and testing of maize seed to the farmers gathered at every town (Mosher, 1978, p 4).

When agricultural extension was first introduced to the USA, agricultural methods were already modern and largely of a commercial nature (Mosher, 1978, p 5).

After World War II the Western World became more and more aware of an increasing gap between themselves, being well developed and wealthy, and the so-called Third World Countries, where poverty, illiteracy and hunger were increasing. Initially the Western Countries believed that the LDCs only lacked the necessary modern technology, and once that was made available to them, they would rapidly develop to the same levels. Today they have learned that the process is much more complex and that cultural, social and other factors also play an important role in the transfer of technology (Foster, 1973, pp 3 - 4).

The implementation of strategies of change by foreign groups of consultants and advisors thus failed in part, if not completely (Crouch and Chamala, 1981, Vol 1, p 99). Development has further been constrained by change agents working on the assumption that if new farm practices are directed at the progressive farmer it will gradually spread to other farmers. This assumption did not work and most farmers did not benefit from extension services (Crouch and Chamala, 1981, Vol 1, p 100).

The so-called "Green Revolution" which also resulted in the rapid diffusion of new high yielding varieties (HYVs) of maize, rice and wheat, fertilizer and other cultural practices were also only partially successful.

Moris (1983, pp 3 - 4) stated that the problem of technology transfer in Africa was that the typically ministry supported extension services caused late fertilizer delivery, incorrect recommendations as well as a number of other factors which eventually nullified the effectiveness of the strategy.

Three general points have been regarded as necessary for an extension service to be effective:

" (i) it must have access to technologies relevant to farmers' needs,

(ii) the extension agents in contact with farmers must be fully familiar with these technologies,

(iii) the extension agents must communicate their messages effectively" (Best and Goldey, 1980, p 3 as quoted by Sooksanguan, 1980, p 34).

Arnon (1981, pp 222 - 223) states that the main extension emphasis in the LDCs is on production techniques, while very little attention is given to farm planning and management as a whole. It is generally accepted that the extension efforts in the LDCs have not always achieved their anticipated results. He. ascribed the reasons for failure of the extension systems to:

(a) organizational defects and operational weaknesses,

(b) lack of an appropriate technology,

(c) lack of co-ordination between research and extension, and

(d) economic and social constraints.

It has also been found that in most of the LDCs the governments are eager to increase and safeguard the nation's food production and thus the extension services concentrate on progressive or large farmers, thus neglecting the small farmers (Silva, 1983, p 5).

These governments often also tend to concentrate on impressive, expensive large scale schemes which are frequently operated at a loss.

In South Africa, agricultural extension directed at small-scale Black farmers, commenced in 1929, when the first Director of Agriculture was appointed to the then Department of Native Affairs. This was necessitated by the rapid deterioration of natural resources due to mismanagement. Agricultural colleges, of which the first one was Fort Cox, bordering on the Keiskammahoek District, were established to train black agricultural educators. These agricultural advisors became known as "demonstrators" and worked according to a system where they demonstrated improved agricultural practices to a selection of influential farmers.

The Department provided the demonstrators with the necessary implements, seed and fertilizer. They were then required to work a portion of the farmers' land, the rationale being that, by comparing this part of the land to that worked by himself, the farmer would become convinced of the advantages of such practices and apply them to the rest of his land. Although some result was achieved, the approach was not very successful. The idea soon degenerated into a situation where the agricultural officer was regarded as the farmer's "foreman" and had to do all the work. He would allow the officer to prepare the demonstration portion of his land and then leave the rest of the land fallow (Lilley, 1975, p 6).

According to Lilley (1975, pp 61 - 66) a number of positive steps were taken by the government to improve the agricultural production of the Black people and to prevent the further deterioration of natural resources. The Native Trust and Land Act (Act No 18 of 1936) made additional land available for Blacks. The Betterment Areas Proclamation (Proclamation No 116 of 1949) made provision that land acquired for Blacks automatically had to be properly planned and managed under the supervision of the Department. It also made provision that land already occupied by Blacks could be declared Betterment Areas after consultation with the residents. In 1955 the report of the Commission for the Socio-Economic Development of the Bantu Areas (Tomlinson, 1955) was published. The so-called

"Betterment" programme was now put on a scientific basis with three objectives in view, namely: protection of the resources, reclamation, and utilization of resources. It also demanded that the population should not live in an unplanned scattered settlement pattern, but rather grouped into defined residential areas with demarcated arable land, and clearly defined communal grazing areas. By the end of 1967 more than half of the Black areas were physically planned and settled. The problem was that most staff were engaged in development work and extension was weakened and was aimed mainly at getting people to accept and implement soil conservation methods.

Most of this development work was done for the people and they did not accept it as their own. Consequently, agricultural production did not improve.

In terms of the Bantu Homelands Constitution Act (Act No 21 of 1971) the agricultural development of the Homelands was transferred to the Blacks themselves.

Extension in the Homelands was characterised by the following:

(i) it was based on the principle of community development, where the community identifies their own needs. The people themselves should be stimulated to do the work at all levels. Whites should only act as advisors and educators,

(ii) agricultural extension work was done according to the programme planning principles of Kelsey and Hearne (1963), as well as the methods advocated by Wilson and Gallup (1955, as cited by Lilley, 1975, p 63). The Department prepared a manual for the guidance of Black extension officers,

(iii) elements of change had to be channelled through some organisation and for this purpose traditional leaders had to be involved.

This strategy was based on the knowledge and experience of some major countries in the world and was basically the same as that advocated for use among the White farmers in the Republic.

There were, however, a number of problems which confronted the extension staff which can be summarised as follows:

(i) incompatible customs and undesirable attitudes such as the Black man's attitude to agriculture and the system of land allocation which is incompatible with the concept of optimum land-use planning,

(ii) a shortage of good quality agricultural staff in the Black areas who did not receive the necessary backing from the Tribal Authorities,

(iii) Black farmers lack sufficient money to carry out farming operations and local markets are not available in their areas.

Lilley (1975, pp 65 - 66) was of the opinion that this system is not functioning effectively and that certain improvements need to be effected.

3.3 THE TYPES OF EXTENSION ORGANISATIONS

Agricultural extension services have been implemented in different parts of the world in different ways. Three general types of organisations may be identified.

The most common organisation is where extension services fall directly under the Ministry of Agriculture and are administered by the government service. This type of extension service is the norm in Southern Africa. A second type of organisation was developed in the United States of America where the extension service is a co-operative service administered in each state by the official "Land-Grant" university. This system is also followed in Scotland, and in both countries there are some arrangements whereby the governments contribute towards the funding of the service. The third system is employed in Denmark and has been followed with variations in some other countries. Here the local extension services are sponsored and directed by farmer organisations. Much of the cost is

subsidised by the central government, but they exercise very little or no control (Maunder, 1973, p 34). This latter type of extension is also found in the Republic of China where the farmers' organisations employ the extension officers, but are sponsored by the provincial, country and City governments (Bembridge, 1983, pp 95 - 97).

Garforth (1982, pp 44 - 45) states that evidence has shown that extension methods commonly used have been unsuited to the needs of the rural poor. The one way flow of information from research organisations through extension services to target audiences which usually occurs has also been criticized.

The most recent extension strategy, the T & V system, was designed by Daniel Benor who had studied the problems usually encountered with extension services in the LDCs. "The T & V Extension System is a structural reconstruction and development of the existing extension services (or the build-up of a new one, ab ovo, when necessary) on the basis of a set of sound and clear-cut organizational principles" (Cernea, 1981, p 223).

It is a simple and uncomplicated system where the management principles of control, staff development and training are followed, as well as regular time-bound contacts between the extension staff and farmers.

Another feature of the system is a sound extension philosophy, where input costs are kept to a minimum, by making use of simple available resources, techniques and links with research (Cernea, 1981, p 223).

3.4 PROBLEMS IN AGRICULTURAL EXTENSION

A review of the literature shows that Agricultural Extension has not brought about the desired change in uplifting the rural people in Less Developed Countries (LDCs) of the world. Maunder (1973, p 8) indicates that it is not the concept of extension education which is at fault but rather one of the following three factors:

(i) failure of governments to provide the other essentials which is needed for agricultural development,

(ii) inadequate support of extension with financing or personnel, and

(iii) ineffective administration and operation of the extension service.

The recommendations of Benor and Harrison (1977) probably had more influence and far-reading consequences than any other previous publication (Nagel et al, 1983, p 29). Ever since

its inception it has been a focus of controversy among extension workers, researchers, administrators, consultants, etc.

The World Bank has put considerable emphasis on the T & V system and provided loans for small-scale farming development projects on the basis of reorganising extension services according to the T & V system (Howell, 1982a, p 273). By the end of 1982, 93 T & V projects were financed or proposed to be financed by the World Bank (Nagel et al, 1983, p 29).

Some of the problems which were identified by Benor and Harrison (1977) and led to the implementation of the T & V system as a solution to the problems, included:

(i) Multipurpose role of the extension officer

Field staff are often assigned a multipurpose role. They are often not only responsible for agriculture, but for all aspects of rural development, as well as other duties such as the collection of data and statistics, the organization of agricultural shows, etc. As a result the extension agent can perform neither his agricultural duties, nor his other assignments effectively (Benor and Harrison, 1977, p 7).

The Extension Officer is often also required to carry out

regulatory work which is detrimental to his credibility with his farmer clients. An Extension Officer should not carry out livestock censuses, collect taxes, debts or enforce any unpopular law (Mosher, 1978, p 9).

In order to obviate this problem, the extension staff should have a systematic time-bound schedule of visits to their farmer clients. The minimum amount of extraneous work should be assigned to field staff in order to direct their attention to extension and educational work (Benor and Harrison, 1977, p. 11). Most of their working time should be devoted exclusively to professional extension work (Cernea, 1981, p. 223).

A further solution is that the extension workers should initially concentrate their efforts on the most important food crops. This would usually include the staple food crop. This had several advantages:

(a) by specialising it is possible to achieve competence and skills on different practices necessary for these major crops,

(b) this in turn will give the extension worker confidence in his own ability, which will boost his morale and credibility,

(c) motivate him to greater efforts, and

(d) achieve a greater impact and quicker success.

Farmers are often sceptical of adopting new farming practices. Because of this, extension workers are advised to recommend that farmers start by adopting a new practice on a small scale trial basis (Benor and Harrison, 1977, p 12).

(ii) Multiple subordination

Field staff are often subject to multiple subordination, whereby they are made responsible to several agencies or individuals without a single, direct line of administrative control and technical support (Cernea, 1981, p 222).

A single line of command should be instituted from the top of the command structure down to the field extension worker. Only one agency or department should have full administrative control of the system in order to carry out effective extension work. All other agricultural activities should be combined into one system as the ultimate goal is the development of a single effective professional service capable of giving farmers sound technical advice on all their activities (See Fig 1).

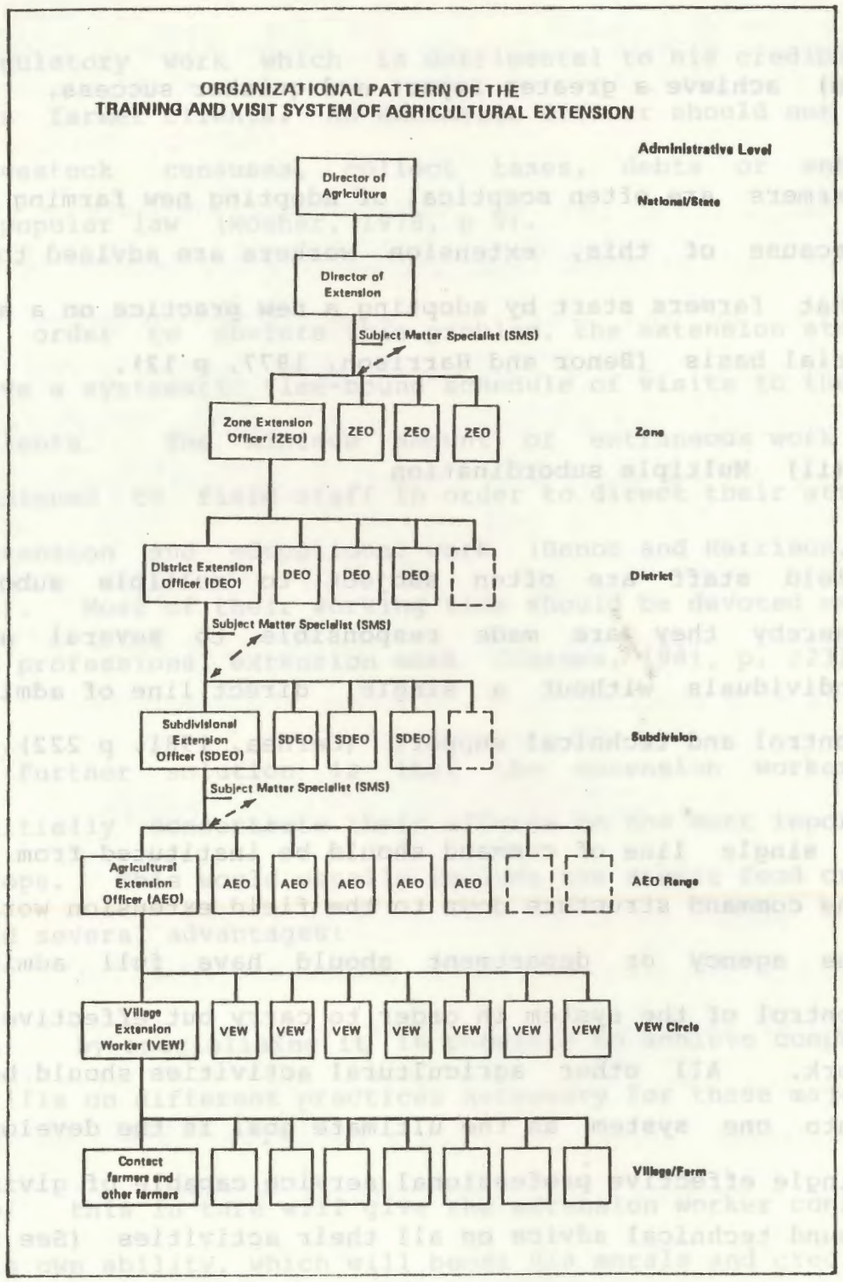

Fig 1 ORGANIZATIONAL PATTERN OF THE TRAINING AND VISIT SYSTEM OF AGRICULTURAL EXTENSION (AFTER BENOR et al, 1984, pp 2 - 3).

In areas where the main agricultural activity is centered on a particular crop (eg sugar), specialised services may be warranted, but the ideal should be to work through the unified extension service (Benor and Harrison, 1977, p 10).

"The objective of this structure is to ensure that each level of the organisation has a span of control narrow enough to permit close personal guidance, training, and supervision of the level immediately below" (Cernea, 1981, p 223).

(iii) Inadequate extension worker/farmer ratio

Extension workers in the LDCs are often responsible for large numbers of farmers. Ward officers often have to cope with over 2 000 farming families which makes contact with all farmers impossible. The situation in the National States and Homelands in Southern Africa is very similar.

Extension messages should be directed to a selected target of contact farmers who in turn will assist in spreading messages to other groups of farmers as rapidly as possible. Contact farmers should be selected very carefully. They must be willing to try new practices and allow other farmers to visit their fields in order to see the results of the new methods. They should be of good standing in the community and be

respected by other farmers.

Progressive farmers are sometimes viewed with suspicion by other farmers, while weak farmers are usually slow to adopt new practices. Both these categories are not recommended as contact farmers and should be avoided (Benor and Harrison, 1977, pp 13 - 14).

(iv) Pattern of visits

There is often no fixed schedule or pattern according to which farm visits by field staff are arranged with the farmers. There is no time-bound plan of work and everything is done in an unorganised haphazard manner (Benor and Harrison, 1977, p 6).

In order to remedy this, it is important that the above points, the multipurpose role of the extension officer, multiple subordination and the inadequate extension worker/farmer ratio should be rectified first. Once this has been achieved, the work needs to be organised in a systematic time-bound programme, where visits to the farmers are carried out according to a planned schedule.

These operations should be closely supervised at all levels. The farmers should know when the extension worker is scheduled

to visit a particular village (Benor and Harrison, 1977, p 12).

(v) Lack of training

Pre-service training received at college or university, is either outdated, inadequate and too theoretical and consequently old, outdated messages are delivered to the farmer (Benor and Harrison, 1977, p 7). It has also been established that in-service training is often neglected (Bembridge and Penberthy, 1980, p 24; Bembridge, 1980a, p 31 and Bembridge et al, 1983, pp 110 - 117). For example, Stevens (1977, p 250) claimed that many extension agents in low-income nations know less about the crops and farming practices than the farmers they are supposed to serve.

In-service training is thus regarded as being very important and should be organised in a systematic time-bound programme of one day training sessions on a weekly, fortnightly or monthly basis, depending on the farming system. At these regular training sessions, the extension workers are intensively instructed on the practices and recommendations which they are to recommend to the farmers during the period until the next training session. According to this method, the extension worker has fresh knowledge of the latest developments and he receives it in small amounts which makes it easy to absorb and

to develop a better understanding.

At these training sessions, problems encountered during the previous work period are also discussed. This gives the worker confidence in himself and he can thus bring a better and more convincing message to the farmer (Benor and Harrison, 1977, p 12).

(vi) Ineffective links with agricultural specialists

There are often poor and ineffective links between the extension workers and Subject Matter Specialists and agricultural research institutes (Cernea, 1981, p 222; Bembridge, 1980a, p 29). Field staff often find it difficult to get information from research stations and institutes, while researchers get very little feedback from field workers of grass-root problems.

In order to close the gap, between research, extension and the farmer, research programmes should be geared to the specific situation, environment and resources of small scale farmers. A feature of the T & V system is the provision of Subject Matter Specialists (SMS) Their role is to carry out adaptive research and provide specialised guidance and training to field extension staff.

(vii) Lack of capital and unavailability of agricultural inputs

Many rural families in less developed countries are caught up in the vicious circle of poverty (Mountjoy, 1978, p 17). Agricultural inputs and/or credit are often not readily available.

Benor and Harrison (1977, p 16) stated that: "The links between extension and input of supplies and credit need to be carefully defined and developed". The extension service thus has a role to play in the effective organisation of credit and farming inputs by:-

(a) helping to generate more interest and subsequently also the demand for inputs. This will in turn create a greater turnover and make the supply agencies economically viable,

(b) provide information to farmers concerning details of costs and suitable available products,

(c) extension workers can play a useful role in providing supply agencies with estimates of the quantities of inputs and supplies which are required by farmers in accordance with recommendations based on adaptive research. The extension service should not be directly responsible for input supplies,

completing loan application forms, or collection of debts. This task should be undertaken by the supplying agencies. The roles of the supply agencies and the extension service should be carefully defined, planned and organised (Benor and Harrison, 1977, p 17).

(viii) Lack of operational policy

Several studies in the Independent and National States of Southern Africa revealed that the lack of a clear cut operational agricultural development policy was a major constraint to the efficient and effective functioning of extension services (Bembridge, 1980a; Bembridge and Penberthy, 1980; Bembridge et al, 1983).

This aspect was not mentioned by Benor and Harrison (1977), but their design of the T & V system solves the problem in that the system cannot be applied effectively unless the necessary operational decisions have been taken.

3.5 THE TRAINING AND VISIT (T & V) SYSTEM

The organisation of the T & V system of extension is adequately described by Benor and Harrison (1977), Benor et al, 1984 and Benor and Baxter (1984) and it is not within the framework of the study to discuss the finer details.

The management pattern is set out in Fig 1. This is however an ideal theoretical model, but in practice the T & V system has to be adjusted and modified to suit the local conditions of each country or district where it is being introduced. Often extension departments have to be rearranged to accommodate the system but in the process the system sometimes has to be adjusted in order to suit the department. The construction of the organisational system is designed to eliminate almost all the problems previously mentioned. (Refer par 3.4).

The following are additional pertinent features of the T & V system as recommended by Benor et al (1984, pp 22 - 44) which will give the reader greater insight into its intended functioning:

(i) General organizational structure

The system is organised in such a way that every person has less than eight persons to manage making the system easily manageable.

(ii) Field level

The Village Extension Worker (VEW), who is known in Southern Africa as the Extension Officer, selects groups of farmers,

called contact farmers, with whom he has to have regular group contact. They in turn are supposed to spread the agricultural messages received from the Extension Officer to other farmers called follower farmers.

Provision is made to give the Extension Officer regular systematic training, usually every fortnight, depending on the topic. This equips him with information, knowledge of skills for his next round of visits to contact farmers and followers. Two way channels of communication are provided from the farmers to the Subject Matter Specialists (SMSs) via the Extension Officers and vice versa. The Extension Officers are also encouraged to establish demonstrations on farmers fields.

(iii) Unified extension service

One of the most important elements is that a single line of command should be established from the top to the bottom of the organisational structure. It is thus important that the extension service should be controlled by one agency, usually the Department of Agriculture.

(iv) Extension exclusively

The extension staff should only carry out extension work. It

should not be concerned with regulatory and other extraneous work. Even the delivery of inputs should be carried out by another agency in co-operation with the extension service.

(v) Systematic training and visits

Every Extension Officer should divide his farmers into six or eight groups. Each group should be visited once a fortnight for a whole day. The other two days in each fortnight are used for training (one day), office work and other unexpected duties. The Extension Officers are trained on one day and are well equipped with a message which must be carried out during the following two weeks. Training sessions are given by the Senior Extension Officer responsible for the area aided by Subject Matter Specialists (SMSs). The SMSs with their research contacts, should create a sound link between the extension staff and research which will in turn keep him up to date with sound messages to deliver to extension workers and farmers.

(vi) Consentration of efforts

In order to make a direct immediate impact, all efforts should be concentrated only on relevant seasonal aspects of the farming system. This in turn enables the Extension Officers to establish themselves as experts in the eyes of the farmers and

improve their credibility.

(vii) Imitable contact farmers

As mentioned in (ii) above the Extension Officer does not work with all farmers. He concentrates only on contact farmers who are aware of when he is due to visit them. Other farmers are only attended to when they request assistance. Contact farmers are intended to spread the messages to their friends and neighbours.

(viii) Best use of available resources

The system emphasises that all available resources including extension staff should be utilised as profitably as possible.

(ix) Linkages with research

Subject Matter Specialists (SMSs) are required to carry out their own adaptive research, as well as to be in contact with research institutions. This enables the Extension Officers to obtain the most up to date applicable recommendations for a specific crop.

(x) Evaluation

The system has an inbuilt system of monitoring and evaluation which is geared to improve the system continuously.

3.6 IMPACT OF THE TRAINING AND VISIT SYSTEM

The concept of the Training and Visit system was first tested on a trial basis in India and Turkey (Cernea, 1981, p 221). Based on its success, particularly with crops under irrigation, it has also been adopted in Bangladesh, Nepal, Pakistan, Sri Lanka, Thailand, The Philippines, Indonesia, and more recently also in East and West Africa (Anon, undated, p 1).

The first results were very impressive and the system was adopted for much larger areas and extended to various countries. It has now been adopted at national or local level by approximately 40 countries (Benor and Baxter, 1984, p 4).

In the Seyhan project in Turkey, farmers increased cotton yields from 1,7 tons to over 3 tons per hectare in three years. In Chambal, Rajasthan (India), farmers increased paddy yields from about 2,1 tons to over 3 tons per hectare in two years. Combined irrigated and unirrigated wheat yields in Chambal, Madhya Pradesh (India), rose from 1,3 tons to nearly 2 tons per hectare after one season and have since increased further

(Benor and Harrison, 1977, p 3).

In India, the country where the system has been most widely established, it is claimed that the T & V system continues to contribute to significant changes in agricultural practices and production.

Because of lack of empirical evaluation studies, it is difficult to isolate which factors have been responsible for the improved production, but it is clearly evident that a well managed agricultural extension service developed on similar principles in each of these diverse areas and was a major driving force behind these changes (Benor and Baxter, 1984, p 4).

The T & V system of agricultural extension spread rapidly to a number of countries where whole extension departments were reorganised to suit the philosophy of the system. This section briefly discusses the success achieved with the system in a number of countries from which information is available.

3.6.1 Bangladesh

The T & V system was introduced in Bangladesh in 1977 in an effort to combat a number of constraints which were identified in the existing extension system at the time. The weaknesses

which were identified were amongst others:

(a) inadequate links between extension and research,
(b) poor in-service training facilities,
(c) no well-defined job descriptions for extension workers,
(d) big areas with large numbers of farming families,
(e) poor office, housing and other facilities,
(f) slow diffusion of agricultural information.

Apart from the above, there was an urgency to increase agricultural production for the fast growing population (Abedin, 1983, p 1).

Empirical information on the evaluation of the system in Bangladesh is not available.

Both Abedin (1983, p 80) and Khayer (1979, p 69) found that at the time of their studies no evaluation had been carried out in Bangladesh and that it was not possible to say how much benefit resulted from the T & V system.

Both authors agree, however, that the T & V system has improved conditions substantially compared to the situation prior to its introduction (Abedin, 1983, p 80 and Khayer, 1979, p 71).

3.6.2 India

In India, which is a large country with a very large population, the T & V system has mainly been implemented by assistance provided by the World Bank. By 1982 it had been introduced in 13 States, with plans for implementation in a further three. The Punjab, India's most agriculturally developed state, is the only major state apparently resisting the idea (Moore, 1984, p 306).

Ray et al (1982, p 60) studied the impact of the T & V system on tribal farms in the Hoogly District in India prior to implementation and again four years after the introduction of the T & V system. The results were impressive and showed "... that the T & V system increased the cropping intensity, income, employment, adoption of recommended practices and marginal value productivity of inputs used on tribal farms" (Ray et al, 1982, p 60).

The major reason claimed for the success of the T & V system in India has been because extension had become the weak link in the integrated approach to development (Cernea et al, 1982, p 1).

Tripathy (1981, pp 607 - 608) mentions that the T & V system

has produced impressive results in the two areas where the system was assessed in India and several recommendations were made on how to improve the system. In Andhra Pradesh and several other states where the T & V system was introduced, best results were obtained where a single line administration system, considered one of the important prerequisites of the system, had been introduced.

Moore (1984, p 314) on the other hand is highly critical of the implementation and results of the T & V system in India. He stated that the system is "... justified only if we can produce evidence that one is on the correct path, that progress has been made, and more can be expected in the future. Unfortunately for T & V in India such evidence is scarce. On the contrary, there are real fears that most of the élan behind T & V is already exhausted and that extension has already regressed considerably after the enthusiasm of the earlier years".

3.6.3 Indonesia

The first four year National Food Crops Extension Project (NFCEP) was established in 1976 according to the T & V principles with donor assistance from the World Bank. Its achievements were so impressive that the project was extended in 1980 to cover the whole of the country. The objectives of

the second phase is amongst others to raise the agricultural production of the nearly 16 million smallholder farm families by organising the approximately 15 000 extension workers according to T & V principles (Sukaryo, 1983, p 17).

A major feature of the implementation of the T & V system in Indonesia has been the ability to take into account the socio-cultural characteristics of local communities and to build the extension activities upon existing traditional village groups. These groups had clear membership ties and strong individual affiliation and gave considerable power to a chosen leader. In most cases up to 100 farm families were grouped together.

The contact farmers were selected for each group by the farmers themselves and in addition 20 progressive follower farmers were also expected to attend most meetings and pass the information on to four or five neighbours.

Subsequent surveys indicated that contact farmers were key sources of information to other farmers, while the progressive contact farmers rarely divulged information to other farmers. (Sukaryo, 1982, pp 2 - 3).

3.6.4 Nepal

The system has been hampered by a lack of trained manpower and in some instances even by a lack of sufficient technical knowledge. Due to lack of trained staff, Village Level Workers (VLWs) have been recruited from the farming community. They work with qualified junior technical assistants stationed at sub-centres, who supervise 3 to 5 Village Level Workers. These VLWs have the advantage that they know the local farming system, but their education is low as well as their remuneration. The problem is that the staff turn-over is high. Training needs to be improved and the technical recommendations will have to be developed.

The cost of implementing the T & V was found to be higher than the traditional system, but the output was also higher (Asian Regional Workshop, 1982, p 19).

3.6.5 Philippines

A modified form of T & V has been introduced under the Extension Delivery System (EDS). It covers all the provinces, but in each province, it is limited to one or two

municipalities only. This gradual aproach enables the staff to eliminate problems before it is implemented in larger areas. Important features in the Philippines system have been active group participation at the local level as well as a "bottom-up" approach in the diagnosis of problems and the design of programmes (Asian Regional Workshop, 1982, p 19).

The modification which the EDS planners implemented concerned both the "training" as well as the "visit" aspects of the system. Both principles were accepted and applied but not as rigidly as suggested by the T & V proponents (Nagel et al, 1983, p xiii).

Other features of the modified T & V in the Philippines are as follows:

- The planning process is characterised by the intention to organize planning from below.
- Supervision is not performed along rigid schedules.
- Monitoring and evaluation is to a large extent based on reports from field staff.
- Extension training is more informal. Extension workers normally have Bachelor degrees of varying standards.
- The farmers use their contact farmers as resource persons, often unaware of their appointment as contact farmers.
- Visits to the contact farmers are regular, but not as rigid

as prescribed by the T & V system.

The strength of the EDS is the result of the combined elements of the T & V system with approaches developed and tested locally (Nagel et al, 1983, pp xiii - xvii).

3.6.6 Sri Lanka

The government of Sri Lanka initiated a scheme in the early 1970's to reorganise and strengthen agricultural research, extension and training. Some progress was made, but basic problems of inadequate staffing, insufficient technical support and supervision still persisted.

In 1978 the T & V system was introduced on a trial basis in one district and subsequently extended to the whole country of 24 districts in 1980.

Research was decentralised and eight Regional Research Centres (RRCs) were strengthened while adaptive research units were established on farmers' fields to test research findings.

Regular and systematic training at all levels assumed greater importance. Six Regional Training Centres have been established close to the existing RRCs while two more is envisaged.

An important feature was that it was not only extension staff that had to be trained. It was realised that other groups also had to be trained in order to create an awareness and understanding of the system. These groups included research personnel, administrators, university teachers, local officials, etc and especially the farmers. This training had to be done on a continuing basis. Experience has shown that strong training support is essential for the success of the T & V system.

There was evidence that paddy yields increased from 2 701,7 kg to 2 956,5 kg per ha in three to four years. One factor was the introduction of improved technology which was adopted by the farmers as a result of the new system of extension. (Natesan, 1983, pp 55 - 63)

According to Von Blackenburg (1982, pp 6 - 22) who conducted an evaluation study in Sri Lanka, the first impressions were favourable.

3.6.7 Thailand

In Thailand the T & V system was first introduced in 1977 and in the five year period 1977 - 1982 the system was implemented throughout the country with an average field worker/farmer

ratio of 1 : 1 000. Previously it was 1 : 10 000 with no regular contact. This can be regarded as a substantial achievement. The following was regarded as being crucial for the successful implementation of the sytem:

(i) regular visits and good supervision,

(ii) mobility of staff and housing facilities for field workers. This was the key to establishing an effective system and maintaining morale,

(iii) the setting up of an intermediate level of staff in six regions to supervise provincial staff and to help prepare the monthly training programmes for SMSs,

(iv) upgrading of the middle level staff since they have often received less formal education than the new staff entering the service,

(v) the local administrators were motivated to reduce demands for reports or other additional activities that weaken their professional extension performance.

A problem was a shortage of SMSs in some areas. An important development in Thailand was the setting up of a central evaluation and monitoring unit. However, it appears no results

have yet been published. (Asian Regional Workshop, 1982, p 18).

3.6.8 Zambia

Over the years, many attempts have been made in Zambia to realise an improvement in food production from farm families by means of extension. These attempts have not been successful in improving agricultural production (SADCC Conference Paper, 1984, p 1).

The T & V system was introduced in Zambia in 1978 on a trial basis in a few areas financed by the World Bank. The programme focussed on small scale farmers covering all the enterprises in which they were involved (Mulele and Chungu, 1984, pp 2 - 4).

During 1984 there were practically no farmers operating as part-time extension agents. It is envisaged, that, in future, farmers may play in increasing role as part-time extension agents (Mulele and Chungu, 1984, p 9).

According to the SADCC Conference Paper (1984, p 2) the Department of Agriculture followed the following organisational pattern:-

(i) 900 agricultural camps (work areas) were organised into

220 blocks,

(ii) on average four to five blocks made up a District,

(iii) an average of five to six Districts formed a Province.

At field level the field extension workers divided a camp into six working areas in order to plan a schedule of regular visits to groups of farmers in each of the six areas. The fixed schedule allows for three visiting days and two office days per week. The six groups of farm families elect their own representative who is known as "The Contact Farmer" through whom the agricultural field worker can reach the farm worker without visiting them all. As yet there has apparently been no evaluation study of this project.

3.7 LESSONS FROM THE TRAINING AND VISIT SYSTEM

Because of the large variations in the different countries with regard to the climate, government structure and policy, social system and farming enterprise, etc, the T & V system cannot be adopted in every country according to a rigid text book recipe.

In order to be successful, the T & V system must be adapted to fit local agro-ecological, socio-economic, and administrative conditions. There are however certain features of the system

which cannot be changed significantly without affecting its operation (Benor and Baxter, 1984, p 9). Some of these features have been outlined by Benor and Baxter (1984, pp 9 - 11) and include:

(i) Professionalism

The extension service has to be professional at all levels. Extension staff must keep in close touch with relevant scientific developments and research in order to make the appropriate recommendations useful to their specific farmers.

(ii) Single line of command

The extension service must function according to a single line of command with support from teaching, research and other institutions.

(iii) Concentration of efforts

All extension staff are required to work only on agricultural extension and then also only on those crops and practices that are relevant to that particular season in their specific locality.

(iv) Time-bound work

Messages and skills must be transfered to farmers in a regular, timely fashion on a fixed day. Fortnightly visits are recommended, but are not compulsory.

(v) Field and farmer orientation

In order to serve the farmers effectively, the extension service must be in contact with the farmers and visit their fields on a regular basis. This applies not only to the VEW but also to almost all other staff. Researchers, trainees as well as District Extension Officers should visit the fields often and regularly to understand the problems faced by farmers and junior extension workers.

(vi) Regular and continuous training

Regular and continuous training of extension staff are required both to teach, and discuss with them, the specific production recommendations required by farmers for the coming fortnight. The VEW is equipped with an up-to-date message to deliver to the farmer.

(vii) Linkages with research

Effective extension depends on close two-way linkages with research. Farmers problems that cannot be solved should be passed on to researchers and the solutions should be returned as soon as possible.

3.8 ADVANTAGES OF THE TRAINING AND VISIT SYSTEM

3.8.1 Linkage with research

The T & V system has strengthened the extension services' commitment to solving farmers' problems in the field. Research often lacked feedback from the farmers. When extension staff are confronted with problems, there is a direct communication channel to the research organisation to obtain the appropriate correct information (Asian Regional Workshop, 1982, p 11 and Moris, 1983, p 15). The farmers are therefore assured of up-to-date correct information applicable to their specific conditions.

3.8.2 Simplistic system to implement

The principles underlying the T & V system are basically simple and can be widely applied in different situations. Few, if

any, new ideas were implemented in the system, but it involves the systematic application of well-known management principles. This is, among others, one of the reasons why the system spread so rapidly to different countries (Benor and Baxter, 1984, p 5).

3.8.3 Rapid impact

The T & V system is designed to achieve results rapidly and cheaply. Changes can often be seen in farmers' fields before the end of the first crop season after initial implementation (Benor and Baxter, 1984, p 6).

3.8.4 Public sector "top-down" structure

The structure of the T & V system matches closely the types of bureaucratic attitudes and structures usually found in Africa. It will thus have a better chance of success (Moris, 1983, pp 14 - 15).

3.8.5 Provision for training extension staff

If the system operates as planned, the regular updating of the VEWs knowledge can only benefit the farmer (Moris, 1983, p 16).

This knowledge, which is supposed to be correctly adjusted for the specific environment of the farmers concerned, is obtained from researchers via the SMSs and has the potential to benefit the farmers considerably. This is a factor for which there is no equivalent in any other extension system.

3.8.6 Realistic work loads for extension staff

Extension staff often became overburdened with work because of financial stringencies as well as other reasons. According to the T & V system, an extension agent has a known client load. Fewer farmers are dealt with, but the work can be carried out as planned (Moris, 1983, p 15). The ad hoc haphazard way of trying to cope with too many farmers and duties is avoided.

3.8.7 Provision for advice to be tested

It is advantageous to have the research results tested on the farmers' land. The farmers must group the critical managerial innovations thoroughly before incurring any credit burden (Moris, 1983, pp 15 - 16).

3.9 PROBLEMS AND CRITICISM OF THE TRAINING AND VISIT SYSTEM

3.9.1 High costs of the system

A few writers have mentioned that the cost of the T & V system is too high, making it an expensive system to implement. The matter remains unresolved at this stage due to the lack of suitable reliable research data (Asian Regional Workshop, 1982, p 19; Moore, 1984, p 309; Howell, 1982a, pp 279 - 281; 1984, p 3; Sankaranarayanan in Howell, 1983, p 18; Sooksanguan, 1980, pp 50 - 51). Russell (in Howell, 1983, p 18) states that the T & V system is in many cases only 25 - 40 per cent more expensive than the previous system where effectiveness was minimal.

The design of the system is critised as adding to costs. The VEWs are supposed to concentrate only on one or two aspects at a time and not to become involved in other functions such as input supply, credit, etc. These functions must now be done by other people other than the VEW which could result in a costly duplication of travelling and visiting time. "Even worse, two or more parallel line management systems could grow up side by side - two systems which would, as likely as not, fail to

co-ordinate effectively" (Reading Rural Development Communication (RRDC) Bulletin 10, 1980, p 3).

Howell (1982a, p 281) agreed with the high cost of introducing the system, but also mentions two indirect administrative costs:

(i) it is expensive, difficult and time consuming to change an extension service, which has developed over a long period of time and has been responsible for a wide range of functions, into an unified extension service,

(ii) considerable organisational difficulties are experienced with the introduction of the T & V system. The long-term benefits must be weighed up against the short-term costs during the disruptive transition period.

The financial cost of the system to the farmer is however small, as the initial focus is usually on the improvement of low cost basic agricultural practices (hybrid seed, seedbed preparation, cultivation, weeding) that require more work but very little additional investment (Benor and Baxter, 1984, p 6).

Other writers such as Benor et al (1984, p 70), mention that the designers, supporters and implicators of the system

maintain that it is a relatively cheap system to implement in order to get substantial increases in production. The same authors (1984, p 55) state that the cost will depend upon the state of the existing extension service at the time of implementation of the T & V system.

3.9.2 Unsuitable for highly diversified cropping systems

The use of the T & V system in a highly diversified rainfed mixed cropping system has also been criticised. The critics maintain that the T & V system originated on large scale irrigation schemes where it is possible to concentrate extension advice on a single crop where the timing of operations is similar throughout the scheme.

> The message which has to be delivered to the farmer, becomes progressively more difficult as the complexity of the farming system increases and the less predictable the rainfall on which the farming operations depends. As T & V moves out of irrigated into rainfed farming systems, especially semi-arid systems, it may be necessary to have its present structure modified (RRDC Bulletin 10, 1980, p 3).

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3.9.3 Technical assumptions of the T & V system are often wrong

The decision to introduce T & V and incur increased expenditure of more staff and research is based upon two assumptions:

(i) That the major constraint to increased production is insufficient knowledge of improved agricultural technology and

(ii) that this knowledge is appropriate to a large number of small farmers and does not require major adaptations to suit local physical variations.

These assumptions have led to criticism of T & V as a top-down structure which is insensitive to the differing requirements of small farmers (Howell, 1982a, p 279).

Abedin (1983, p 66) agrees with this point of view and states that the SMSs prepare the impact points on the basis of theoretical ideas and pass them on to the VEWs with a direction to make the farmer aware during the next fortnight. Sometimes, however, those impact points are not feasible for all the contact farmers.

Russell, quoted by Howell (1983, p 1) said that when the T & V system is implemented effectively, it provides for much closer interaction with farmers. The two way flow of communication which is provided in the system, makes it possible to have recommendations tailored to different ecological zones and the varying needs of farmers with different resources. The 'top-down' approach will seem to be present if the system has not been implemented properly.

Howell (1983, p 2) also quotes Israel who disputes the two points, namely, that the T & V system assumes that insufficient knowledge is the major constraint to increased production. It assumes that knowledge is a constraint that has to be solved with many other problems. With regard to the second point that recommendations do not suit all local conditions, Israel maintains that the T & V system is particularly necessary in circumstances where knowledge requires adaptations.

The senior staff and SMSs usually carry out the training sessions for the VEWs, and are supposed to have regular contact with the farmers as well as with research. They should therefore be in a position to recommend the most appropriate information to the farmers.

3.9.4 Emphasis on support for crop improvement at the expense of 'non-production' functions

The emphasis which the T & V system puts upon a single function of crop improvement is also criticised. Critics maintain that it misinterprets the role of the extension agent. The extension officer should only offer technical advice to the farmers and ignore functions such as selling, buying, checking, etc.

Howell (1982a, p 280) mentioned that Rice found in his study that agricultural extension in the Andes was only effective when linked to access to input supplies and credit. This aspect has been confirmed by other writers on Africa (Moris, 1983, pp 23 - 24) and India (Moore, 1984, pp 304 - 305).

3.9.5 Poor transmission of messages to follower farmers

The farmer groups (contact farmers) consisting of household heads are not always directly involved in their own agriculture as much of the farming work is undertaken by the women and young people in the family. The real farmers on the land are not reached. The extension staff are not always aware of the other household or family duties which women have to perform.

Widows or wives looking after the farm in the absence of household heads, may also be excluded from obtaining extension advice.

The transfer of knowledge from the contact farmers has also been questioned. There is a strong likelihood that such farmers will monopolise the advice and extension service and not pass on the information gained to others (Howell, 1982a, p 280). This viewpoint has been confirmed by Moore (1984, p 310) and Jaiswal (1983) as quoted by Feder and Slade (1984, p 17), while the latter writers did not find it to be a problem in their study area of Haryana, India. The Monitoring and Evaluation Unit in Haryana (Feder and Slade, 1984, pp 19 - 22) found that 60 per cent of the non-contact farmers confirmed knowing at least one contact farmer. It was further found that 52 per cent of the contact farmers did discuss information learnt from the VEW with the other farmers. More than 30 per cent of the non-contact farmers who had direct contact with the VEW indicated that they also passed on information to other farmers.

The Reading Rural Development Communications Bulletin (RRDC Bulletin 10, 1980, p 3 - 4) stated that many extension schemes which relied on the demonstration effect have failed due to the attitudes of the follower farmers towards the contact farmers.

No provision is made in the system for the monitoring of the flow of information between contact farmers and follower farmers. This aspect is regarded as the most fundamental defect of the system (RRDC Bulletin 10, 1980, p. 4).

3.9.6 System is not an easily-managed system

The critics acknowledge that the system is highly streamlined with clearly defined functions and lines of command.

Problems are forseen in that the roles of the SMS and the District Extension Officer (DEO) can be duplicated. The SMSs are not in the "line of command" but have the crucial role of instructing the VEW at the fortnightly sessions. This means that they may usurp the functions of the DEO who is in direct control of the VEWs. This can than develop into an area of friction. The single line of command which is a key principle of the T & V system may thus be violated (RRDC Bulletin 10, 1980, p 4).

3.9.7 The T & V system does not benefit all staff

It was claimed by the designers of the system that it leads to a higher staff morale and higher production levels (Benor et al, 1984, pp 68 - 69). It has been found that the

introduction of the T & V system has often lead to dramatic increases in staff morale where poorly trained staff were involved. The critics feel that well equipped extension workers are also often found, and in some situations their morale could even be lowered (RRDC Bulletin 10, 1980, p 4).

3.9.8 Monitoring of side effects of extension recommendations

There is a built-in monitoring system in the T & V system. In order to establish whether the VEW has been functioning effectively, his supervisor simply needs to visit farmers to discover whether they have grasped the messages which the VEW was supposed to deliver. Doubt has been expressed whether this system of monitoring will be effective in establishing any unforseen, negative or unwanted side-effects of farmers' responding to messages delivered by the system. For example, a farmer can put more resources into a cash crop as a result of following extension advice directed towards that particular crop and at the same time neglect a food crop which will result in poorer nutrition (RRDC Bulletin 10, 1980, p 5).

3.9.9 A tall hierarchical pyramid

The top management is far removed from the base level. In such a situation smooth management is not easy and may sometimes create problems (Abedin, 1983, p 64).

The internal vertical channels are too long. Management information has to pass through too many people which takes a longer time and is exposed to a higher risk of distortion. A farmers' urgent problem may have to wait up to a fortnight for the next visit of the VEW (Abedin, 1983, pp 64 - 65).

3.9.10 Visiting schedule may be unsuited to the farmers

The rigid schedule of visiting certain farmers on certain predetermined days of the week does not make provision for the programmes of the farmers where they often have to attend funerals, initiation ceremonies, beer feasts, etc. This problem has been mentioned by Sooksanguan (1980, p 57) in Thailand.

3.10 PROBLEMS OF THE TRAINING AND VISIT SYSTEM IN AFRICA

3.10.1 Lack of appropriate knowledge

Moris (1983, p 16) stated that the T & V system's assumption that there is already an effective technology-generating network in operation, limits its applicability. In Africa research stations and proven technological innovations are often lacking. Without the appropriate technology and knowledge, the extension staff will have difficulty selecting

correct recommendations, ultimately the extension staff will stop giving unpopular and ill-chosen recommendations.

3.10.2 Structure of the T & V system

The T & V approach is very organisational-intensive at the middle management levels. This might be its strength in India. In order to implement the system, middle management has to bear a heavy responsibility as they have to do the screening of innovations, designing training aids, setting up field schedules, recruiting subject matter specialists and field supervisions, arrange for finance, transport, etc. "Such tasks require a level of commitment and a cost consciousness which is simply not found at the middle levels of the typical African Ministry of Agriculture" (Moris, 1983, p 16). These functions cannot be provided on a continuing basis as is needed by the system (Moris, 1983, pp 16 - 17).

3.10.3 Extension specialised in one crop

The extension staff, under the T & V system, are supposed to deal only with certain specified crops. It is thus presumed that other agencies are present in the community to handle crop finance, farm credit, land reform, disease diagnosis, etc. In many African countries these functions will not be carried out if it is not done by the extension agents. This aspect has

already proved to be a problem in countries where the T & V system has been implemented (Moris, 1983, p 17).

3.10.4 Rigid schedules

An important aspect of the T & V system is that the extension staff should follow and adhere strictly to set schedules. In the African context time is not regarded as being important. This fact, coupled with long distances, lack of transport and poor initiative, means that many commitments and appointments will not be met. This situation will occur from the top levels down to the VEWs (Moris, 1983, pp 17 - 18).

3.10.5 Ecological variation

The T & V system is suitably adapted for areas such as India where a single major crop is grown over very large areas. It does also assume that the average farmer represents a large category of farmers. This rigid and rather simplistic concept of farmers' needs is inadequate if localities contain pronounced ecological variation. In Africa, divergent farming types, different types of livestock, different soils, marginal lands and a wide spectrum of annual crops are present. A wide range of animal diseases and a wide variety of different community problems also exist. The T & V system thus has to be adjusted considerably to suit these conditions (Moris, 1983, p 18).

3.11 SOLUTIONS TO EXTENSION PROBLEMS IN AFRICA

Moris (1983, pp 19 - 27) suggested a package of six solutions to reform extension in Africa:

(i) a sound agricultural policy is necessary at the top level,

(ii) agricultural research should be strengthened and should be appropriate,

(iii) once objectives are classified and new technologies available and appropriate, a modified version of the T & V system can be introduced,

(iv) extension activities should be grouped in:

(a) information delivery, which entails supervising research field trials, selecting technical recommendations, organising farm demonstrations, etc,

(b) agricultural economic considerations, such as price policies, cash crop development, loan programmes, input availability, storage, marketing performance and transport, and

(c) creating an institutional capability for training, for responding to the special needs of youth and women,

(v) with the high ratio of field agents/farm families, a contact network should be designed very carefully, and

(vi) staff should be made downwardly accountable.

Field workers should represent their communities rather than their employers. In the past, some communities in the USA contributed towards the salaries of their extension officers. Communities should perhaps be consulted with regard to the appointment of their extension officer.

3.12 DISCUSSION

Von Blanckenburg (in Howell, 1983, p 19) stated that the assessment of the T & V system should not only be based on the organizational aspects. The impact of the new system is more important and should be better than the old ones in terms of benefit/cost ratio, of changes in farm technology, incomes and levels of knowledge and capabilities of farmers. He also admits that very little is known at this stage apart from a few success stories. He agrees that the T & V system compares favourably with most other extension systems.

The lack of in-depth study results concerning the T & V system, makes it difficult at this stage to make an objective

assessment of the impact of the system.

The introduction of a new extension system such as the T & V system involves so many aspects that it takes a long time to become well established and to iron out all the problems which were not envisaged during the planning stages. Improvements and adjustments have to be made to adapt the system to a specific area and to specific people.

It is not possible to evaluate the system in depth, taking among others costs and benefits into consideration, if the system has not yet been in operation for a number of years and has reached a stage of established stability.

As the system was only recently introduced in most countries, it is still too early to expect permanent changes amongst the farmers concerned.

In many countries where the system was introduced, it was sponsered financially by World Bank loans which usually tend to be short term (5 years).

The success of the system can only be validly assessed once the sponsoring body has withdrawn and the system has been functioning satisfactorily on its own over a period of time. Cultural change is a slow process, especially in rural

communities, while sponsoring agents are often keen to see rapid changes in a short time.

CHAPTER 4

DESCRIPTION OF THE AREA

4.1 INTRODUCTION

This chapter is designed to orientate the reader with regard to the historical background, physical resources and infrastructural development of the study area.

4.2 HISTORICAL BACKGROUND

Towards the end of the eighteenth century the early settlers from European stock and the Xhosas first came into contact with each other in the area which today is known in Southern Africa as the Republic of Ciskei.

For approximately 100 years (1780 - 1880) there was hostility between the early settlers and the Xhosas. The town of Keiskammahoek was established in 1853 as a centre for a military base five years after the first military settlements were established (Hobart-Houghton, 1955, p 1).

When the first settlers arrived in Keiskammahoek, the area was occupied by the Ngqika section of the Xhosa people (Wilson et al, 1952, p 1).

The Mfengu (Fingoes) were refugees of Nguni stock, driven from Natal by Chaka's wars known as the Mfecane. They slowly moved westwards and spent some time among the Gcaleka in what is now known as Transkei. Small numbers of Mfengu infiltrated earlier into the area of the present Ciskei but the majority (16 800) crossed the Kei river on 9 May 1835 towards the end of the Sixth Frontier War (Moyer, 1976, p 158). They settled in the Peddie district, but due to a number of problems the majority soon moved to other adjoining areas (Moyer, 1976, pp 193 - 195).

Since the 1830's it was the policy of the administration in the Cape Colony to settle friendly Mfengu groups in reserves or locations among the Whites in the Cape Frontier districts in order to provide additional security (Hobart-Houghton and Walton, 1952, p 2).

The Ngqika were driven away from the Keiskammahoek area during the Eighth Frontier War (1850 - 1853). After the war a large number of Mfengu were resettled in the area to form a human barrier between the Whites and the Xhosa (Moyer, 1976, p 223).

"The Keiskammahoek region became a magnet for the Zizi" (Moyer, 1976, p 226). The highest ranking hereditary Mfengu-Zizi chief, Wulana, settled in the district as well as Jama and his nephew Socitsha.

Shortly after being moved several times, the Tolo chief Dondela, also settled in the area (Moyer, 1976, p 226) after being moved from the Mancazana stream by Sir George Cathcart (Moyer, 1976, p 392).

After the 1850 - 1853 war many Xhosa people filtered back, but Mfengu are presently still the dominant group in the district. Culturally Mfengu and Xhosa differ very little (Wilson et al, 1952, p 1).

Soon after their arrival in the Cape Colony the Mfengu undertook to:

"- support the British King and His government,
- be faithful to God, and
- support the Missionaries and educate their children"
(Ayliff and Whiteside, p 34 as quoted by Moyer, 1976, p 12).

Subsequently they were used, by the British Colonial Government, as a buffer between the Xhosa and the European farmers and in some of the frontier wars they fought with the

Europeans against the Xhosa. On account of this the Mfengu received preferential treatment from the authorities, while they were naturally industrious and soon accumulated some wealth. All the abovementioned caused some animosity between the Mfengu and Xhosa groups which, although very unobtrusive at present, are still present between the two groups (Moyer, 1976, pp 12 - 20).

Prior to the granting of independence by South Africa to Ciskei in 1981, almost all the white owned farmland and urban property was expropriated. Presently less than 20 White families are resident in the area. These people are mostly attached to a sawmill, a furniture factory, a few shops and employed on the Keiskammahoek Irrigation Scheme.

4.3 AGRO-ECOLOGY

4.3.1 Situation

The district is situated between 32° 33' and 32° 48' South, and between 27° 00' And 27° 15' East extending over some 570 square kilometers (Fig 2 and 3).

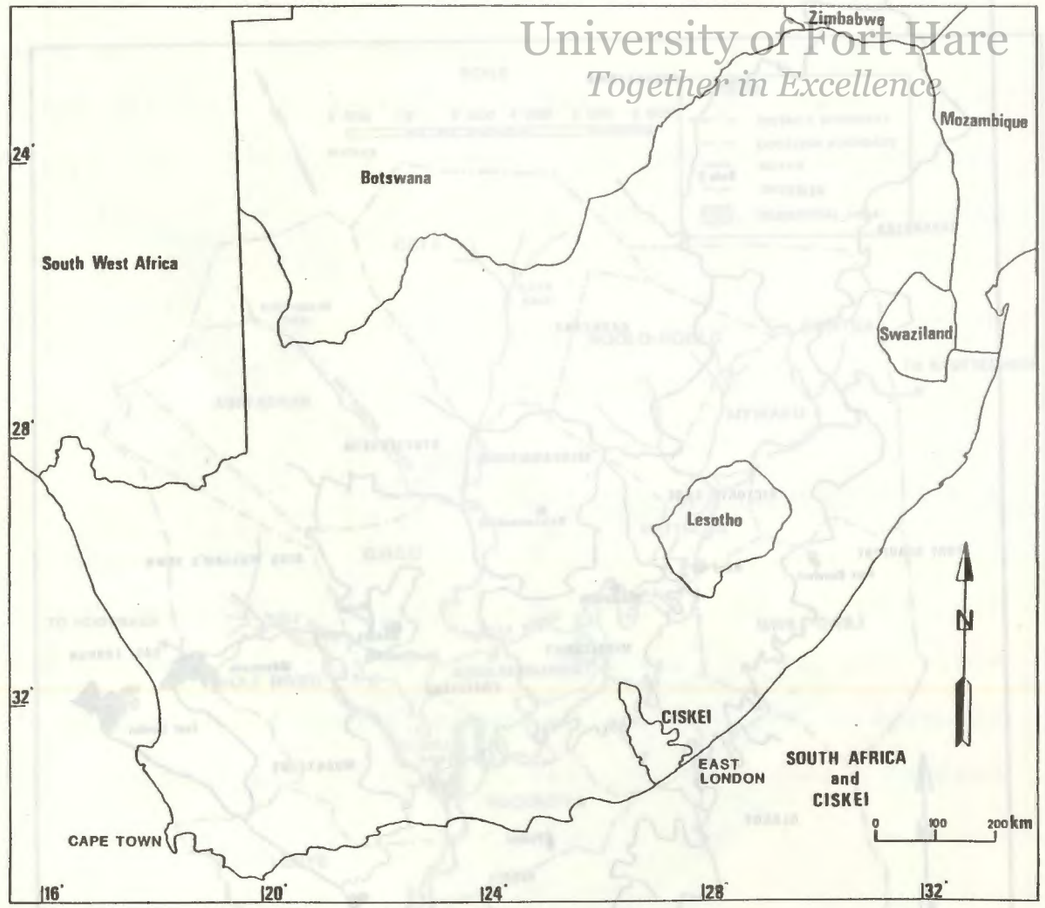


Fig 2 MAP OF SOUTHERN AFRICA SHOWING LOCATION OF CISKEI

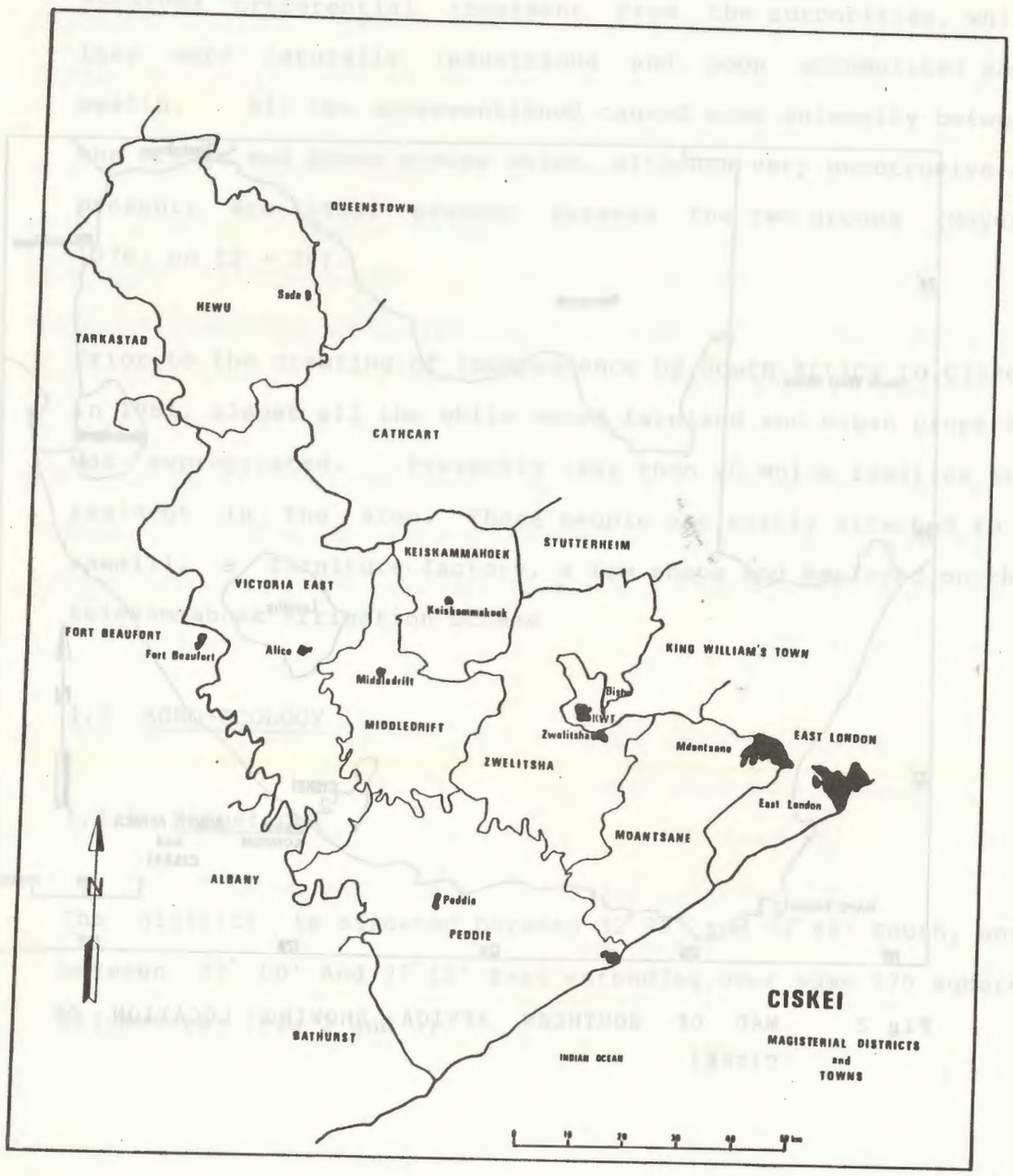


Fig 3 MAP SHOWING MAGISTERIAL DISTRICTS AND TOWNS OF CISKEI

The town of Keiskammahoek is centrally situated in the roughly circular district, 53 km and 30 km approximately distant from King William's Town and Middledrift respectively (Fig 4).

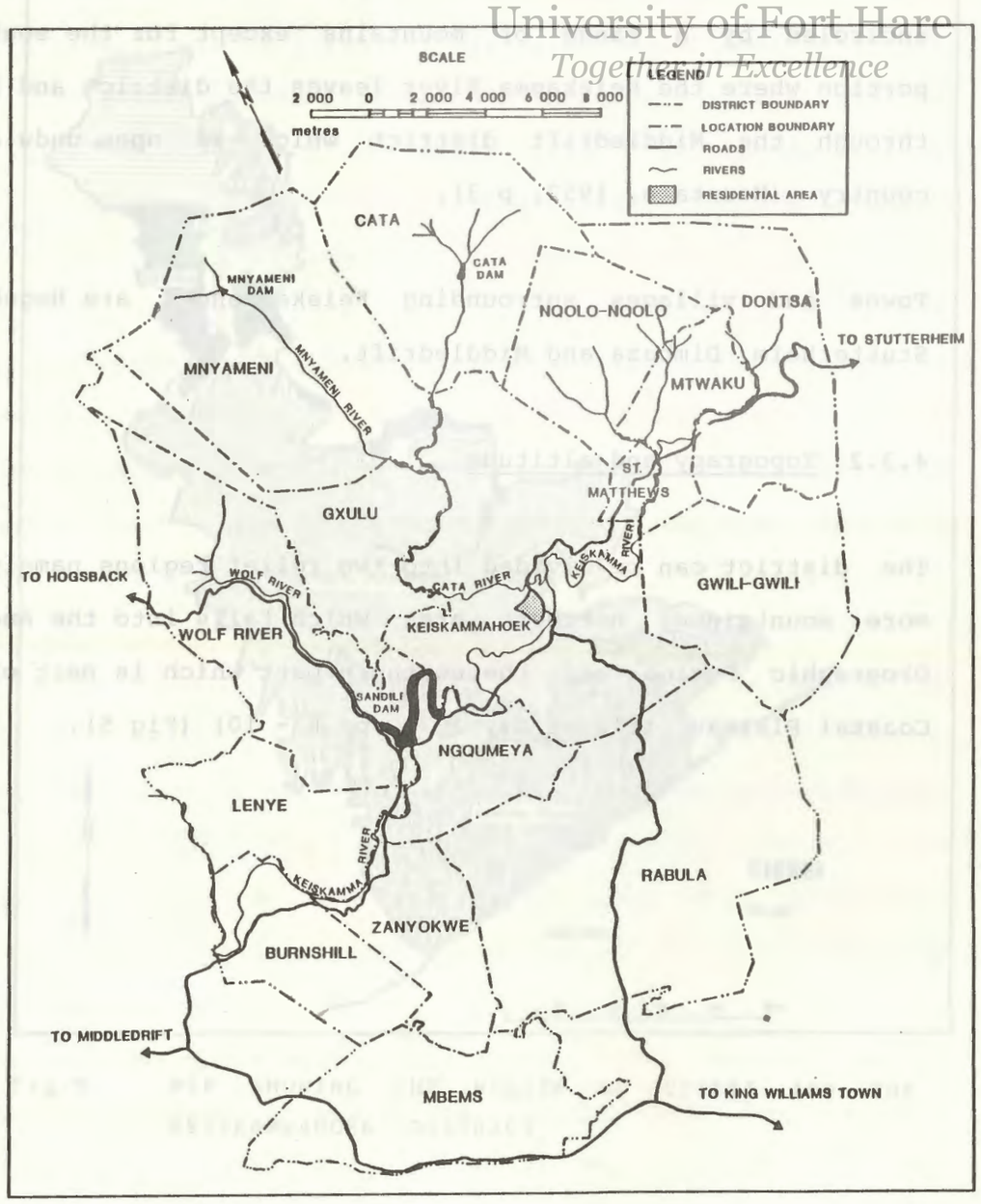


Fig 4 MAP SHOWING THE KEISKAMMAHOEK DISTRICT

The district corresponds very closely to the drainage basin of the Keiskamma River above Fort Cox and is more or less encircled by a range of mountains except for the southern portion where the Keiskamma River leaves the district and flows through the Middledrift district which is open undulating country (Mountain, 1952, p 3).

Towns and villages surrounding Keiskammahoek are Hogsback, Stutterheim, Dimbaza and Middledrift.

4.3.2 Topograpy and altitude

The district can be divided into two relief regions namely the more mountainous northern area which falls into the Amatola Orographic Region and the southern part which is part of the Coastal Plateau (Els et al, 1971, pp 6 - 10) (Fig 5).

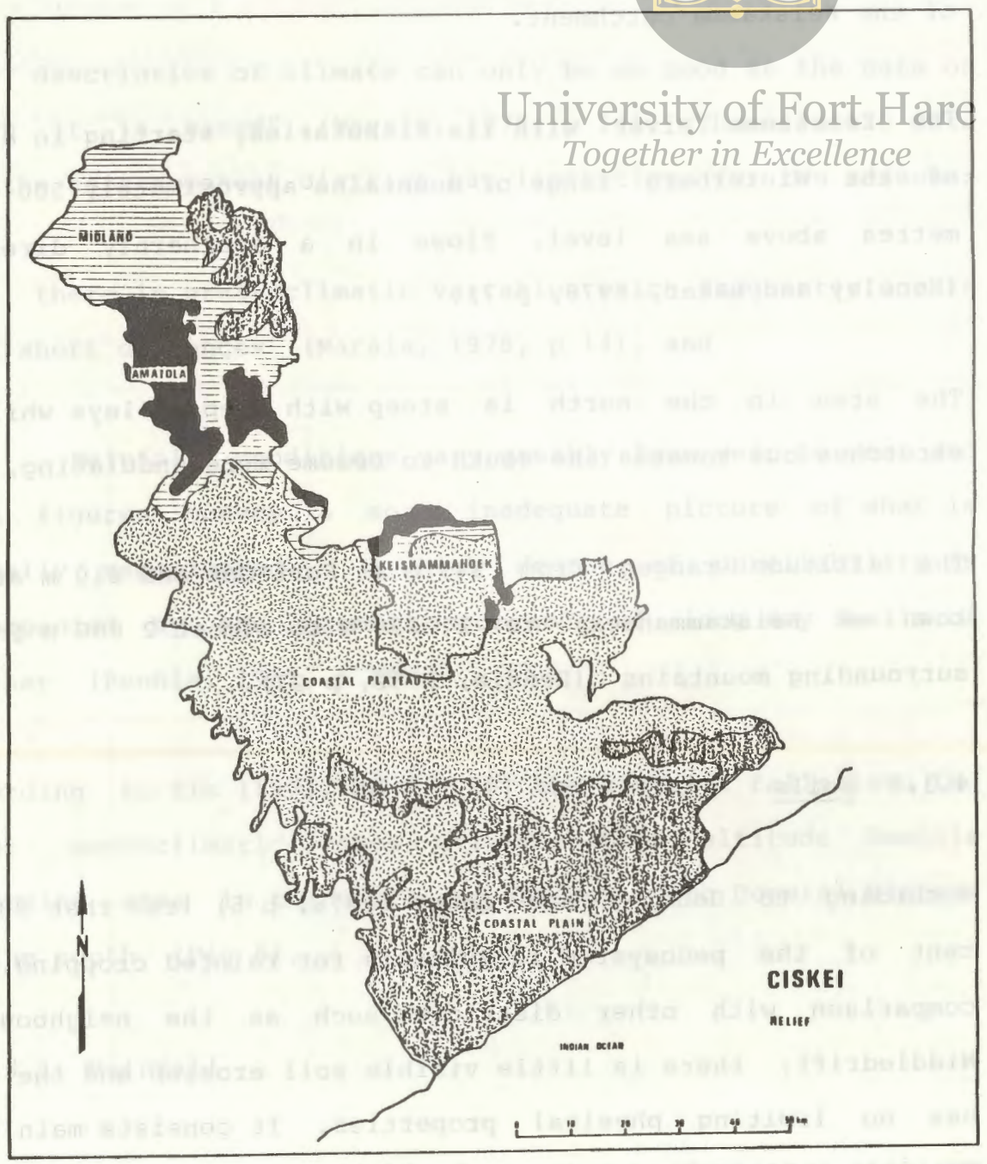


Fig 5 MAP SHOWING THE RELIEF OF CISKEI AND THE KEISKAMMAHOEK DISTRICT

The northern part of the Keiskammahoek district incorporates part of the Amatola Mountain Range which forms the headwaters of the Keiskamma catchment.

The Keiskamma River with its tributaries, starting in a part of the Winterberg range of mountains approximately 500 - 900 metres above sea level, flows in a southernly direction (Hensley and Laker, 1978, p 7).

The area in the north is steep with deep valleys while it stretches out towards the south to become more undulating.

The altitude ranges from 549 m at Fort Cox and 610 m at the town of Keiskammahoek, to 1 220 m to almost 2 000 m in the surrounding mountains (Rennie, 1952, p 27).

4.3.3 Soils

According to Hensley and Laker (1978, p 5) less than 20 per cent of the pedosystem is suitable for rainfed cropping. By comparison with other districts such as the neighbouring Middledrift, there is little visible soil erosion and the soil has no limiting physical properties. It consists mainly of Hutton, Oakleaf and Mispah forms. The steep topography and stoniness in some places, however, can be considered as moderately limiting factors.

4.3.4 The climate

"Any description of climate can only be as good as the data on which it is based" (Marais, 1978, p 14). The climatic data for the Keiskammahoek district has limitations for two reasons:

(i) there is great climatic variation which frequently occurs over short distances (Marais, 1978, p 14), and

(ii) rainfall conditions vary greatly from year to year and mean figures convey a most inadequate picture of what is actually experienced. A high degree of unreliability is accompanied by the normal occurrence of long dry spells of weather (Rennie, 1952, p 28).

According to Els (1971, pp 6 - 10) the district falls into two major macroclimatic zones viz the high altitude Amatola mountains area in the north and the low lying Coastal Plateau in the south (Fig 5).

4.3.4.1 Rainfall

Rainfall figures are available for a number of weather stations in and around Keiskammahoek (Police), Hogsback Forest, Middledrift, Wolf Ridge, Lenye Forest, Fort White, Cata

(Department of Forestry), Debe Nek, and Rabula (Forestry).

The annual rainfall for the district varies from approximately 700 - 1 000 mm in the higher mountainous areas to approximately 600 - 700 mm in the low lying areas. It is a summer rainfall area with the maximum precipitation occuring in March. Rainfall is of a showery nature and thunderstorms (20 - 30 per annum) are quite frequent (Els, 1971, p 15). To illustrate the above points table 4.1 gives the rainfall data for a ten year period 1971 - 1980 for the Keiskammahoek Police station.

Table 4.1 ANNUAL RAINFALL FIGURES FOR KEISKAMMAHOEK POLICE STATION 1971 - 1980 (WEATHER BURO)

	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
1971	87,0	48,8	28,2	71,6	47,8	2,0	49,7	102,0	4,0	87,7	62,6	50,3	641,7
1972	118,0	171,0	80,0	24,3	18,5	31,1	4,5	13,5	35,5	55,0	45,0	22,0	618,4
1973	21,7	173,7	98,7	44,7	15,5	0,0	6,2	62,4	24,5	36,2	100,7	64,3	648,6
1974	175,7	106,7	172,6	21,7	112,5	38,5	0,0	92,9	8,0	34,0	137,5	55,5	955,6
1975	38,5	77,0	72,5	15,5	8,0	39,0	2,0	11,5	78,2	0,0	32,8	159,1	534,1
1976	91,6	126,5	238,9	29,2	27,3	0,0	38,5	2,0	62,5	158,1	79,0	69,0	922,6
1977	19,3	73,0	18,0	73,5	64,0	17,0	2,0	17,5	64,0	62,0	62,0	158,5	630,8
1978	50,8	5,3	47,2	101,0	28,0	29,0	5,5	7,6	16,0	88,2	21,4	100,6	500,6
1979	52,6	71,1	58,5	7,5	49,2	8,5	71,8	110,5	78,3	441,5	285,0	46,0	1280,5
1980	40,0	76,1	31,5	0,0	18,5	3,0	15,5	0,0	81,0	33,5	114,0	190,0	603,1
AVERAGE	69,5	92,9	84,6	38,9	38,9	16,8	19,6	42,0	45,2	99,6	94,0	91,5	7336,0

The specific figures for every month, gives an indication of the great variation in rainfall and is an indication of how misleading average rainfall figures can be. The mean monthly rainfall for Keiskammahoek and Wolf Ridge are illustrated in fig 6.

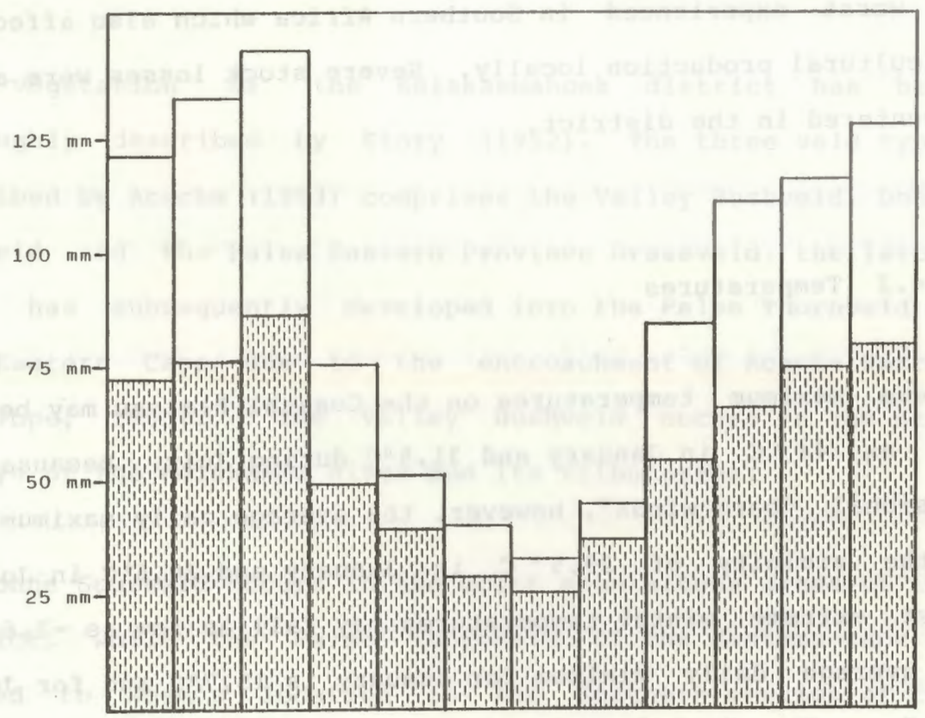


Fig 6 MEAN MONTHLY RAINFALL FOR KEISKAMMAHOEK (LOWER FIGURES) AND FOR WOLF RIDGE (HIGHER FIGURES) (RENNIE, 1952, facing p 29)

The Keiskammahoek district, like the whole of the Eastern Cape, is subject to periodic mid-season droughts. The subsistence arable farming practised in the district, is entirely dependent upon rainfall and these droughts have disastrous effects on the crops (Hobart-Houghton, 1955, p 3).

It was generally accepted that the 1982/83 drought was one of the worst experienced in Southern Africa which also affected agricultural production locally. Severe stock losses were also encountered in the district.

4.3.4.2 Temperatures

Extreme maximum temperatures on the Coastal Plateau may be as high as 44 ° C in January and 31,5°C during July. Because of occasional "berg winds", however, the average daily maximum is in the vicinity of 29,5 ° C in January and 20,6°C in July. Whilst extreme winter temperatures may fall as low as -2,6°C, the average daily minimum for January is 15,7°C and for July 5,2 ° C. The Amatola Mountain area at 1 000 meters or higher elevation, experiences cooler summer temperatures with occasional snowfalls during winter, when temperatures drop well below zero (Els, 1971, p 13).

4.3.4.3 Wind

Winds blow mainly in a north-easterly and south-westerly direction, occasionally reaching gale force. During late winter and during summer, very dry and hot "berg winds" are experienced (Els, 1971, p 15).

4.3.5 Vegetation

The vegetation of the Keiskammahoek district has been thoroughly described by Story (1952). The three veld types described by Acocks (1953) comprises the Valley Bushveld, Dohne Sourveld and the False Eastern Province Grassveld, the latter which has subsequently developed into the False Thornveld of the Eastern Cape due to the encroachment of Acacia Karroo (Trollope, 1985). The Valley Bushveld occurs in the arid valleys of the Keiskamma River and its tributaries.

The Dohne Sourveld occurs in the moist mountainous areas of the district, while the False Thornveld of the Eastern Cape is limited to Mbem's location in the Southern portion of the district. Story (1952, p 42) subdivided the vegetation into woodland, comprising seven different types, and grassland comprising two.

The woodland types were:

- Scrub of Acacia karroo.
- Low mixed scrub, as found at Fort Cox.
- Tall mixed scrub, as found at Nqhumeya.
- Bush, as found at Zanyokwe.
- Dry forest, as found at Lenye Forest Station.
- Moist forest, as found at Wolf Ridge Forest Station.
- Macchia.

The grassland types were:

- Sweetveld, palatable in winter and summer.
- Sourveld, palatable in summer only.

Overstocking of the veld with animals over a long period of time has caused a deterioration in the condition of the veld. There has been a significant increase in undesireable plant species which are unpalatable to livestock. This is particularly true of the higher rainfall areas where the Dohne Sourveld has been encroached by unpalatable macchia (fynbos) species.

Overgrazing in the lower lying areas such as Burnshill, Mbem's, Zonyokwe and lower Rabula has caused widespread denudation of the veld, resulting in widespread soil erosion. The veld is

thus in a very poor condition and will have to be rehabilitated before a viable livestock industry can be established (Trollope, 1985, Personal Communication).

4.4 LAND-USE

The traditional land use patterns have been changed by legislation and are discussed in par 4.5.12.

The farming system employed today has not changed much from the old traditional times.

Semi-extensive livestock production is practised. The quality of the stock is usually poor as the quantity is more important to the farmers than quality. Small-scale dryland cropping is usually limited to a few crops of which maize is the most important. Irrigation is not practised at all.

The natural population increase has put severe pressure on the land and control measures of the number of stock a man may keep have been unsuccessful. Consequently the veld condition has deteriorated gradually.

Due to many reasons arable land is often not cultivated and are consequently underutilised. The land-use recommendations for Ciskei including the Keiskammahoek District is shown in Fig 7.

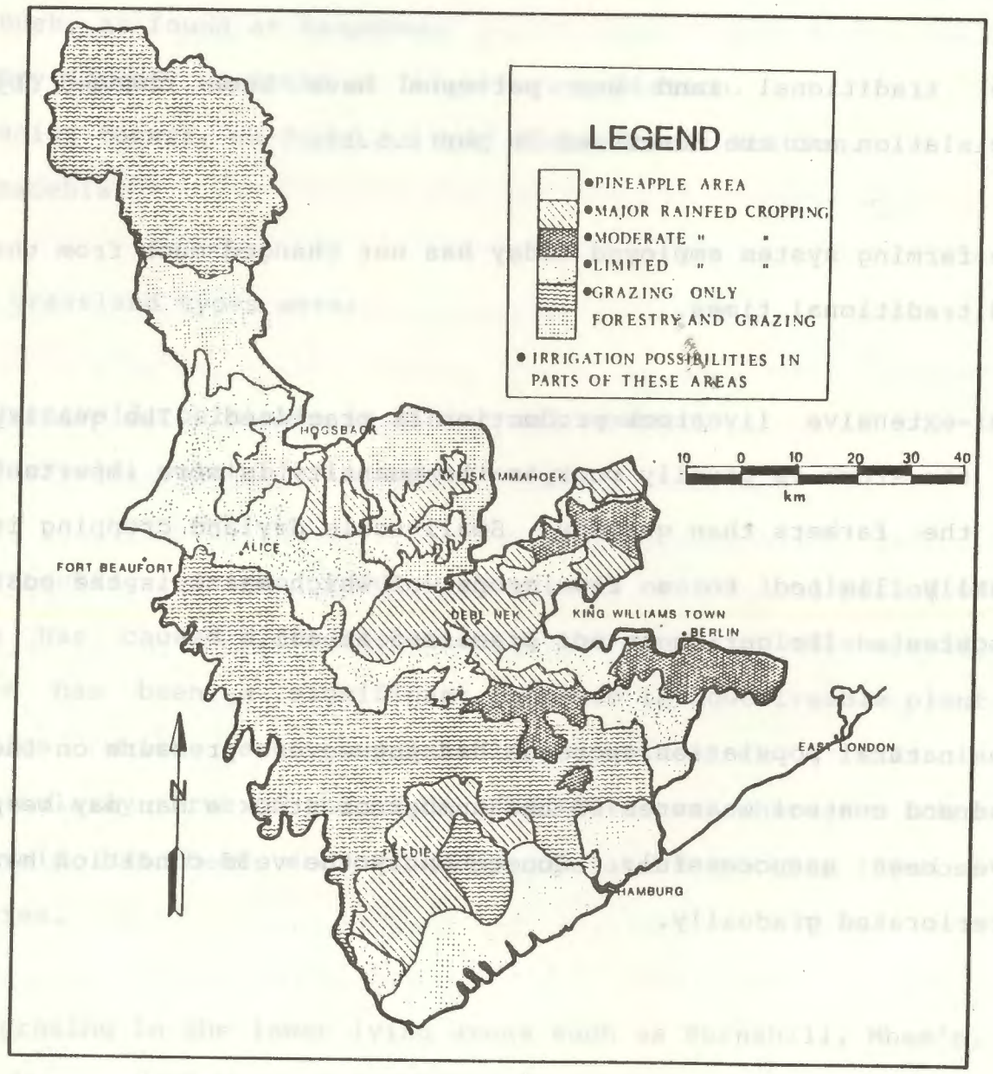


Fig 7 RECOMMENDED LAND-USE FOR CISKEI INCLUDING THE KEISKAMMAHOEK DISTRICT

4.5 INFRASTRUCTURE

Arnon (1981, p 415) states that "The transition from subsistence farming to commercial agriculture requires massive investments in the development of an appropriate and efficient infrastructure capable of providing the facilities needed to produce and distribute the inputs required for modernizing production, as well as to handle the increased production".

The establishment of infrastructure is normally the responsibility of the government or government agencies. Infrastructure is related to the human potential of an area as many things can be established by the government or other institutions as a result of the people's motivation, drive and initiative. Especially in Ciskei, it has long been a practice that if a community requests a school, borehole, shearing shed, etc the government has always been willing to assist, provided the community contributed in some way towards half the total cost. Many communities have improved infrastructural developments in their areas due to their own initiative.

Infrastructure is often not well defined. There will be a difference between the infrastructure necessary for a highly sophisticated commercial farming enterprise and that for

subsistence farmers. Wharton (1967) as quoted by Arnon (1981, p 416) listed the following major components of agricultural infrastructure:

(i) Capital-intensive infrastructure

- Irrigation and public water facilities: dams, canals, tributaries, drainage systems.
- Markets.
- Transport facilities: roads, railroads, bridges, boats, airplanes, ports, docks, harbours.
- Storage facilities: silos, warehouses.
- Processing facilities: machinery equipment, buildings.
- Utilities: electricity and power, drinking water systems, gas.

(ii) Capital-extensive infrastructure

- Extension education services, statistical reporting services.
- Agricultural research and experiment facilities: laboratories, experiment stations.
- Crop and animal protection, control and grading services.
- Soil conservation services.
- Credit and financial institutions.
- Education and health facilities: schools, hospitals.

(iii) Institutional infrastructure

Formal and informal institutions of a legal, political and socio-cultural nature.

According to these standards, the district is not well endowed with infrastructure.

4.5.1 Markets

The small farmers in the Keiskammahoek District have two ways of disposing of their produce. Firstly, to give or sell their surplusses in small quantities to neighbours, and secondly, to sell it to the Ciskei Marketing Board (CMB). There are no official market places in the district and the CMB provides a marketing service to the rural areas.

4.5.2 Trading stores and co-operatives

Although most business transactions are conducted in the large centres such as Keiskammahoek, Middledrift and King William's Town, registered trading stores are found in almost every rural location. The number and types of trading licences granted in the district for 1984 are listed in table 4.2.

Table 4.2 NUMBER OF TRADING LICENCES GRANTED IN THE KEISKAMMAHOEK DISTRICT FOR 1984 (DEPARTMENT OF INTERNAL AFFAIRS)

TYPE OF LICENCE	NO
General Dealers and Patent	14
General Dealers, Farm Produce and Patent	13
Hawkers	25
Licenced to sell fresh produce	12
Cafe	1
Cafe and Milk Depot	1
TOTAL	66

Generally the local shops in the locations are very poorly stocked with a limited number of the most essential items.

Only one primary co-operative situated at Rabula location was in operation in the District. It was served by a secondary co-operative from Debe Nek just outside the district. The co-operatives were initiated by the Ciskei Department of Agriculture and Forestry. Three secondary co-operatives were established at Debe Nek, Peddie and later also at Alice.

Initially the movement was successful, but due to poor management and the shortage of trained staff, activities had to be curtailed and many primary co-operatives had to close.

4.5.3 Transport

4.5.3.1 Roads

The Keiskammahoek District is well served by roads. The town is centrally situated with two main roads linking it with Stutterheim and Dimbaza. There is also a secondary road to Middledrift and a minor road to Hogsback (Page, 1982, p 55). All these roads have gravel surfaces and are in fair condition.

All locations are easily accessible except in rainy weather when some roads become slippery and low bridges are often flooded and not negotiable. The only significant tarred road in the district is the main road from Middledrift to King William's Town which passes through Mbem's location near Debe Nek, in the southernmost part of the district.

4.5.3.2 Railways

The railway line between Cookhouse and East London runs through Middledrift and Debe Nek and is therefore close to the southern part of the district. The Debe Nek station is only three

kilometres from Mbem's location.

4.5.3.3 Bus services

Page (1982, p 55) reported that the South African Transport Services (SATS) delivered two daily motor transport services between Keiskammahoek and King William's Town and Keiskammahoek and Middledrift.

After the independence of Ciskei in 1981, the SATS bus service was gradually replaced by the Ciskei Transport Company which introduced bus services from Keiskammahoek to King William's Town via Middledrift and via Rabula, Keiskammahoek to Stutterheim, Keiskammahoek to Alice, as well as from Keiskammahoek to a number of locations in the district. The people living in the district are therefore well served with transport services and can easily visit other areas.

As these buses usually also transport commuters parcels, it is relatively easy for a small farmer to buy seed and fertilizer and get it to his home.

4.5.4 Water resources

The modern part of the district forms the Keiskammahoek basin. Both the altitude and rainfall are higher in this area. A

number of small tributaries form the headwaters of the Keiskamma river, which bisects the district.

A few dams have been constructed in the headwaters of the tributaries at Mnyameni and Cata which provide water for the Keiskammahoek Irrigation Scheme.

The larger Sandile dam which provides water for Dimbaza, was completed in 1984 and is situated just below the confluence of the Keiskamma and Wolf Rivers. Small areas of suitable irrigation land are available under this dam, but is not being utilised for irrigation purposes at present. The district is thus well served by streams and dams, but not sufficient use is made of this potential.

4.5.5 Electricity

Two Electricity Supply Commission (Escom) powerlines bisect the district. The main line from King William's Town to Alice passes through Mbem's Location. Escom also supplies electricity to Middledrift, Fort Cox and the Sandile Dam water purification works.

A smaller line links Keiskammahoek with Dimbaza. Apart from the town's domestic use, the hospital at St Matthews, only a few kilometres away, the Keiskammahoek Irrigation Scheme and a

few factories are the only users of electricity.

A few individuals in the district have acquired their own generators, but the rural population does not use any electricity.

4.5.6 Housing

Traditionally the Xhosa established an umzi or kraal by building a number of round huts forming a semi-circle which faces the cattle kraal and often also the rising sun. The number of huts were determined by the number of wives a man had. Usually a wife had three huts. One was a general living hut, which served as a bedroom and for cooking in cold weather. The second hut was used by children and visitors, while the third, called the uvimba (stingyness) was a store room usually of a strictly private nature (Soga, 1931, p 408).

The housing patterns in the rural areas have changed slightly with the considerable decline of polygamy in recent years (Republic of Ciskei, 1981, p 20). Many new dwellings are still built with mud bricks or poles and mud. Corrugated iron roofs are becoming more common due to the scarcity of thatching grass, but cattle dung is still commonly used to smear floors. The thatched roofs and dung smeared floors provide good

insulation.

In some areas, especially locations which are situated closer to the main roads or towns, many more sophisticated type houses have been built in recent years. These houses are constructed of cement or baked bricks, corrugated iron roofs and cement or wooden floors with steel frame windows.

Three or more residential villages with the adjoining communal grazing areas and arable lands form part of one administrative area or location.

The residential plots are usually approximately 0,43 ha in size (Proc R188, 1969, sec 49 (2). The plot is large enough to accommodate a cattle and/or small stock kraal, a fowl run and a small vegetable garden, as well as the dwellings.

4.5.7 Educational facilities

In Republic of Ciskei compulsory school education has not yet been introduced, although primary schools are generally found in most locations. High schools and facilities for higher education are not readily available. For secondary education children often have to attend boarding schools which are situated outside their home district.

In Ciskei schools are grouped in four categories namely:

(i)	Lower Primary Schools	up to std 2
(ii)	Higher Primary Schools	Std 3 to Std 5
(iii)	Junior Secondary Schools	Std 6 to Std 8
(iv)	High Schools	Std 9 and Std 10

Combinations of the different types of schools are often found. Lower Primary schools are combined with Higher Primary schools while High Schools often cater for pupils from std 6 to std 10.

The following table gives the pupil enrolment for the Keiskammahoek District during 1984 (Table 4.3).

Table 4.3 PUPIL ENROLMENT IN SCHOOLS IN THE KEISKAMMAHOEK DISTRICT DURING 1984

TYPE OF SCHOOL	NUMBER OF SCHOOLS	NUMBER OF PUPILS
Primary Schools	33	10 516
Post Primary Schools	10	2 636
	43	13 152

There are only three high schools in the district with a total enrolment of 1 589 pupils. From the above figures it can be inferred that a large number of pupils drop out of school before reaching standard six and that only a very few reach standard ten (matric). It is possible, however, that some pupils may be sent away to attend boarding schools elsewhere, but their numbers are likely to be negligible.

The Phandulwazi Agricultural High School for boys and girls which has boarding facilities is situated in the Victoria East district (Alice) and is approximately 20 km from Keiskammahoek.

The Fort Cox Agricultural College, is also situated in the district adjacent to Burnshill Location, where extension officers, foresters, and home economics officers are trained. The University of Fort Hare situated at Alice is only 50 km from the town of Keiskammahoek.

The general situation regarding education in the district corresponds with the findings of Bekker et al (1981, p 13) in the Amatola Basin, which is adjacent to the Keiskammahoek District. Classrooms and toilets are short in supply and are often of poor quality. School children often have to walk long distances to reach schools. The teacher/pupil ratio is very high. There is a shortage of teachers and this leads to the

appointment of unqualified and inferior staff.

The role of education in rural areas is discussed in more detail elsewhere (Refer par 6.2.9).

4.5.8 Health facilities

There are six clinics, situated at Burnshill, Cata, Gxulu, Lenye, Mbem's and Rabula (Page, 1982, p 94).

Clinics are usually staffed by two nursing sisters who render antenatal care, attend to minor ailments and visit patients at their homes when necessary.

Each clinic is visited once a month by a medical doctor and a psychiatric nurse from St Matthews Hospital, situated near Keiskammahoek. Quarterly and yearly records are submitted to this hospital and monthly meetings have to be attended by all sisters (Steyn, 1982, pp 57 - 58). The clinics are often far from some residential areas and people have to walk long distances to reach them. St Matthews Hospital is at present in a poor state of repair and will be replaced shortly by a new hospital in Keiskammahoek.

The mission at St Matthews caters for physically disabled women by providing care, training and sheltered employment to 80

individuals (Page, 1982, p 93). It also provides ambulance services to the district, but for various reasons this service was found to be unreliable. In the nearby Amatola Basin, Steyn (1982, p 58) found the same conditions existed.

4.5.9 Post and telephones

The only public telephone in a location is usually situated on the premises of the local trader who usually handles a postal agency.

Telephone facilities are usually available at the clinics, some schools and Tribal Authority offices, while the ward extension officers have no telephones except for the district office at Keiskammahoek.

Post Offices within reach of the district are situated at Keiskammahoek, Middledrift and Debe Nek.

4.5.10 Tribal Authorities

For administrative reasons the Keiskammahoek district is served by the Keiskammahoek South and Keiskammahoek North Tribal Authority (Table 4.4) (Jackson, 1975, p 50).

Table 4.4 COMPOSITION OF THE KEISKAMMAHOEK POPULATION ACCORDING TO ADMINISTRATIVE AREA AND ETHNIC AFFINITY (JACKSON, 1975, p 50)

K E I S K A M M A H O E K*

TRIBAL AUTHORITY	NO. AND TRIBE	ADMINISTRATIVE AREA	POPULATION	ETHNIC IDENTITY AND COMMENTS
Keiskammahoek South	12 - 044 Fingo	Mbem 1	1 928	amaZizi.
		Burnshill 2	1 197	amaZizi, amaHlubi and amaTolo.
		Zanyokwe 3	792	amaZizi, amaNgqika.
		Lower Rabula 7	1 593	amaBhele.
		Upper Rabula 8	1 549	amaHlubi and amaTolo.
			7 059	
	11 - 105 amaNgqika (Ex 11 - 125)	Lenye 4	502	amaNgqika.
		Fort Cox 5	388	amaNgqika.
		Total for C/A	7 949	
Keiskammahoek North	12 - 312 amaZizi	Wolf River 6	2 143	amaZizi.
		Dontsa 9	460	amaKhuze.
		Nqolonqolo 10	1 038	amaZizi.
		Mnyameni 11	1 973	amaBhele.
		Cata 12	1 690	amaZizi.
		Mtwaku 13	1 885	amaKhuze.
		Gwili-Gwili 14	1 943	amaZizi.
		Gxulu 15	2 188	amaTolo, amaZizi and amaBhele.
		Upper Ngqumeya 16	1 320	amaZizi and amaTolo.
		Lower Ngqumeya 20	432	amaZizi.
		Total for T/A	15 072	
		St Matthew's Village	921	
			2 060	
		District Total	26 002	

(*1970 Census figures)

The Keiskammahoek North Tribal Authority is headed by the AmaZizi acting chief Nkosana Wulana (Ah Zolamandlovu) who lives at Gwili-Gwili (Jackson, 1975, p 35). The Keiskammahoek South Tribal Authority is headed by chief Stanford Sonjica.

The powers and functions of the tribal authorities are determined by Act No 4 of 1978, Ciskeian Authorities, Chiefs and Headmen Act 1978 as amended by Act No 31 of 1983. Section

45 of these acts determines the duties, powers and functions of the headmen who are responsible for the administrative matters in their respective locations. These acts govern the general welfare of the rural communities and the powers and functions of the chiefs and headmen.

According to the duties assigned to a paramount chief, chief and headman (Section 45) nothing is mentioned about the promotion of agriculture. The Tribal Authorities' powers, functions and duties, as determined by section 5, specify a number of functions concerning agriculture which are applicable. In general terms the Tribal Authority should "promote the interests and the advancement and well being of the residents of, and the development and improvement of the land, in the tribal area".

It further makes provision for functions including the following:

- Land administration,
- Soil, veld and water conservation,
- Preservation of fauna and flora,
- The improvement of livestock and animal husbandry and the establishment of co-operative dairy schemes as well as other agricultural co-operative schemes,
- The organisation of farmers' associations and agricultural

shows, demonstrations and competitions,

- The prevention of cruelty to animals,
- The erection and maintenance of fences,
- Forestry,
- Firewood,
- Impounding of livestock,
- Local markets.

The chiefs through the Tribal Authorities are entitled to do a great deal towards the promotion of agriculture in their areas. However, generally very little has been achieved throughout most areas of Ciskei.

4.5.11 The extension service

An extension service is a very important aspect of infrastructure in any developing country.

As mentioned previously, the existing Extension Service in the Keiskammahoek District did not play a significant role in the past in improving agriculture. This aspect was adequately dealt with by Bembridge and Penberthy (1980) and is not discussed further in this study.

4.5.12 Land tenure

Many writers such as Kotter quoted by Pohoryles (1975, p 14), Grigg (1970, p 141), Arnon (1981, pp 445 - 446), as well as the Tomlinson Commission (1955, p 153) stated that the system of land tenure in many developing countres is one of the main obstacles towards agricultural development.

De Beer (1983, pp 24 - 25) on the other hand, contradicts this view by stating that a land tenure system does not have a significant effect on agriculture. The writer does not completely agree with the latter opinion because land reform has had significant effects in some overseas countries such as Taiwan (Bembridge, 1983, pp 80 - 83), especially if tied to other institutional supporting factors.

The following land tenure systems are found in the Keiskammahoek District:

(i) The communal system (traditional)

According to the traditional communal system of land tenure, the land belongs to the tribe but is vested in the Chief who administers it and allocates it to the people according to

their needs (Soga, 1931, p 383). This system is still generally applied today, but a magistrate has to issue a certificate of occupation to the occupier. Traditionally there were no well defined residential or arable areas. Residential sites and arable land were allocated by the chief or headman. Houses and arable land were scattered through the area. Communal grazing was practised (Page, 1982, p 18).

After the maize harvest, stock were allowed to enter the fields to graze the maize residues. This practice is known as ukubuqisa (Kropf-Godfrey, 1915, p 50).

Since the 1950's the Government of the Republic of South Africa propagated the improvement of these areas by introducing legislation to locations planned and divided into residential, grazing and arable areas. This system was commonly known as the "Betterment Scheme" and was regulated by Proclamation R188 of 1969 which still applies in the Republic of Ciskei at present (De Beer, 1983, p 20).

Share-cropping (isahlulo) is commonly found under this system where the holder of the plot supplies the land, while the share-cropper supplies the labour and inputs. The produce is then equally shared.

Another method is to let the plot to another person (ukuqesha).

To legalise this practice, the magistrate's consent has to be obtained (De Beer, 1983, p 21).

(ii) The freehold system

According to the freehold system, ownership of the land rests entirely with the owner who has a title deed registered at the deeds office. The Keiskammahoek District is one of two districts in the Republic of Ciskei where a significant number of farms, registered according to this system, are found (De Beer, 1983, p 22).

In Rabula location for instance, most of the land is owned by individuals (Mills and Wilson, 1952, p 45), but freehold land is also found in other locations. The sizes of the farms varies greatly. (Mills and Wilson (1952, p 62) found a variation from 4 ha to 37 ha while de Beer (1983, p 22) stated that it varied from 8,6 ha to 31,6 ha. These plots were surveyed from 1866 onwards and sold by the Government to Blacks and Europeans on freehold tenure. Freehold land is free from control by the Administration and the owner enjoys a high degree of security (Mills and Wilson, 1952, p 45). It can be sold, mortgaged and left to someone else in a will (De Beer, 1983, p 22).

Visual evidence suggests that freehold plots are no better

farmed than land owned according to the other systems of land ownership. In many instances the owner of the land works elsewhere, while his wife is in charge of it while he is away. A possible reason for the underdevelopment of the freehold land, is that the units are too small for any viable type of farming enterprise to be practised under the existing conditions.

(iii) The quitrent system

The Quitrent system of land tenure is regarded as complicated because it was established under several different acts and was not applied in the same way in all the villages. The system was further significantly modified during the 1930's. Initially it did not differ much from the freehold system previously described. Inheritance was governed by the same laws, and the right of alienation of lease with the consent of the Governor and the right of sub-division of holdings was recognised.

In 1927 the law of inheritance was changed and the right of sub-division abrogated. The right of alienation was also limited. According to this system a residential plot and arable land of between 2 to 3 ha was sold to a person. He was then also entitled to graze his animals on the commonage (Mills and Wilson, 1952, pp 69 - 71).

Quitrent titles are issued and registered in the deeds office. This applies to residential and arable land, and a title holder is also entitled to utilize the communal grazing area for his stock. A nominal annual quitrent has to be paid (De Beer, 1983, p 22). Such allotments can be mortgaged, sold, leased or sub-let, but in practice this rarely occurs (Page, 1982, pp 18 - 19).

According to the quitrent system, share-cropping and letting is allowed on the same basis as the traditional system.

(iv) South African Native Trust Land

During 1952 seven villages in the Keiskammahoek District were allocated land which was bought by the South African Native Trust created by the Native Trust and Land Act No 18 of 1936. This land was bought from Europeans, though much of it had originally been granted to Blacks and sold by them. The object of the Trust was to exclude Europeans from the villages and provide additional land for Blacks who had no land and land was not bought from Black freehold title owners (Mills and Wilson, 1952, p 93).

The process of buying out the European farms continued slowly with a sudden surge during the 1970's, when all the white owned

land was bought and the Europeans were moved off the land. In the Keiskammahoek District, Trust land was occupied by landless people mostly on the basis of the communal tenure system. The Keiskammahoek Irrigation Scheme was also established on Trust land.

4.6 CONCLUSION

Evidence in this chapter shows that the major part of the Keiskammahoek District is best suited to livestock production supported by dry land cropping in certain areas. Forestry is suited to the higher altitude northern part of the district. This is caused primarily by the erratic and unreliable nature of the rainfall and also because of the sloping nature of the land. On the other hand the veld and bush provides excellent grazing for cattle and browsing for goats.

There is potential for irrigation in some areas and small irrigation schemes have been in operation in the past. At present, however, irrigated crop production is not practised, the only irrigation being a major capital intensive scheme at Keiskammahoek.

With regard to infrastructural development there are numerous aspects which need to be improved. The establishment of markets for small farm produce may encourage peasant farmers to

produce a surplus, but many other cultural factors may act as barriers towards this ideal. Sharing the surplus is regarded as an investment for times of need when help can be expected from others as well as a means to achieve status. The service rendered by the local shops is poor and people often have to travel far to the towns to buy their basic necessities.

The transport facilities, however, have been improved in recent years and people in most areas can get around fairly easily.

School facilities are inadequate and need to be improved. Attention should be given to the improvement of the image of agriculture at school level. The teaching programme should be geared to educate the peasant farmer for his future role and to equip him with adequate knowledge concerning the appropriate technology for his farming enterprise. At present teaching tends to be very academic and more inclined to educate the migrant worker for his task in the urban sector.

Health services and communication also need to be improved, while reforms in the land tenure system will be a step in the right direction in creating conditions for the establishement of bona fide farmers. Land reform is however a delicate political issue and needs to be investigated and studied in detail, because there are many factors which have an influence on farming in general.

CHAPTER 5

IMPLEMENTATION OF THE MAIZE PROGRAMME

5.1 INTRODUCTION

This chapter outlines the planning, preparation and implementation of the maize production extension programme in the Keiskammahoek District.

The objectives of the programme and the roles of the different institutions which were involved, are dealt with. The programme as designed by the University of Fort Hare for the first year is shown in Appendix 6.

5.2 OBJECTIVES OF THE MAIZE EXTENSION PROGRAMME

The programme was designed to enable farmers to produce more maize, the staple food crop, by means of an extension strategy designed according to the management principles incorporated in the T & V system. According to Benor and Harrison (1977, p 12) one aspect of the T & V system is to concentrate initially on

the most important crop in the area in order to ensure immediate acceptance by the farmers and thus also success.

Maize was chosen as the crop to be improved because it is the traditional staple food of the Xhosa and a major crop which they prefer to grow. It was envisaged that the immediate success would give the farmers confidence in the extension service. The extension staff would also gain confidence and credibility.

All efforts were to be channeled through a number of contact farmers with whom regular contact is made weekly or fortnightly.

Before meeting the contact farmers, a training session was to be given to the extension staff by either a crop specialist or a senior officer where they are equipped to give sound advice and provoke the farming skills of the farmers during the forthcoming week or two according to the cropping cycle.

The integrated approach towards rural development was envisaged and the other aspects such as winter wheat, peas, livestock, health and home economics would also be introduced slowly on a step by step planned basis.

5.3 PLANNING OF THE PROGRAMME

The T & V system as designed by Benor and Harrison (1977) was used as a guideline, but had to be adjusted to suit circumstances in the Keiskammahoek District.

The model on which the programme was based, is given in fig 8.

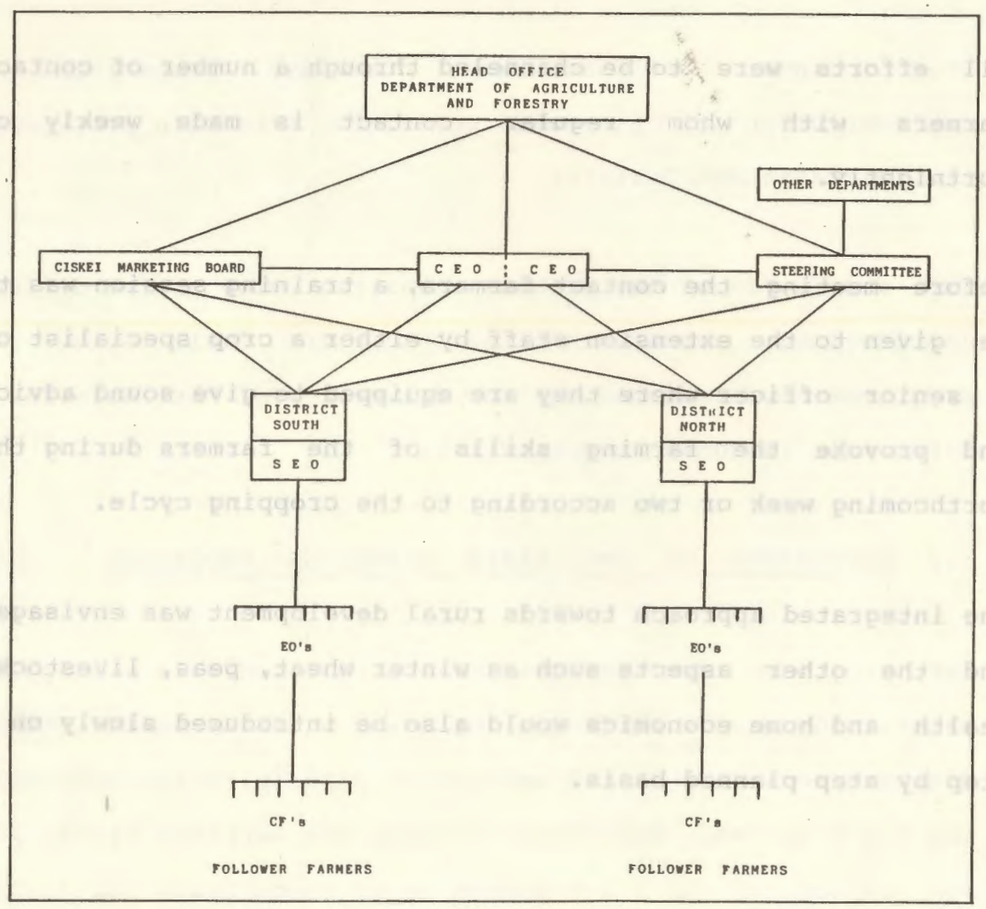


Fig 8 MANAGEMENT SYSTEM FOR THE MAIZE PROGRAMME IN THE KEISKAMMAHOEK DISTRICT, 1981.

The role of each organisation/individual was as follows:

5.3.1 The Ciskei Marketing Board (CMB)

The Ciskei Marketing Board (CMB) made a complete package available in one hectare units which included seed, fertilizer, cutworm bait and stalkborer insecticide. Ploughing, and in most cases planting, was carried out on a contract basis by the Department of Agriculture and Forestry. The CMB also undertook to buy all the maize which the farmers produced.

5.3.2 The Department of Agriculture and Forestry

The programme was launched by the Department of Agriculture and Forestry of the Ciskei Government and their extension staff, as well as staff from other sections and departments who assisted in a supportive role. The department was thus solely responsible for the total management function of the programme at all levels.

According to the report on the extension service of the Ciskei (Bembridge and Penberthy, 1980) there were numerous problems, which had to be attended to by the department in order to enable the extension staff to work in a productive orientated environment. The department had to provide the necessary "infrastructure" and "tools of the trade" to enable the

extension staff to function effectively.

5.3.3 The Steering Committee

The steering committee comprised of individuals from various government departments and other bodies. These representatives were members of the Development, Extension, Veterinary and Forestry sections of the Department of Agriculture and Forestry, as well as from the Departments of Health, Education, Social Work, the Ciskei Agricultural Promotion Loan Fund (APLF) and the Ciskei Marketing Board (CMB). From time to time, depending on the needs of the programme, other senior officials were also invited to attend the meetings. The professional staff of the Department of Agricultural Extension and Rural Development of the University of Fort Hare acted in an advisory capacity.

The steering committee was responsible for guidance in organising, planning, training, motivating, controlling and co-ordinating the extension programme. It was further also responsible for liaison with the tribal authorities and in practice sometimes acted as a liaison body between the department and the field staff.

The committee met once a month in the agricultural office at Keiskammahoek and was chaired by one of the Chief Extension

Officers (CEOs) from Head Office.

5.3.4 The Department of Agricultural Extension and Rural Development of the University of Fort Hare

The head of the Department of Agricultural Extension and Rural Development of the University of Fort Hare designed and initiated the programme in the Keiskammahoek District at the request of and in co-operation with the secretary for the Ciskei Department of Agriculture and Forestry.

The role of the Department of Agricultural Extension and Rural Development was limited to providing advice, guidance and some staff training functions, as well as monitoring and evaluation of the programme.

The university staff had no jurisdiction over the management of departmental staff and maintained a "low key" role during the course of the programme.

5.3.5 The District Office

The two senior extension officers were stationed at the district office at Keiskammahoek, which was regarded as the control centre of the programme and from where the extension officers were controlled and managed.

None of the extension officers had access to a telephone and the two senior officers had only one vehicle at their disposal. The functioning of the district office was therefore greatly hampered by lack of communication and transport.

5.4 IMPLEMENTATION OF THE PROGRAMME

The implementation of the programme commenced during April 1981.

5.4.1 The provision of staff

It was planned to have an extension officer for each extension ward comprising a number of villages in the district, as well as two supervisors, Senior Extension Officers (SEOs), responsible for a sector of the district to whom they could report. At head office two Chief Extension Officers (CEOs) were given responsibility for controlling the programme (Fig 9). These officials were responsible to the officer in charge of the extension section who was in turn responsible to the secretary of the department.

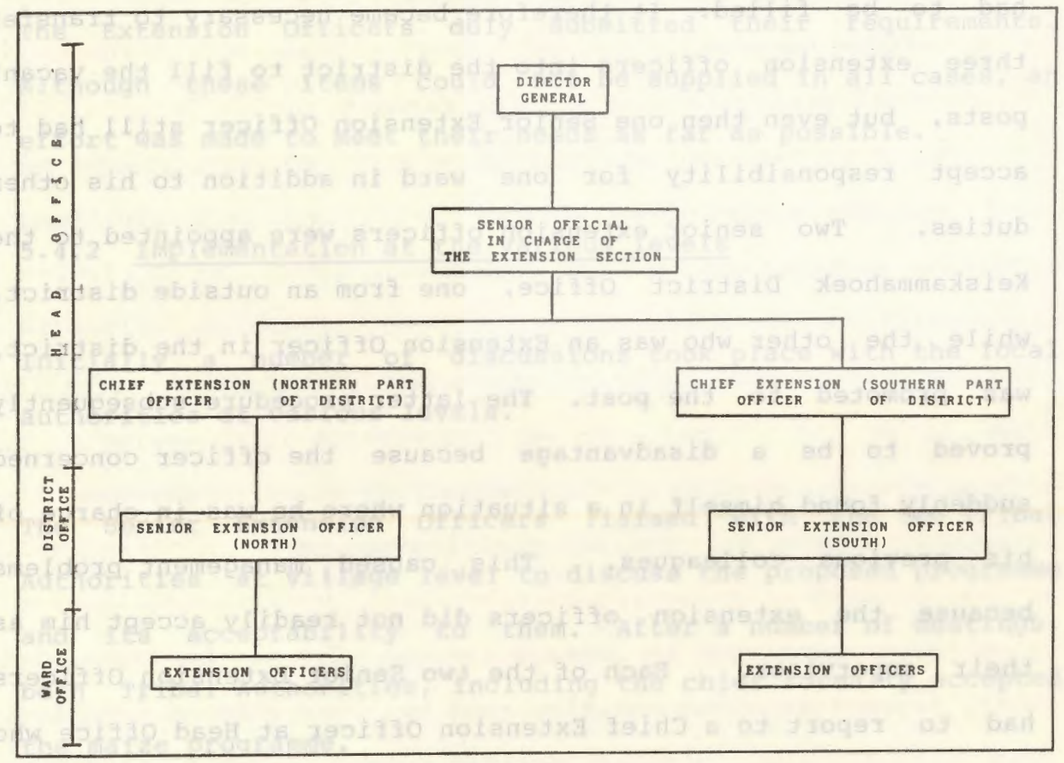


Fig 9 STRUCTURE OF THE EXTENSION STAFF IN THE KEISKAMMAHOEK DISTRICT DURING 1981

For administrative reasons the same North/South division as the Tribal Authorities was used for division of the district into work areas for the Senior Control Staff (SEOs and CEOs).

Initially there were some vacant posts in the district which had to be filled. It therefore became necessary to transfer three extension officers into the district to fill the vacant posts, but even then one Senior Extension Officer still had to accept responsibility for one ward in addition to his other duties. Two senior extension officers were appointed to the Keiskammahoek District Office, one from an outside district, while the other who was an Extension Officer in the district, was promoted to the post. The latter procedure subsequently proved to be a disadvantage because the officer concerned suddenly found himself in a situation where he was in charge of his previous colleagues. This caused management problems because the extension officers did not readily accept him as their supervisor. Each of the two Senior Extension Officers had to report to a Chief Extension Officer at Head Office who had at that stage just completed an extension training course at the University of Fort Hare. The Chief Extension Officers were designated to supervise, control, manage and train their subordinate officers. They were stationed at the Head Office in Zwelitsha, approximately 60 km away from the district headquarters.

The departmental staff at Zwelitsha was requested by the steering committee to provide each officer with suitable housing, as well as adequate offices, suitable equipment and visual aids, including a map of each work area.

The Extension Officers duly submitted their requirements. Although these items could not be supplied in all cases, an effort was made to meet their needs as far as possible.

5.4.2 Implementation at the various levels

Initially a number of discussions took place with the local authorities at various levels.

The Senior Extension Officers liaised with the two Tribal Authorities at village level to discuss the proposed programme and its acceptability to them. After a number of meetings, both Tribal Authorities, including the chief formally accepted the maize programme.

The Extension Officers were requested to conduct a survey of their areas in order to obtain the necessary information to be able to participate in a programme of this nature. This is a normal extension planning procedure.

They were instructed to collect the following information which should be recorded in their offices:

- A list of all the landholders in their ward,
- Details of the land area cultivated,
- Livestock numbers,
- Personal particulars of all the farmers,
- An up to date map of the area showing grazing, arable land and residential areas, as well as detail such as fences, water supplies and contact farmers' lands, etc.

The ward extension officers were also instructed to establish the number of farmers who were interested in co-operating in the programme, as well as those requiring loans to purchase the necessary inputs for the 1981 planting season.

They were required to obtain the goodwill of the headman in their respective wards and keep them well informed of progress. The selection of contact farmers was supposed to have been carried out in consultation with headmen. Subsequently it was found that this was not done.

Initial staff meetings were held at Keiskammahoek at which all the extension staff of the district were present. The concept and strategy of the proposed programme was explained and discussed with all staff.

The initial reaction of the extension staff was negative. At a meeting held in April 1981 they suggested that the programme should only be implemented in one village. This is a reflection of their low morale and lack of confidence in their own ability as found by Bembridge and Penberthy (1980, p 38).

Initial tasks and instructions were often not carried out properly, or carried out in a very haphazard way. The selection of contact farmers was a case in point where the Extension Officers' instruction to select contact farmers had to be repeated twice, and even then they selected very few.

It subsequently came to light that the Extension Officers in the district were upset because they had to work under more strict supervision than their counterparts in other districts who carried on working on the usual ad hoc basis. This was a reflection of a complete lack of management and control in the extension service (Bembridge and Penberthy, 1980, p 19).

5.4.3 Staff training

The training of the extension staff is an integral part of the T & V system. The extension staff must regularly (weekly or fortnightly) be intensively instructed in the three or four

most important recommendations which they are to carry out to the farmers during the following one or two week period (Benor and Harrison, 1977, p 12).

5.4.3.1 Pre-programme training

Prior to commencement of the programme, staff of the Department of Agricultural Extension and Rural Development of the University of Fort Hare briefed all the extension staff on all aspects of the programme. The roles, tasks, boundaries and co-ordination of different individuals and institutions were discussed and agreed upon. Staff were informed step by step on how to carry out the programme. At subsequent sessions their progress was checked, problems were solved and further training given. On one occasion a two-day course was offered where some basic aspects of extension were reviewed. At a later stage a one day course was given by the agronomists of the Ciskei Department of Agriculture where they were given in-depth training on maize production practices.

5.4.3.2 In-service training

For the duration of the programme, training was scheduled fortnightly at the district office at Keiskammahoek.

The Senior Extension Officers stationed at the District office

were responsible for these training sessions.

In practice however, only one training session per month was held. The training session also served as a monthly office day when they had to submit returns and their proposed itinerary for the following month. These meetings were generally poorly attended and even those who did attend were not punctual.

At one such meeting, only six out of 12 Extension Officers were present including the senior officer. One Extension Officer was excused because he had to attend to ploughing matters. At another special training meeting, which was arranged for ten o'clock in the morning, only seven of the 12 officers were present by 10h15. The majority of the officers were thus not punctual when attending meetings or functions. The same attitude was exhibited when they had to submit requests, statistics or returns.

A special one day training session in management was arranged at the University of Fort Hare for the two senior officials at Keiskammahoek.

5.5 CONTACT FARMERS ROLE IN DIFFUSION TO OTHER FARMERS

Part of the philosophy on which the T & V system has been founded and which is regarded as the fundamental premise, is that the contact farmers, who have regular contact with the Extension Officer, should spread the message they have received to the other farmers in the neighbourhood (Benor and Harrison, 1977, p 13 and Cernea et al, 1982, p 10). This was their intended role in the Keiskammahoek programme.

5.6 THE SELECTION OF CONTACT FARMERS

As previously mentioned, the Village Extension Worker (VEW), the Extension Officer in this case, was intended to work mainly with a group of carefully selected farmers called contact farmers. The contact farmers were intended to act as opinion leaders in their respective residential areas and spread the knowledge and skills which they had acquired from the Extension Officer to a group of farmers, known as the follower farmers.

Benor and Harrison (1977, p 22) gave no guide-lines how these contact farmers should be selected. They only stated that they should be selected "in consultation with village leaders".

Russell as quoted by Howell (1983, p 11) mentioned that the

contact farmer concept "has led to more misunderstanding than any other element of the T & V system ...". He stated that contact farmers have been poorly selected in some cases and that it is in fact difficult to select contact farmers especially when the system is introduced for the first time.

According to Von Blanckenburg (1982, p 15) a development in most countries where the T & V system is in operation is that local farmers participate in the selection of their contact farmers. There must be an interchange of opinions between the VEW and the farmers. Mostly the final decision with regard to the choice of the contact farmers rests with the VEW.

In Sri Lanka the most important criterion used by the VEW was the farming standard and the social acceptance of the contact farmers by the other farmers. The second most important criterion was the ability of the farmers to convey messages to other farmers. It is further suggested that the contact farmer should be one where farming level is between that of progressive and traditional farmers. It is felt that there should be a "certain homogeneity" amongst the farmers such as the same social, education and religious levels (Von Blanckenburg, 1982, p 16).

Bembridge et al (1983, p 282) mentioned eight different qualities which a contact farmer should have in order to ensure

the successful implementation of an extension programme. They are as follows:

- He should accept extension knowledge and be prepared to carry out demonstrations, field days and other extension activities on his land.

- He should be acceptable to other members of the group.

- He must be an average farmer with respect to crop yield, resources and education.

- He should, as far as possible, be dependent mainly on farming for a living.

- He must be easily accessible to others.

- He should be prepared to spend a little of his time, energy and resources on fostering the extension programme.

- He should be someone who takes pleasure in seeing other farmers making progress.

- He should be someone whose family members willingly participate in his or her activities in connection with the extension programme.

5.7 THE SELECTION OF THE CONTACT FARMERS IN THE KEISKAMMAHOEK DISTRICT

In the Keiskammahoek programme the selection of the contact farmers was done in a rather haphazard way and it was found that the extension staff did not have a clear perception of the term "contact farmer", neither did they appear to have a sound knowledge of the communities they were working with.

Initially, when they were instructed to select contact farmers, they were hesitant and only a very few were selected. They had to be instructed a second time to select contact farmers. A number of approximately fifty per extension worker was recommended.

Subsequently it was found that 40 per cent of the extension officers accepted farmers, who had applied to the Ciskei Agricultural Promotional Loan Fund (APLF) for loans, as contact farmers. Forty five per cent of the Extension Officers indicated that they organised meetings at which they invited interested farmers to become contact farmers. A large majority of the extension staff thus used no special selection technique in determining the number or quality of their contact farmers in spite of being instructed on criteria how to go about selection.

Only one extension officer mentioned specific guide-lines which he applied to select his contact farmers. The criteria used were as follows:

- The farmers' interest in farming.
- Whether he was able to do the work.
- His willingness to learn.
- The condition of his land.
- The availability of labour.

The fact that a farmer was an accepted opinion leader in his area did not feature as a selection criteria.

5.8 RESEARCH

It was agreed that the Department of Agronomy at the University of Fort Hare conduct research as to the optimal planting times of maize in the Keiskammahoek District as well as the suitability of maize, sorghum and wheat. Logically this is a long term project and no reliable results were available at the time of writing this dissertation.

5.9 CONCLUSION

Very little negative comment can be raised against the procedures adopted at the planning and implementation of the programme. A reasonable amount of motivation had to be applied by persons at the top of the structure to get the programme moving. Probably because of lack of motivation and control the Extension Officers did not follow the set guidelines in selecting contact farmers. Comparatively few farmers were selected in each ward.

The planned programme provided a clear-cut operational policy for both staff in the district and those involved at head office. The programme provided clear-cut policy guidelines which were previously discussed. As will be shown in Chapter 7, the major problem in implementation lay in the unwillingness and inability of senior control staff to plan, organise, motivate and control field staff.

CHAPTER 6

THE HUMAN POTENTIAL

6.1 INTRODUCTION

In this chapter the personal and socio-economic factors of the contact farmers, as well as the institutional functions are evaluated.

6.2 PERSONAL CHARACTERISTICS OF THE CONTACT FARMERS

6.2.1 The importance of personal factors

In planning and evaluating extension programmes it is important to study the personal characteristics of contact farmers in order to assess their potential and constraints. Bembridge (1984b, p 121) states that the human resource input can be divided into two distinct inputs namely, labour, and decision making and management.

The labour function will depend to a large extent on the farmer's health situation, the size of his family, age,

attitude towards farming, motivation and other interests, etc, while decision making and management will depend mainly on factors such as educational levels, attitudes and other socio-psychological factors.

6.2.2 Age

Bembridge (1984b, p 131) indicated that chronological age may have an impairing effect on physical ability, which is important on family holdings, but that research showed little or no mental deterioration at least up to 60 years of age. Since farm management has been considered to be primarily a mental process, it is assumed that increased age does not seriously impair managerial ability, at least up to 60 to 65 years of age (Hobbs et al, 1964, p 71).

It can, however, be generally expected that age is a factor which will have an influence on attitude and cultural change. Research has shown that younger persons generally accept change and innovations more readily than those, who, with age tend to become conservative and resist the adoption of innovations (Watson, 1978, p 125 and Mohammad and Majeed, 1979, p 161).

The predominance of elderly people might restrict social activities and might adversely affect the economic situation of farm families (Obibuaku, 1981, pp 42 - 43).

In many societies, aspects of progress such as agriculture, are entrusted to the oldest age groups who are often emotionally committed to maintain their traditional agricultural techniques to a degree which seriously hampers or blocks progress (Arnon, 1981, pp 412 - 413).

Sobahle (1982, p 50) found that in a number of locations in Ciskei the full time farmers were all retired because of age or ill health. Even some old people fit enough to work, had other occupations as well.

The age group classification of the contact farmers are shown in Fig 10.

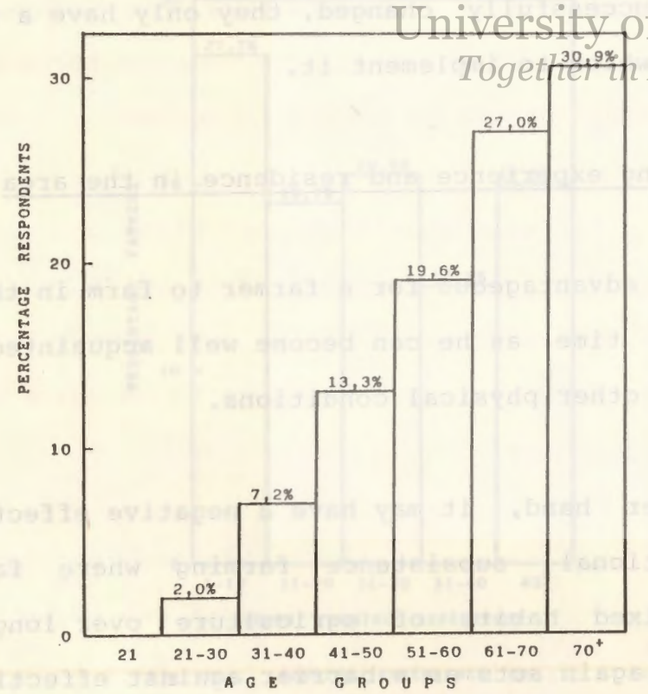


Fig 10 AGE GROUP CLASSIFICATION OF CONTACT FARMERS IN THE KEISKAMMAHOEK DISTRICT, 1983 (N = 97).

According to figure 10, 58 per cent of the participants were over the age of sixty while only nine per cent were under the age of forty.

This type of age distribution is typical of a rural farming situation where the majority of the population are either old or young with the middle aged groups working elsewhere. The main emphasis should be to educate the rural youth to become good farmers by including basic agriculture in their school

curricula. It is not viable to endeavour to change the fixed attitudes of such elderly people. Even if their attitudes could be successfully changed, they only have a very limited lifespan in which to implement it.

6.2.3 Farming experience and residence in the area

It can be advantageous for a farmer to farm in the same area for a long time as he can become well acquainted with local climatic and other physical conditions.

On the other hand, it may have a negative effect especially with traditional subsistence farming where farmers have developed fixed habits of agriculture over long periods of time, which again acts as a barrier against effective learning and the adoption of more modern practices. This unconscious or spontaneous dependence on habits can retard creative thinking and the acceptance of new innovations without some external encouragement towards change (Steyn, 1982, p 38).

The farming experience of the contact farmers are shown in Fig 11.

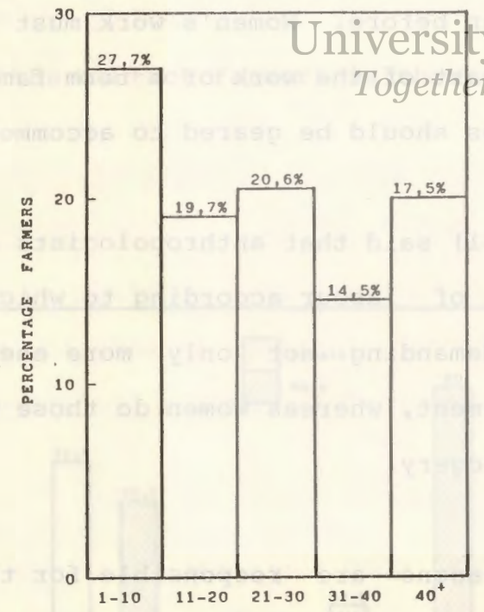


Fig 11 FARMING EXPERIENCE OF CONTACT FARMERS IN THE KEISKAMMAHOEK DISTRICT, 1983 (N = 97.

More than 70 per cent of the contact farmers have been farming in their respective areas for more than 10 years and over 30 per cent have been in their areas for more than 30 years (Figure 11). The farmers therefore did not lack farming experience in terms of time.

6.2.4 Sex ratio

The large amount of literature on the role of women in

development which has recently become available brought about a greater acceptance and better understanding of the role of women in LDCs than before. Women's work must be treated as the most important part of the work of a farm family and extension and other services should be geared to accommodate them.

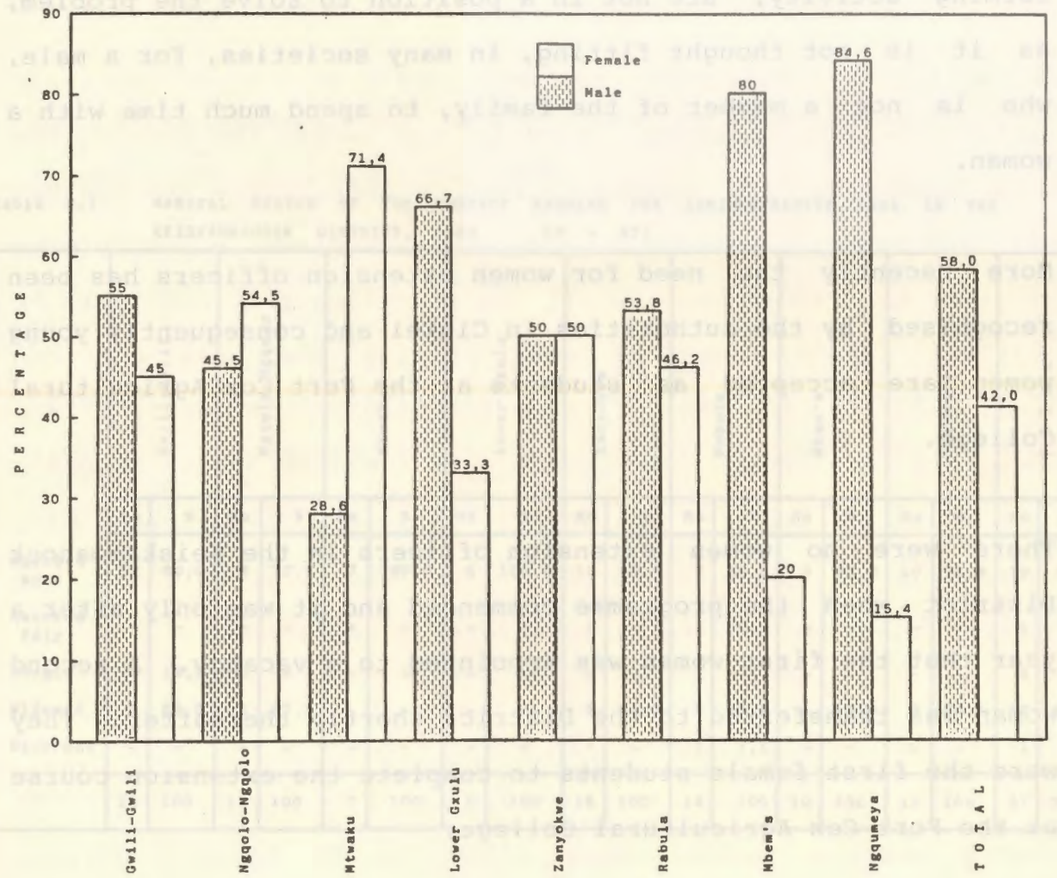
Firth (1970, p 31) said that anthropologists are familiar with a sex division of labour according to which men perform the harder tasks, demanding not only more energy but also more skill and excitement, whereas women do those which are easier, but with more drudgery.

A number of reasons are responsible for the high number of women in agriculture. The most important one being the migrant labour system, and also the traditional rule that a widow may retain her husband's land rights after his death (Soga, 1931, p 383 and Pauw 1985, p 46).

In most countries around the world, rural extension services are built upon the assumption that the male directs and does the agricultural work, while the female confines her work to traditional home economics. Female extension officers are required to do home economics extension while males concentrate on agriculture. Many cases have been reported where male extension officers failed to influence the rural male towards new practices due to the fact that among other reasons, it is

the female who does the agricultural work in question (Whyte, 1983, p 137).

The sex ratio of the contact farmers is shown in Fig 12.



During the programme in the Keiskammahoek District, more than 40 per cent of the contact farmers in the district were female. A fact that should be recognised by the extension service. There should be many more women extension officers dealing with agriculture and crops in addition to home economics. Whyte (1983, pp 137 - 138) states that male extension agents, even if they recognise that the woman is primarily involved in the farming activity, are not in a position to solve the problem, as it is not thought fitting, in many societies, for a male, who is not a member of the family, to spend much time with a woman.

More recently the need for women extension officers has been recognised by the authorities in Ciskei and consequently young women are accepted as students at the Fort Cox Agricultural College.

There were no women extension officers in the Keiskammahoek District when the programme commenced and it was only after a year that the first woman was appointed to a vacancy. A second woman was transferred to the District shortly thereafter. They were the first female students to complete the extension course at the Fort Cox Agricultural College.

Because there were no female extension officers initially, the programme was not adequately staffed to deal with the large

number of women. This was simply because there were no female extension officers available in Ciskei at the time.

6.2.5 Marital status

Nowadays polygamous marriages are exceptions among the Xhosa in Ciskei and seldom occur (Raum and De Jager, 1972, p 21). (Table 6.1).

Table 6.1 MARITAL STATUS OF THE CONTACT FARMERS PER ADMINISTRATIVE AREA IN THE KEISKAMMAHOEK DISTRICT, 1983 (N = 97)

	Gwili-Gwili		Ngqolo-Ngqolo		Mtwaku		Lower Gxulu		Zanyokwe		Rabula		Mbem's		Ngqumeya		TOTAL	
	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%	No	%
Married Mono	12	60,0	8	72,7	7	100,0	6	100,0	11	68,7	7	50,0	9	90,0	10	76,9	70	72,2
Married Poly	-	-	-	-	-	-	-	-	-	-	1	7,1	-	-	-	-	1	1,0
Single	3	15,0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3,1
Widowed	5	25,0	3	27,3	-	-	-	-	5	31,3	5	35,8	1	10,0	3	23,1	22	22,7
Divorced	-	-	-	-	-	-	-	-	-	-	1	7,1	-	-	-	-	1	1,0
	20	100	11	100	7	100	6	100	16	100	14	100	10	100	13	100	97	100

The high incidence of widows/widowers (22,7%) shown in Table 6.1 can be attributed to the older age groups of contact farmers. This can be regarded as a constraint due to possible family instability and reduced potential for labour and family income. The latter aspect can lead to a lack of capital to buy inputs.

6.2.6 Family size

In a rural subsistence economy, family size is an important factor in two respects. Firstly, the larger the family, the more resources are needed to feed, clothe, house and educate all the members. Secondly, and perhaps a direct opposite view is that the larger the family, the more labour is available to cultivate arable land or work outside the area and send remittances to the family. Nevertheless, smaller families are necessary to reduce the pressure on the land and to ensure a better future for the individual. Large families consequently cause a great financial burden on such families, which in turn affects their ability to finance farming development.

The modal family size of the contact farmers was 6, being 17 per cent, while the average family size was 6,42. In the nearby Amatola Basin, Steyn (1982, p 39) found an average family size of 5,97 while Seobi (1980, p 14) found an average family size of 7 persons in a rural area of Bophuthatswana.

The family size ranged from 1 to 14, 13 per cent had 10 or more members. Thirty five per cent of the group having families of 4 - 6 members, 33 per cent between 7 and 9 members, while 19 per cent had families of 3 and smaller. Twenty four per cent of the contact farmers had other dependants staying with them. The numbers varied between one and six. Ten per cent of this category had three or more dependants, while on average, a total of 0,6 dependants stayed per contact farmer.

The family situation was characterised by large families living in very poor economic situations.

The organisers of a development programme should take cognisance of these factors. Large families may have the necessary labour available to be active in agriculture, but lack the necessary funds to obtain inputs. Furthermore, extension staff should identify the decision maker with regard to agriculture in the family, because he/she is the most important contact person with whom to work. It is doubtful whether this was done during the programme.

6.2.7 Religious denomination

It proved difficult to obtain correct information concerning religious practices. Although some people belong to a recognised world religion, they still believe in and worship their ancestral spirits. In some instances a traditional slaughtering of an animal to appease the ancestral spirits, may be commenced with a christian scripture reading and prayer.

Pauw (1975, p 176) mentions that when Christians slaughter an animal to appease ancestors, they do not follow all the traditional rituals, nor do they use the traditional names. It is often simply called a dinner and appears to be a usual meal which is served at a table.

Respondents willingly indicated to which church they belonged, but were rather reluctant to give information concerning their traditional religions.

A significant factor in Ciskei is that the population is divided into two groups. "Red people have a traditional, conservative, tribal outlook, whereas the life-view of School people is modified by white influence" (Reader, 1961, p 70). Usually School people who have accepted the Christian religion, are educated to a certain extent and wear European type of

clothing. These people have therefore incorporated many aspects of the European culture into their own culture.

The other group are still mostly traditional, pagan and illiterate. Some of the women sometimes still wear the traditional red ochred clothes from which the name "Red people" is derived.

Elliot (1970, p 125) states that a Christian Xhosa looks with scorn upon the traditional tribesman, less politely referred to as amaqaba (smeared ones) (Mayer and Mayer, 1979, p 4). The same situation also applies in reverse, where the traditional tribesman is proud to adhere to his peoples' traditions. He in turn refers to the School people as gqoboka (a hole has been pierced through the heart) (Kropf-Godfrey, 1915, p 129).

Wilson et al (1952, pp 128 - 129) indicated that missionaries were active in the Keiskammahoek District even before the White traders and farmers arrived in the area, and that the Mfengu had contact with missionaries before they had moved to the district. The missionaries' influence did not only affect the religion of the people, but they also introduced standards and modes of European civilisation which had far reaching consequences which also spread to pagans.

Pagan people are present in the district but they are not as

easily identified by outsiders because they have accepted almost all the European fashions and habits in the same way as the Christian or "School" people.

This division was confirmed by informants in the Keiskammahoek District and the Extension Officers questioned about it, were well aware of it and actually knew to which of the two groups the people in their wards belonged.

Sobahle (1982, pp 46 - 50) differentiated between the two groups of farmers and mentioned the characteristics as set out in table 6.2 below.

Table 6.2 DIFFERENCES BETWEEN ENLIGHTENED AND UNENLIGHTENED PEOPLE IN CISKEI (SOBAHLE, 1982, pp 46 - 50).

	ENLIGHTENED	UNENLIGHTENED
Attitude to Agric.	Aims at production for a market. (Only a small group) Money economy.	Production for a subsistence economy. Sharing in the traditional rule where money plays a minor part. Produce are not sold but shared.
Lifestyle	Accepts a lifestyle of competitiveness, individualism and acquisitiveness and shedding responsibility towards the extended kin group and neighbours.	Lifestyle is orientated towards conforming to the norms of the community.
Types of seeds and crops	Realize the advantages of using certified seeds. Prefers to grow maize, and a mixture of root crops and leaf crops such as spinach and cabbage.	People still use own seed and reluctant to use certified seeds. Often grows sorghum and also uses it for their traditional beer. Prefers non-root crops.
Attitudes towards the Extension Staff	Readily seeks and uses advice from the Extension Staff.	Tries to belittle the work done by the officers.
Fertilizer	Uses fertilizer.	Prefers manure.
Implements	Makes use of ploughs and planters. More men are engaged in agriculture.	Still uses hoes and practices hand planting.
Labour	Uses hired and paid labour.	Makes use of traditional work parties, (amalima) where traditional beer is served.

The membership of contact farmers to religious organisations is given in table 6.3. As the majority of contact farmers belong to a church, they can be regarded as being in the "enlightened" group.

Table 6.3 RELIGIOUS AFFILIATION OF CONTACT FARMERS IN THE KEISKAMMAHOEK DISTRICT, 1983 (N = 92)

CHURCH	NUMBER	PERCENTAGE
No Official Church	2	2,1
Ancestor worship	3	3,1
Methodist	29	29,9
Dutch Reformed	4	4,1
Anglican	16	16,5
Congregational	6	6,2
Presbyterian	16	16,5
Other Churches	16	16,5
No reply	5	5,1
	97	100,0

6.2.8 Ethnic composition

In the light of the historical background referred to in Chapter 4.2 it was expected that Mfengu would be the dominant group amongst the contact farmers (Fig 13), but it was found that only 42 per cent were Mfengu while 58 per cent indicated that they were Xhosa. This could be due to the fact that the Xhosa and Mfengu have moved closer together in recent years as well as the more recent positive efforts of the Ciskei Government to unite the two groups. It is possible that some Mfengu's may have identified themselves as Xhosa's for some reason or other.

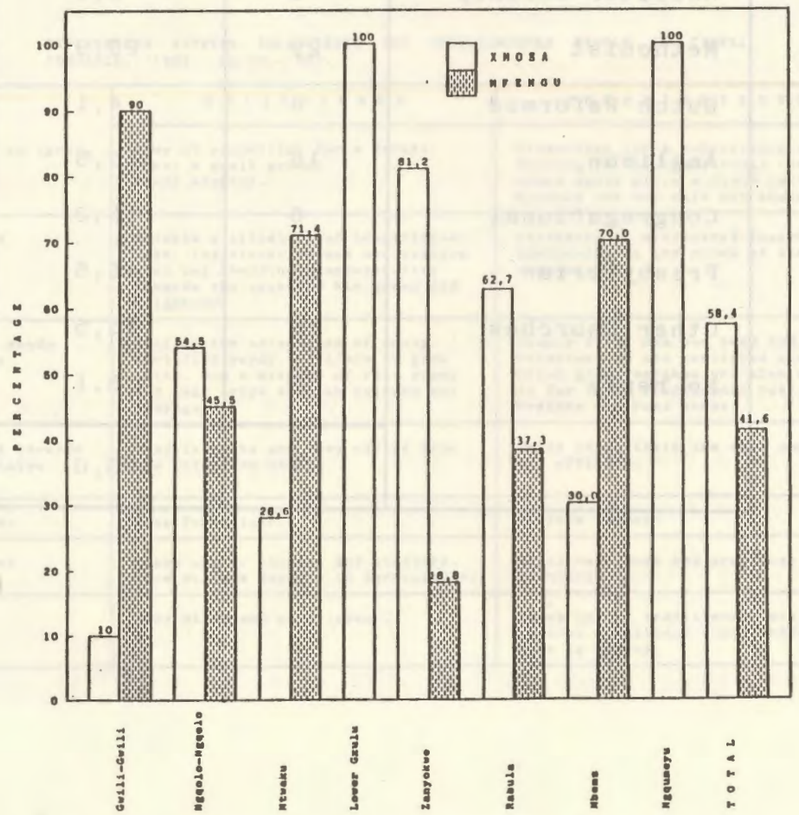


Figure 13 ETHNIC COMPOSITION OF THE CONTACT FARMERS ACCORDING TO ADMINISTRATIVE AREA IN THE KEISKAMMAHOEK DISTRICT, 1983

Undercurrents of mutual distrust and suspicion between the two groups still exist today. In an area such as Keiskammahoek, where the two groups are so closely interwoven with each other, extension staff must be extremely cautious how they approach individuals belonging to the other group to which they themselves belong. Amongst the Xhosa it is a habit to ask a person what his clan name or isiduko is on meeting him for the first time. The name of a man's clan will immediately signify the group to which he belongs. The group to which a man belongs is thus a fact that cannot be hidden from others.

6.2.9 Education

Education in health, nutrition and fertility reduction, is one of the key elements influencing human development. These elements are closely interrelated and improvements in one area can facilitate improvements in others (World Bank, 1980b, p 97).

The education of girls is regarded as one of the best investments a country can make, because it is through the woman that the education will benefit their future homes and will have a positive effect on their health, nutrition and act as a stimulus for smaller families (World Bank, 1980b, p 50).

Education is the most effective tool for moulding the response

of the agents of production (the farmer) to a common purpose. It can generate potent forces helpful in the transformation of a traditional society. Education, training and manpower development can be regarded as prime factors which are essential for the development of a nation (Gupta, 1983, pp 21 - 22).

Different studies have proved that the adoption rate of new innovations is higher amongst educated farmers compared with those who are illiterate (Mohammad and Majeed, 1979, p 155).

Rural people having become educated can use this as an extra capacity in town to earn more money (Lipton, 1977, p 260). Lipton (1977, p 261) concluded from Sen (1971) that education also helps rural villagers to use existing resources more fruitfully and to assess new resources more accurately. Sobahle (1982, pp 49 - 50) is of the opinion that education has more negative than positive effects on agriculture. Agriculture is seen as a way of life and not as a source of income. Education offers an alternative type of living away from agriculture. The more educated, the better the chances of a living away from agriculture. Agriculture is looked down upon by the educated.

During the 1970 census the Keiskammahoek District had the highest percentage of persons who had advanced beyond Std 6 in

Ciskei, namely 15 per cent while the average for Ciskei was 12 per cent (Page, 1982, p 73).

The formal education level of the contact farmers is shown in Fig 14.

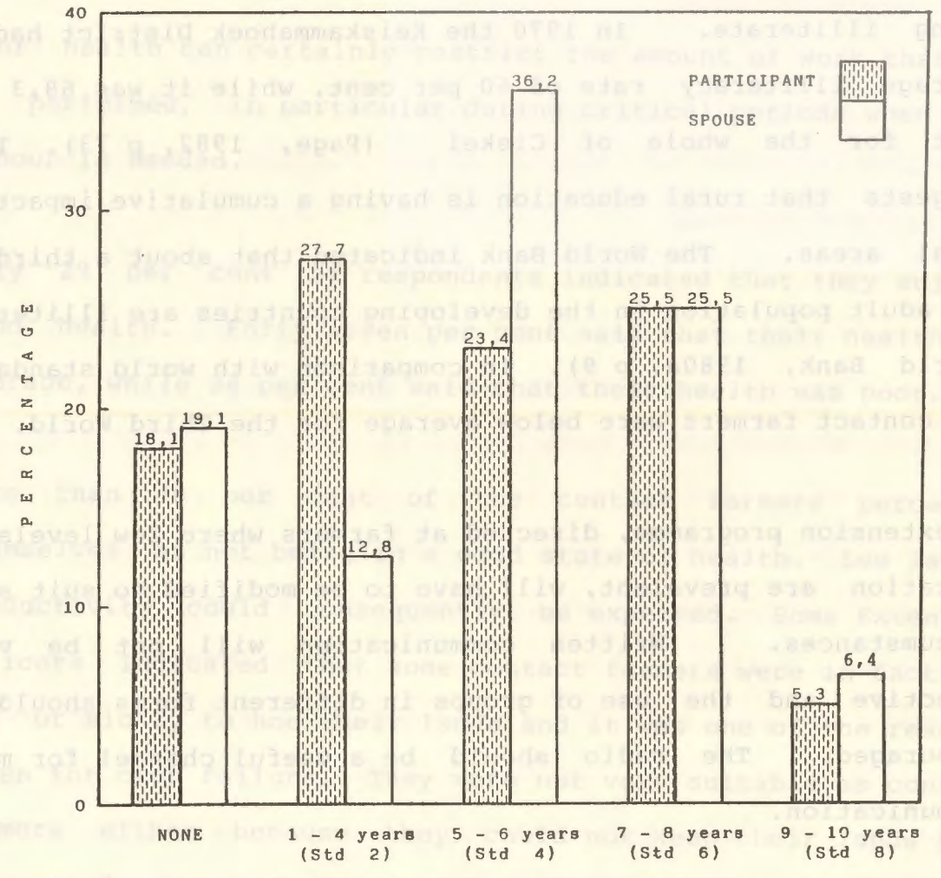


Figure 14 FORMAL SCHOOL EDUCATION OF CONTACT FARMERS AND THEIR SPOUSES IN THE KEISKAMMAHOEK DISTRICT, 1983 (N = 97)

Thirty one per cent of the contact farmers had standard six or higher. This is a substantially higher percentage than the 15 per cent which was the average for the whole district in 1970. It appears that the contact farmers were better educated than the average person in the district. This augurs well for future extension programmes.

Forty six per cent of the contact farmers can be regarded as being illiterate. In 1970 the Keiskammahoek District had an average illiteracy rate of 60 per cent, while it was 68,3 per cent for the whole of Ciskei (Page, 1982, p 73). This suggests that rural education is having a cumulative impact in rural areas. The World Bank indicated that about a third of the adult population in the developing countries are illiterate (World Bank, 1980a, p 9). In comparison with world standards the contact farmers were below average for the Third World.

An extension programme, directed at farmers where low levels of education are prevalent, will have to be modified to suit such circumstances. Written communication will not be very effective and the use of groups in different forms should be encouraged. The radio should be a useful channel for mass communication.

6.2.10 Health

In the tropical areas Arnon (1981, p 147) indicated that the main reason for low labour output was not the climatic constraints, but the generally low standards of nutrition and the many endemic diseases.

Poor health can certainly restrict the amount of work that can be performed, in particular during critical periods when much labour is needed.

Only 29 per cent of respondents indicated that they enjoyed good health. Forty seven per cent said that their health was average, while 24 per cent said that their health was poor.

More than 70 per cent of the contact farmers perceived themselves as not being in a good state of health. Low labour productivity could consequently be expected. Some Extension Officers indicated that some contact farmers were in fact too old or sickly to hoe their lands and it was one of the reasons given for crop failure. They were not very suitable as contact farmers either because they could not keep their lands free from weeds or carry out other necessary work. Their fields were not suitable for demonstration purposes either. Furthermore, it would not be of much use to motivate sickly

people as poor health is a valid reason for not participating actively in a programme. Healthy contact farmers should be selected.

6.3 SOCIO-ECONOMIC FACTORS

6.3.1 Introduction

It is important to assess and evaluate socio-economic and cultural aspects of participating farmers in evaluating an extension programme.

The importance of taking socio-cultural and socio-psychological factors into consideration in any development strategy cannot be over-emphasised. This factor has been stressed by various authors such as Foster (1973), Rogers and Svenning (1969), Jones and Rolls (1982), Crouch and Chamala (1981), Timmer (1982), Williams and Williams (1971), Arnon (1981) and Mohammad and Majeed (1979).

Arnon (1981, p 405) mentions a school of thought which maintains that socio-cultural factors only have a marginal role to play in a traditional subsistence farmer environment. He quotes Behrman (1969) who indicated that according to this line of thought traditional farmers will respond quickly, normally

and efficiently to economic incentives in adopting new techniques.

The opposing view that non-economic forces generally outweigh purely economic factors, leading to behaviour which is not within the bounds of economic rationality (Balogh, 1966 as quoted by Arnon 1981, p 405) is also unacceptable. Arnon (1981, p 406) suggests that individual farmers and groups fall on different points of a continuous scale.

There are certain farmers who do not require much persuasion to adopt new techniques, while there are others, probably the majority, in which tradition and established customs are conducive to resistance to change in spite of any persuasion, inducement or economic advantages. Arnon (1981, p 405) states "The development of agriculture is not a purely technological or economic problem. Its success is frequently dependent upon an understanding of the society in which it is to take place, a knowledge of the social and cultural factors that condition farmers' responsiveness to technological change, and the ability to obtain willing co-operation of the people involved".

According to Foster (1973, pp 148 - 152) certain particular traits may have positive effects and stimulate change, while some factors may have negative effects and act as barriers to change.

6.3.2 Social activities

During the course of this study people were frequently unavailable for interviews. There are a number of occasions in the social life of the rural areas, where almost all the people of the village or location are in attendance. These are functions such as weddings, funerals, initiation and religious ceremonies, etc some of which can often extend over a few days. For example, in one village permission could not be obtained to interview the contact farmers, because the headman was attending a wedding ceremony. On two occasions initiation ceremonies were attended by a large group of men and it was impossible to interview contact farmers. Other factors causing people to be absent are the attendance at tribal meetings, court hearings either at the chiefs' great place or at the Keiskammahoek Magistrates court. There are also shopping days, which often last a whole day. A death in the family can easily cause a man to be "out of action" for a week or more.

In locations people know each other and are under a moral obligation to attend functions such as those mentioned above. Functions frequently occur at short intervals and there will thus be a number of days every month on which the extension officer will not be able to meet any farmers because of a meeting or function of some kind. It is therefore often

impossible to follow a strict predetermined extension programme.

6.3.3 Leadership and organisation participation

Local participation in planning and execution of rural development projects is regarded as an important principle for successful community development (Ferrinho, 1980, p 50). This statement applies to any development programme and is no less appropriate to an extension programme.

Many researchers including Bembridge (1984b, p 142) found that membership and participation in organisations were significantly related to progressive farming variables such as knowledge of farming practices, adoption of modern technology, farm production, etc.

Thirty five per cent of the respondents indicated that they did not belong to any organisation. Ten per cent belonged to the women's Zenzele organisation, while the burial societies proved to be popular as 35 per cent of the participants were members. Nineteen per cent of the contact farmers indicated that they belonged to a co-operative society. Eleven per cent of these contact farmers, however, were from Rabula location where the only primary co-operative in the district was situated.

Of those who belonged to an organisation, 81 per cent were ordinary members while the remainder held leading or executive posts in the various organisations. One third belonged to more than one organisation.

Other organisations which were identified by the contact farmers had a very low membership:

- Mothers Union 3
- Red Cross 2
- Keiskammahoek Agric Show Committee 4
- Bisho National Show Committee 1
- Ciskei National Independence Party 2
- School Committee 5
- Extension Committee 2
- Tribal Authority Committee 1

The 65 per cent of the contact farmers who belonged to an organisation can be regarded as well above average. Bembridge (1984b, p 143), in a study of 538 farmers in three different areas in Transkei, found that only 53 per cent of the farmers belonged to some or other organisation.

This is an indication that the contact farmers can be regarded as being more progressive and outgoing than average farmers.

Extension staff are usually trained to identify local groups in rural areas and to utilize these groups for extension purposes. For example as additional channels for information to reach the farmers. In this case there were a number of possible organisations in the district which could be used to further extension.

6.3.4 Land tenure system

A study of land tenure systems and the implications they have on agriculture is a study of wide proportions and it is not within the terms of reference of this study to fully investigate the problem. The problem of land reform is adequately expressed by Ladejinsky (1973, p 383) as quoted by Nitish, in Fisk (1978): "Agrarian reform is a combination of a great many things, and not all of them are of equal importance. Important though the other ingredients are, unless those who work the land own it, or at least secure on the land as tenants, all the rest is likely to be writ in water ... It is relatively easy to use science to increase production, but only if the cultivator's relationship to the land and the State's treatment of him and of agriculture create incentives to invest, to improve the land and to raise productivity. Too many of Asia's cultivators are still waiting to find that incentive". Although his study was concerned with Asia, the problem has application in the Republic of Ciskei.

Tapson (1984, p 5) is of the opinion that freehold title is simply not a pre-requisite for increased productivity and that its introduction will not guarantee improved agricultural production. The land tenure system of the contact farmers is given in table 6.4.

Table 6.4 LAND TENURE SYSTEM OF CONTACT FARMERS IN THE KEISKAMMAHOEK DISTRICT, 1983 (N = 96)

LAND TENURE SYSTEM	NUMBER	PERCENTAGE
No land rights	3	3,1
Certificate of occupation	64	66,7
Quitrent	9	9,3
Freehold	4	4,2
Hired land	11	11,5
Share cropping	5	5,2
	96	100

Sixty one per cent of the contact farmers indicated that the present status quo should be maintained with regard to land tenure. Thirteen per cent did not have any specific preferences concerning the matter, while only 12 per cent were in favour of a system whereby land could be bought and sold. This information confirms that the farmers in the Keiskammahoek District who are mostly old, have very traditional and conservative attitudes and are not in favour of major changes. It appeared as if the freeholders were happy with their way of life, while those living in the locations indicated that they did not wish to live on isolated pieces of land. A slight animosity was detected between the two groups, but this factor was not investigated and was not regarded to be serious.

The farmers themselves are not in favour of any type of land reform. It is an aspect which is very sensitive politically and which will have to be handled with the utmost care. It is however a factor which needs to be considered for the future development of Ciskei.

6.3.5 Size of holding

It is difficult, if not impossible, to determine a fixed minimum area of land necessary for a farmer to supply and fulfil all family needs.

Slovo (quoted by Bembridge, 1984b, p 74) estimated that in a cropping area, a rural family requires 3,4 ha of arable land in order to sustain family life. Pearse as quoted by Arnon (1981, p 449) mentions the concept of 'livelihood threshold'. According to this concept the size of a farm should enable a farmer to produce sufficient calories for family needs plus a further fifty per cent which could be sold to purchase supplementary foods and other essentials.

Arnon (1981, p 449) is of the opinion that farm size "... must be considered within the context of the norms of the community, the fertility of the land, the effectiveness of the infrastructure, the services available, the intensity of land-use, population pressure, the tenure system, the availability of capital and know-how, the diligence of the farmers, etc." Climatic conditions and other physical aspects of the environment, preferences for certain commodities by the population, economic factors, personal factors of the farmers, etc should also be taken into consideration.

The size of land needed by a farmer, will thus have to be determined individually for each specific farmer taking into consideration the abovementioned aspects.

About 30 years ago Hobart-Houghton and Walton (1952, p 177)

found that in the Keiskammahoek District an exceptionally good harvest only produced sufficient food for half the people living at home. In poor years the yield was only enough for one-twentieth of their nutritional requirements. The general conclusion was that very few people in the district could make a living from agriculture.

The size of the contact farmers landholding is shown in table 6.5.

Table 6.5 SIZE OF HOLDINGS OF CONTACT FARMERS BY ADMINISTRATIVE AREA IN THE KEISKAMMAHOEK DISTRICT, 1983 (N = 95)

	1 ha		2 ha		3 ha		4 and more		T O T A L	
	No	%	No	%	No	%	No	%	No	%
Gwili-Gwili	8	40,0	1	5,0	8	40,0	3	15,0	20	100,0
Nqolo-Nqolo	3	27,3	7	63,6	-	-	1	9,1	11	100,0
Mtwaku	2	28,6	4	57,1	1	14,3	-	-	7	100,0
Lower Gxulu	5	83,3	1	16,7	-	-	-	-	6	100,0
Zanyokwe	8	50,0	4	25,0	1	6,3	3	18,7	16	100,0
Rabula	12	85,7	-	-	-	-	2	14,3	14	100,0
Mbems	-	-	5	55,6	3	33,3	1	11,1	9	100,0
Ngqumeya	8	66,7	3	25,0	1	8,3	-	-	12	100,0
	46	48,4	25	26,3	14	14,7	10	10,5	95	100,0%

The programme only involved dry land farmers. Forty eight per cent of the participants only had one hectare of arable land for crop production. Twenty six per cent had two hectares, while the remaining 25 per cent had three or more hectares.

Only ten per cent, which includes the freehold farmers, had access to four hectares or more. When the erratic nature of the rainfall, temperatures and the other factors mentioned in chapter 4 are taken into consideration, it is doubtful if any of the contact farmers found themselves in a situation where they could make a living from agriculture only.

Surprisingly 56 per cent of the contact farmers stated that they could make a living from agriculture as the only source of income. Nevertheless 77 per cent indicated that they received money from other sources. These findings must be interpreted with some caution. It is possible that they wanted to create an impression of their effectiveness as farmers or they had a complete overestimation of their own abilities. Alternatively, rural people are generally very reluctant to reveal the true facts concerning their financial situation and consequently a much higher figure than 77 per cent receiving outside income could be expected.

In 1975 it was found in another study in Ciskei that in two

rural communities, 40 per cent of the households grew insufficient food for their own requirements (Daniel and Webb, 1980, p 50).

Of those respondents, who said that they could not make a living from the land, only five per cent indicated that they needed more land. In the light of the findings concerning their personal situation given in the first part of this chapter, it is doubtful whether these farmers will be able to handle more land effectively due to old age, illness and lack of resources.

6.3.6 Migrant labour

Research has revealed different effects with regard to migrant labour. In some cases the effect of migration has had positive consequences for the labour-donor country by decreasing underemployment in agriculture, resulting in increased productivity and wage increases. The flow of remittances from urban to rural areas has also been beneficial. In other cases migrant labour had negative effects, where undesired social effects were noted, and the vacuum caused by the migrant men had left the farming scene without adequate labour (Arnon, 1981, pp 157 - 158).

Hobart-Houghton and Walton (1952, p 111) stated that the

absence of so many adult members had a marked effect upon the social and economic life of the district, and that the ideas with which these people returned modified tribal customs. Migrant labour serves as a very important source of income for the inhabitants of the district, but the negative factors caused by the system are the disintegration of families, illegitimacy and juvenile delinquency (Hobart-Houghton and Walton, 1952, pp 111 - 112).

Sobahle (1982, p 105) states that a Black farmer is traditionally supposed to share his crop with his neighbours, family and friends. This was also mentioned by all respondents as the most accepted way according to which a man could achieve a higher status in the community. This is confirmed by Sobahle (1982, p 46) when he stated that "The greatest criticism goes to a person who sells food while his neighbours and relatives are in need of it".

Migrant labour is thus the only solution for the rural man to earn a reasonable income. It has been going on for such a long time that it has reached the stage where it is expected of a young man to go to work elsewhere (Mayer and Mayer, 1979, p 91).

Hobart-Houghton and Walton (1952, p 192) stated that "So long as the Native Reserves are regarded as reservoirs from which

industry can draw a constant supply of intermittent labourers, they will remain little more than dormitory suburbs, creches, infirmaries, and holiday resorts for the industrial workers in the city".

Almost 60 per cent of the contact farmers indicated that they had experienced urban employment. Less than ten per cent were unemployed while living in urban areas. Sixteen per cent were engaged in non-agricultural rural employment while only four per cent had any experience of agriculture on White farms.

Experience gained on White farms could have a positive influence on peasant farming, but in this case very few of the contact farmers were involved. The White farmers who previously farmed in the Keiskammahoek District were not regarded as progressive. Only three or four White farmers were considered to be good farmers, while some were also regarded as mere subsistance farmers (Hundleby, 1985). The White farmers in the district did not play a significant role in improving the agriculture of the Black people.

6.3.7 Opinion leadership

Opinion leadership has been defined by Rogers and Shoemaker (1971, p 35) as "... the degree to which an individual is able to informally influence other individuals' attitudes or overt

behaviour in a desired way with relative frequency". It has been accepted as a powerful motivating factor in agricultural extension and this philosophy has been incorporated into the T & V system. The contact farmers should act as opinion leaders for their follower farmers.

A few questions were included in the questionnaire to establish the role of opinion leadership amongst the contact farmers. Although perhaps not the ideal method, it was easiest to use the self-designating technique by asking the contact farmers to state how many other farmers asked their advice on different topics.

Table 6.6 gives an indication of opinion leadership in the district.

Table 6.6 OPINION LEADERS AMONGST THE CONTACT FARMERS OF THE KEISKAMMAHOEK DISTRICT, 1983 (N = 95)

TOPIC OF INFORMATION SOUGHT	FREQUENCY OF CONSULTATIONS PER MONTH								TOTAL	
	NONE		1 - 5		6 - 10		11+			
On the Maize Programme	70	73,7	17	17,9	5	5,3	3	3,1	95	100
Crops in General	67	70,5	25	26,4	3	3,1	-	-	95	100
Cattle	79	83,2	16	16,8	-	-	-	-	95	100
Money Matters	67	70,5	24	25,3	2	2,1	2	2,1	95	100
Social Activities	68	71,6	21	22,1	2	2,1	4	4,2	95	100
Tribal Matters	77	81,1	15	15,8	-	-	3	3,1	95	100
AVERAGE	71,3	75,1	19,7	20,7	2	2,1	2	2,1	95	100

Of those farmers who were asked for information 57 per cent indicated that they were consulted for only one aspect while the remaining 43 per cent were asked for information on more than one aspect.

Only about a quarter of the contact farmers could be regarded as opinion leaders for any of the mentioned aspects. Almost 20 per cent were consulted for cattle and tribal matters, while the numbers consulted for the maize programme were even lower than those consulted for money matters.

The conclusion is therefore that the contact farmers were ineffective opinion leaders and were not capable of spreading a message effectively to follower farmers.

6.3.8 Theft

Information with regard to the role of theft in rural communities is still largely lacking. Steyn (1982, p 99) mentions stocktheft in the Amatola Basin, an area adjacent the Keiskammahoek District, as one of the main reasons for kraaling animals at night.

Eighty per cent of the contact farmers indicated that theft of their produce in the fields was a major problem in their area and they had no clear solution to the problem.

Theft as experienced in this case, can be regarded as a serious constraint as it will have a demoralising effect on a farmer if his produce is stolen. It will discourage farmers to produce crops if they know it is going to be stolen.

Where theft is a severe problem, extension staff should liaise with the police who are trained to curb crime. It is also the community's task to take appropriate steps to stamp out crime such as this by making use of their own methods.

6.4 DISCUSSION

The functions and selection of contact farmers have been discusssed in par 5.5 and 5.6 and it was pointed out that they were not selected according to sound principles.

A general conclusion from this chapter is that the contact farmers, instead of being active, able bodied persons as they should be, whose plots could be used as demonstration plots, were found to be too old and sickly. Many of them could not fulfil this important function as many were unable to keep their plots in a good condition and free from weeds. Furthermore a very low percentage could be regarded as opinion leaders and failed to be effective in influencing their

follower farmers. The majority of contact farmers did not conform to the suggested norms.

Although their education levels were higher than the average person in the district, only about half were likely to be responsive to written communication.

The present land tenure system can be regarded as a constraint to agricultural development. A more important factor, however, is the small size of arable holdings of contact and other farmers. It is impossible to establish any effective and viable farming enterprise in the Keiskammahoek District on one or two hectare plots without irrigation.

The uneconomical size of the arable plots is one of the reasons why the rural people have to leave the area to work elsewhere to earn a cash income.

Further constraints were the high percentage of large families and the attitude that agriculture is not a suitable career for a progressive type of person. The migrant labour system and the high incidence of theft are also important constraints.

A number of serious constraints to the programme were thus caused by demographic, socio-economic and other factors beyond the control of any organisation or body involved in the programme.

CHAPTER 7

EVALUATION OF THE PROGRAMME

7.1 INTRODUCTION

In this chapter the management and organisation and implementation of the programme are evaluated.

7.2 INSTITUTIONAL POLICY AND SUPPORT

The necessity and urgency of a sound agricultural policy has been stressed by various writers including Bembridge (1984b, p 430), Bunting (1985, pp 8 - 9) and Bembridge and Penberthy (1980, p 6).

The Bembridge/Penberthy (1980, p 6) report indicated that there was no operational policy known to the extension staff in Ciskei and they usually worked in an unplanned and haphazard way.

The maize programme was adopted by the Department of Agriculture and Forestry as a priority project and the

programme was accepted and promised the necessary departmental support.

Bunting (1985, p 9) also stressed the importance of both competent politicians and competant civil servants.

During the course of the programme, however, there were three different Secretaries of the Department of Agriculture and Forestry. This caused considerable inconvenience as not only was the department disrupted, but after each change the new Secretary had to be informed and introduced to the programme and his commitment obtained. It naturally took some time for the new Secretary to settle into his new position. This is a good example of the problematic features often experienced in a LDC as Moris (1981, p 116) put it: "Where senior officials are frequently changed, today's commitments may be modified tomorrow".

Jealousies were not excluded. An official who was appointed in the extension service during the course of the programme, subsequently reported that he was told by a senior official to give the programme a very low priority because "If the programme happens to be success, the Department of Agricultural Extension and Rural Development at the University of Fort Hare will get all the credit".

Some of the top staff in the department were thus from the outset not completely committed to making a success of the programme.

7.3 PROGRAMME INPUTS

7.3.1 The package of inputs

Pearse (1980, p 12) defines a package as "... a set of recommended tools, material inputs, and practices - somewhat like a cook's recipe". He indicates that the term often misleadingly implies that all the required components of the package were available. It is often found, however, that all the required components are not included, as the term is not always used to mean exactly the same thing. The package entails two main components viz:

- those items necessary to suit the physical conditions, the agronomic requirements, and
- that part which ensures that the farmer can produce ie he has knowledge and skills and can market his produce more favourably than before. This second requirement is often ignored.

Dahlberg (1979, p 124) states that a risk factor is present in

every package and that the farmer ultimately has to bear the cost of any mistakes or miscalculations made by the planners, administrators or researchers.

A further consequence is that the basic farm decisions are gradually taken away from the farmer and it becomes difficult for him to influence the decision makers.

In the LDCs there are certain constraints which occur regularly which are also pertinent to Ciskei such as:

- Farmers cannot afford to buy improved inputs such as seed, fertilizer and insecticides.
- They have insufficient draught power.
- They have no easy access to shops where good inputs are readily available and can be purchased.
- They are ignorant about the correct application of inputs.
- There are no marketing facilities.

In order to eliminate the above constraints, it was regarded as essential to make the necessary inputs available to the small farmers in the form of a package. Arnon (1981, pp 265 - 267) gives an account of the success experienced with package programmes in India, Mexico, El Salvador, etc.

There has been some criticism of package programmes. Laker

(1984) indicated that it cannot be expected of a traditional farmer to accept and adopt as many as five different new techniques in one operation. It was recommended that one new aspect should be introduced at a time and only once it has been accepted should the next aspect be introduced. This was recommended to the extension staff involved in the programme. The T & V system makes provision for conducting the training of the farmers on the basis of recommending only one practice at a time. The training should then also coincide with the time when it is necessary to implement the practice.

During interviews with contact farmers in the Keiskammahoek District, the impression was gained that the farmers were eager to improve their situation and that they were willing to experiment with new crop production techniques and practices. Crop production is not so deeply involved with their culture and religion as is the case with cattle for instance.

Mosher (1966, p 92) mentioned five qualities which supplies, inputs or equipment must have in order to be acceptable to the farmers and to ensure that they will keep on buying them every year. They are as follows:

- The practices must be technically effective.
- It must be of dependable quality.
- The price must be reasonable.

- It must be available locally at the right time.
- It must be available in sizes or amounts to suit the farmers requirements.

The package offered to the farmers in the medium rainfall areas of the Keiskammahoek District for 1981 comprised the following:-

4 x 50 kg 2.3.2 (22) fertilizer with zinc	@ R 9,95	= R39,80
1 x 50 kg Supers (N = 11,3%)	@ R 6,50	= R 6,50
1 x 12,5 kg Cutworm bait	@ R 7,00	= R 7,00
1 x 4 Stalkborer insecticide	@ 68c	= R 2,72
2 x 10 kg Maize Seed	@ R 9,25	= R18,50
Ploughing of one hectare	@ R20,00	= R20,00
Plus 4% tax		R 3,78
T O T A L		R98,30

The total cost of the package per hectare was R98,30. The Ciskei Marketing Board undertook to pay the farmers R10,00 per bag for their harvest. A farmer thus had to harvest and sell approximately ten bags of maize in order to repay the full loan. Only what remained after that could be used for his own consumption. The cost could well be more if he had to make use of paid labour for hoeing or any other practice. Although it may be normal for a commercial farmer to spend approximately R100,00 per ha to grow maize, it is a large amount for a rural

peasant farmer to negotiate. Research should also be done to establish what appropriate technology will be best suited to farmers with meagre resources. A farmer was subjected to a considerable risk if he applied for the package deal as the normal yield under traditional circumstances was on average only approximately 3 bags per ha.

The farmers could apply for ploughing without taking the other aspects of the package if they paid for the service in advance. To facilitate the delivery of inputs as well as the whole administration, no other aspects were sold separately. Farmers had the option however to plant one or a half hectare of maize by means of the package. As there were no local research findings for the district at that stage it is difficult to comment on the technical soundness of the package.

The nature of the package was such that ploughing, planting and fertilizer application was done for the farmer. The farmer only had to apply insecticides, carry out weeding and harvest the crop. A number of the basic farm decisions were thus taken away from the farmer. This was compensated to some extent by the extension staff who had to educate farmers on every aspect of the package and its technology.

Under prevailing circumstances it was considered valid to persuade the farmers in this way to adopt new methods. This

would make them accustomed to new methods in the hope that they would adopt them and apply them subsequently on their own.

7.3.2 Credit

Credit was made available by the Ciskei Agricultural Promotion Loan Fund (APLF) (See Appendix 7). A farmer's application for credit was approved, provided he did not owe money from previous loan transactions. Loans were only given in half hectare and one hectare proportions and were R98,30 or R49,15 respectively.

The extension staff had to get the forms completed and after they were processed by the APLF the forms were passed on to the Department of Justice as the Magistrate at Keiskammahoek was then responsible for the receipt of repayments. In this respect some of the extension staff had to be coerced in order to persuade them to submit the completed forms on time. The extension staff were also cautioned not to accept applications from farmers who were obviously too old, sickly or had any other factor which made them a risk for borrowing money.

Eighty per cent of the contact farmers were satisfied with the different inputs provided on loan, while only nine per cent were not in full agreement. This confirms that the technology advocated was acceptable to the farmers.

Senior extension staff were required to arrange for delivery of inputs to the farmers. Eighty per cent of the contact farmers who received the package, indicated that they received their inputs on time. There were however, 20 per cent who experienced problems. The delivery of inputs could have been improved. The distribution of the inputs by the two senior officials is discussed in paragraph 7.4.

7.3.3 Contract ploughing

An important aspect of the package deal was assisting farmers with ploughing and planting of the maize crop. This was regarded as necessary because many farmers did not have enough cattle for draught-power.

Previously, mechanical ploughing was done by a private concern, but it was decided by the Department of Agriculture and Forestry that it would take over the functions of the ploughing unit with effect from 1 September 1981. This was just about the time when the first ploughing of the season should have commenced.

At the time of transfer, however, the department bought a number of additional tractors to enlarge the ploughing fleet. The management of the ploughing team experienced problems in

employing experienced, reliable drivers and found control very difficult.

The Extension Officers had promised the farmers that the tractors of the department would carry out the ploughing according to their instructions. However, at a meeting held on 9 November 1981 some Extension Officers reported that the tractors had not been to their wards and that farmers were agitated because they had missed the early planting season.

The best planting times for maize in the Keiskammahoek District is either early in the season (September/October) or late December/January. Early planting enables the maize to reach the tasseling stage before the very hot months of January and February. Maize is very sensitive to drought during the tasseling stage and if affected by drought, yields can be drastically reduced. If it is planted late, the young maize can survive the two hot months and tassel at a time when it is cooler and the possibility of rain is greater (Marais, 1985).

In order to maintain control, the tractors had to work as a fleet in one village at a time, and then move to the next village. The ploughing commenced in the northern part of the district during the middle of October, working towards the south.

A large number of complaints were lodged because the ploughing team often arrived at a location at a time when the soil was completely dry. The extension officers further complained that the tractors arrived at their wards unannounced and that they had to make the necessary arrangements precipitately.

The ploughing commenced so late that the early planting season was missed. Many farmers believe that maize should be planted early and the delay agitated them to the extent that some farmers even went so far as to hire private tractors, or used oxen to do their own planting when they realised that the tractors would be late.

The late ploughing was therefore a critical factor which caused farmers to lose faith in the programme. It also had a further detrimental effect on the credibility of extension staff with the farmers.

During the 1982/83 season some similar problems were again experienced, although there were definite improvements on the previous year. This time many of the "teething problems" were eliminated and the ploughing commenced earlier.

The ploughing team followed the same pattern as the previous year and ploughed the fields of farmers who had arranged for loans or those who had paid in advance at the magistrate's

office. It often happened that some farmers only made up their minds to plough once they saw their neighbours fields being ploughed or even after the tractors had left. At that stage they could not have their fields ploughed as the team had to move on to the next village and could not keep on going back for individuals. Such farmers often could not comprehend that the teams could not return for a limited number of plots and complained to the extension staff.

7.4 MANAGEMENT OF EXTENSION

Management has a central role in the T & V system and sound management is an essential requirement for success (Baxter, 1983, p 103). The management of field extension was found to be very poor and left much to be desired. Planning was not carried out effectively by the Senior Extension Officers. They usually worked on an ad hoc basis attending to matters as they arose. A few matters were planned well in advance such as the monthly report/training/pay days, and the farmers' days. However, normal every day duties were often only undertaken when requested by Head Office or as decided on the spur of the moment. Appointments were sometimes made by the writer to meet a Senior Extension Officer at Keiskammahoek. On arrival it was found that he had to attend to another matter elsewhere.

The organising of the extension staff was very slack and they

usually did as they pleased. Any reason given as an excuse for undesirable behaviour was usually accepted and was passed unchecked by senior staff.

The control function was carried out in much the same way as mentioned above. The ward officers were situated far from Keiskammahoek without telephones and transport, while the two senior officers only had one vehicle between them. The other duties kept them so occupied that they very seldom visited the extension staff in their wards.

The poor management should perhaps not be blamed entirely on the senior extension staff but partly also on the environment in which they had to operate. On the other hand the Senior Extension Officers did not control, comment or reprimand the staff on any aspect of their work. The poor management is best illustrated by the following examples:

(i) Reports to the steering committee

When the senior extension officers submitted reports to the steering committee they were usually incomplete, because some of the field staff did not submit the necessary information on time. A full report on some aspects could only be completed after referring the matter back to the staff members concerned. The steering committee therefore only received the full report

at a later meeting.

(ii) Calendar of work (Itinerary)

At the end of each month each officer was required to submit a plan of work for the following month. A study of these itineraries showed that they did not conform to the concept of contacting a number of farmers per day over a fortnightly contact period. They were vague, not in accordance with the programme and always accepted without any comment, changes or recommendations by the senior staff (See Apendices 8 - 11).

It was further found that some itineraries were completely fictitious as the extension officers often did not work according to these plans. This shows a complete lack of supervision and control by senior officers. The impression was gained that the senior officers were so used to this "system" that they were unconcerned about it.

The writer made unannounced visits to a number of village level offices. One officer was on a number of occasions usually found at home during mid-morning, which indicated that he was not doing any active work that day as his house was situated a reasonable distance from his farmers. During two such visits to the district where a total of nine village level officers were visited, only one officer was found to be occupied with

the educational task indicated on his monthly plan of work (itinerary).

The extension officers were subsequently instructed to leave a note on their door when they went out to indicate where they could be found. However, this procedure did not improve the situation. The messages were often vague, and it often proved impossible to trace the whereabouts of extension officers from the apparently deliberate vague notes they left. The poor supervision and control is thus further proved by the fact that the necessity for the above arrangements were not even recognised by the senior officers.

On visits to the district office, one or two Extension Officers were often found to be loitering around the office. With their transport position it can be concluded that no productive extension work could have been carried out on that particular day. This again shows lack of control as the junior staff were able to move around at will without being confronted. If they were confronted, the slightest excuse was accepted. The day of the month on which they received their salaries was also regarded as a day off to do personal things.

At a steering committee meeting it was decided to hold a special meeting where all the Extension Officers were expected to be present. When the Tuesday after a long Easter weekend

was suggested, a senior officer indicated that it would not be a suitable date as "... some of the Extension Officers might not be back from the weekend". This again confirms the lack of control by senior staff over field staff, as well as an attitude that slack behaviour is expected and tolerated.

Supervision and control were sadly lacking and the Extension Officers got no guidance from any source.

(iii) Address by the Secretary

Staff morale is likely to be one of the most important problems, the effects of which could have a direct impact on staff performance at all levels (Pakdee, 1983, p 79). Pakdee (1983, p 79) further mentions that the spirit of all extension workers must be maintained at a high level.

The morale of the staff in the programme was low from the beginning, but later it appeared to be deteriorating further.

The co-operation, morale and effectiveness of the Extension Officers became so poor that the steering committee recommended that the Secretary for Agriculture and Forestry should address them. This meeting was held on 17 November, 1981 and thereafter the situation improved to some extent. Among other things dissatisfaction with salaries was raised by the

Extension Officers at this meeting. Extension staff were paid much less than, for example, teachers with similar qualification levels. At the time the Secretary said that the situation was being attended to. However, nothing positive was done to improve the situation.

The motivational factor of salaries proved to be a serious constraint. Besides salaries per se unfulfilled promises by the department created a demoralising situation.

(iv) Attitudes towards work

Early in January 1982, a critical time in the programme, it was found that five Extension Officers, as well as one local Senior Extension Officer had taken a large part of their annual leave. To allow such a large number of the staff to go on leave at a crucial stage of the programme when ploughing and planting was still in progress, indicates a lack of managerial ability and foresight, especially as it occurred shortly after the disrupting effects of the independence celebrations and agricultural show. This indicates that they did not care for the welfare of their farmers.

It further reveals that the staff had much more interest in their own welfare and comforts than in their work and it also

suggests low morale and lack of motivation.

(v) Senior staff at Head Office

The Chief Extension Officers at Head Office, besides assisting with the programme, also had a considerable workload of other duties. In practice they only occasionally found the necessary time to spend on guiding and monitoring the programme. During 1981 the two officers only managed to visit the extension officers occasionally, but subsequently no further visits were made. One local Senior Extension Officer indicated that he was initially visited twice a month.

The role of the two Chief Extension Officers at Head Office was mainly to supervise the implementation of the programme by the two Senior Extension Officers at the district office, to assist with the training sessions and to make contact with the extension officers and their contact farmers. They also had to liaise with the senior specialist information officer at Head Office, as well as with organisations such as the APLF and the Ciskei Marketing Board concerning loans and inputs. They acted as the link and co-ordinating agency between the field officers, Head Office and other organisations.

The investigation showed that the Chief Extension Officers at Head Office initially supervised the two senior officers at

Keiskammahoek and also met the extension officers once when compiling a report for the steering committee. Subsequently they withdrew from the programme and did not carry out any training either.

(vi) Extension Officers supposed to do extension work exclusively

According to Benor and Harrison (1977, p 11) the extension staff are supposed to be working exclusively on extension duties. Even tasks such as the distribution of inputs are discouraged.

The arrangements concerning the delivery of inputs in the Keiskammahoek District proved to be a problem because no other organisation or agency was available to assist in this regard. Russell (1981, p 33) agrees that extension staff should only concentrate on giving extension advice, but if the supply of inputs and a marketing system is lacking, extension staff could initially assist with this function until the supply function could operate on its own. "For however well trained the staff may be, and however good their links with research, without a supply of inputs and a marketing infrastructure, the credibility of the extension worker will soon be lost".

Nagel et al (1983, pp 37 - 38) were of the opinion that this

aspect should be reconsidered and that a difference should be made between activities that support advisory work and those which are detrimental. Jaiswal, as quoted by Moore (1984, p 311) is in agreement that the timeous supply of inputs is very important and that some procedure to streamline input deliveries should be investigated.

Benor, quoted by Howell (1982b, p 3), when confronted with these opinions, contested the issue and indicated that other functions relating to input supplies, etc regulate the work of providing technical advice. Because such tasks are timebound and measurable, they usually receive preferential attention at the cost of the extension function. He is further of the opinion that this type of work is more of a clerical nature which is detrimental to the professional image of the extension officer.

Due to the non-availability of other organisations to arrange for the distribution of inputs in the Keiskammahoek District, it was decided that the extension staff should handle the matter. This entailed taking the orders for loans and inputs, carry out the distribution of inputs, as well as organising the ploughing teams when they reached the extension officers' area.

The two senior officers had only one light delivery vehicle (LDV) between them for their ordinary duties and had to use the

same vehicle for the delivery of inputs. They also had to make the necessary arrangements while the extension officers collected the basic data and supervised the ploughing. Naturally much time was devoted to these activities and it would have disrupted a planned programme as all these activities were not planned in advance but had to be done when required. It was, however, another opportunity for the staff to meet their farmers and they could have used the meeting to exchange knowledge.

The investigation showed that other duties also interfered with the planned programme. For example, the Ciskei National Show early in December 1981 which was held at a critical time for the programme. In order to select show material, smaller shows were held well in advance to select suitable items. The extension staff had to arrange these smaller shows and had to work very hard towards the organising of the National Show, as all exhibits from the Keiskammahoek District had to be collected from the farmers and returned again after the show. During the show they had to work as stewards. This applied to the Extension Officers at field level as well as the senior officers, including those at Head Office. The attention of the staff was thus divided between the extension programme and other work for a period of approximately two months.

Lack of transport and communication facilities meant that

Extension Officers had to go to great lengths to organise a simple operation such as transporting exhibits from the residential areas of his ward to the show venue. These activities also disrupted the programme and together with the disruptions caused by the ploughing and planting it can be concluded that the Extension Officers could not follow a fixed programme of visits to their farmers.

(vii) Use of time

The extension officers were supposed to work four days per week in their wards visiting groups of contact farmers. In practice it did not function in this way. Some reasons have been mentioned in par 7.4 (vi) above. Furthermore some officers had so few contact farmers that they could visit them all in two days. The extension staff were not accustomed to working according to a time scheduled plan of work and visits to certain farmers on certain days of the week were not made. It was found that many work days per month were lost due to other trivial activities which could have been finalised within minutes had there been better communication facilities.

A day per month was usually lost when staff received their salaries at the district office. This day was however also used to hold a staff meeting.

At area farmers' days up to eight Extension Officers from the surrounding areas also attended, thus being absent from their wards for that day. On a number of occasions when the office in Keiskammahoek was visited one or more Extension Officers were there for some reason or other. Apart from the above there were numerous occasions when telephonic or personal contact was made with the district office and the writer was informed that all the staff had gone to a certain function for the day, such as a diploma day at Fort Cox or meetings at Zwelitsha.

The factors mentioned above make it impossible for extension staff to follow their programmes. Because extraneous functions are decided upon at short notice they could not be included in the planning of the programme.

7.5 PROBLEMS EXPERIENCED BY THE EXTENSION OFFICERS

7.5.1 Transport

None of the extension officers were issued with any means of transport. Some officers, however, had the use of a horse or a bicycle in their wards to travel to their farmers, but they mostly travelled on foot and did not use those means of transport. When going to the Keiskammahoek Office they had to rely on lifts which often took a long time because public

transport was erratic and unreliable. Because of uncertain transport, travelling took much longer while the opportunity was also used for private business purposes as many facilities were lacking in the locations.

In the wards, transport was not considered to be a great problem. All Extension Officers could walk to their farmers, although it took some time, but outside the ward it was a problem, especially with no communication facilities.

7.5.2 Communication

As no Extension Officer had telephones, it was very difficult to get any messages to them. Arrangements for any training session or meeting had to be planned well in advance. At such meetings some of the staff often arrived late due to the uncertainty of their transport. Last minute changes were impossible, as messages usually took a long time to be relayed to the wards. Urgent messages had to be transmitted personally by a senior officer who had to use his vehicle which was a rather expensive and cumbersome exercise. One officer indicated that he visited the office at Keiskammahoek approximately six times per month to ask advice and to obtain more details about his work. He also admitted that such a visit took a full day. A telephone would have been a much cheaper and efficient way of communicating. As previously

mentioned, even a trivial activity became a major operation due to lack of communication facilities.

7.5.3 Management and guidance

The Extension Officers found themselves in their wards without the necessary guidance from senior staff. This was often due to transport problems which hampered the senior staff, as well as other duties which kept them occupied. Other factors such as lack of training, insight and credibility also played a major role.

The two Chief Extension Officers from Zwelitsha only visited the Extension Officers once in order to establish their progress at a certain stage. They submitted one report each on their findings but they never visited the Extension Officers in order to have contact with the farmers. These two reports can be regarded as the only internal monitoring which was done during the course of the programme.

7.6 PROBLEMS EXPERIENCED BY THE SENIOR EXTENSION OFFICERS AT DISTRICT LEVEL

7.6.1 Transport

As already mentioned the two officers only had one vehicle. It made staff control very difficult as their areas were in directly opposite directions and only one of them could use the vehicle at a time.

When something went wrong with the vehicle, or it had to be serviced, it often remained at the government garage for a considerable time. They were not always supplied with a relief vehicle. Furthermore, they were also restricted by Head Office not to exceed 1 200 km per month.

A further problem was that the vehicle had to be used in some instances to fetch inputs in King William's Town and deliver them to the farmers. Towards the end of 1981 during a very critical time of the annual maize cycle, the truck had to be used extensively in the district to transport agricultural exhibits.

7.6.2 Other duties allocated to the senior officers

Apart from their supervisory duties in the district, other duties were allocated to these officers which were time consuming:

- As mentioned in par 7.4 (vi) above, the Ciskei National Show was held during December, 1981. A time during which a large amount of supervision and guidance was necessary.
- The two officers were further also responsible for the delivery of inputs as discussed in 7.4 (vi) above.
- One senior officer was in charge of a ward as well as his other duties.

These additional duties were very time consuming and interfered with the activities of the maize programme as well as with the control of staff.

7.6.3 Lack of respect and credibility from the extension officers

The Senior Extension Officer in charge of the southern part of the district was only promoted to that post towards the beginning of the programme. He was familiar with the other extension officers and now found himself in charge of them. As

the Extension Officers knew him well as one of their former colleagues, he was not respected with the necessary authority of a senior official. The Extension Officers often ignored his instructions and authority and he lacked the necessary respect and credibility.

7.7 SUBJECT MATTER SPECIALISTS

As stated in Chapter 3 the duties of a Subject Matter Specialist (SMS) are to carry out training sessions for the Extension Officers and visit them in the field in order to assist with any problems which they may have, and also to liaise with research institutions and conduct their own adaptive research in order to be able to make the correct recommendations for a specific area (Benor and Harrison, 1977, p 25). Howell (1982a, p 275) mentioned that there is a need to ensure that the research base for advice is sound. There are often difficulties in communicating research results to the extension worker.

At the commencement of the programme, the Department of Agriculture and Forestry had two qualified agronomists serving the whole of Ciskei. It was not possible to second an agronomist to the Keiskammahoek programme to serve as a SMS on a full-time basis.

The agronomists conducted a training session and organised a one day training course at the commencement of the programme covering the most important aspects of maize production. They did not have time to visit the Extension Officers in the field, neither could they carry out any adaptive research.

The role which the Subject Matter Specialists were able to play in the programme was thus very limited from the outset. This was, entirely due to the non-availability of qualified staff.

A very important aspect of the T & V system was thus not functioning satisfactorily during the course of the programme. Both these officers vacated their posts during the course of 1982 and were not subsequently replaced.

7.8 COMMUNICATION CHANNELS

7.8.1 Literature

Literature in the form of one page pamphlets in the Xhosa language was distributed to the contact farmers during the prpgramme in which the correct cultural practices were recommended as well as the times of the year when these practices should be effected (Appendices 12 - 14).

Twenty nine per cent of the contact farmers indicated that they

could not read, while a further 29 per cent indicated that they could read but never did any reading. Written information was therefore only directly useful to 43 per cent of the contact farmers.

Only 28 per cent said that they read farming journals or farming publications. The reasons for not reading farming articles are given in table 7.1 and suggests that written communication has had little, if any, impact.

Table 7.1 REASONS WHY CONTACT FARMERS DID NOT READ FARMING ARTICLES IN THE KEISKAMMAHOEK DISTRICT, 1983. (N = 95)

R E A S O N	NO	%
Do read articles	27	28,4
Unable to read	31	32,6
Unable to obtain publications	23	24,2
Not enough time	2	2,1
Lazy to read	5	5,3
Too old to read	3	3,2
Poor eyesight	4	4,2
	95	100,0

7.8.2 Radio programmes

The publicity section of the Ciskei Department of Agriculture and Forestry was responsible for two radio programmes per week concerning agriculture and this channel of communication was also used to propagate the maize programme. Particulars about the programme were broadcast and interviews arranged and recorded with participating farmers. Recordings were also made at the farmers' days (See par 7.8.3).

Twenty eight per cent of the contact farmers did not possess a radio. Four per cent indicated that they did not listen to the agricultural programmes. Thirty one per cent were thus immediately excluded from receiving any radio communication.

Fifty two per cent of the contact farmers indicated that they had heard about the programme on the radio, while 32 per cent said that they listened to all programmes concerning agriculture. Seventy eight per cent of those who had radios rated the agriculture programs as very good while ten per cent rated them as fairly good. Eighty one per cent of the radio listeners indicated that they believed that everything concerning agriculture which was broadcast over the radio was true, while a further 17 per cent said that most things were true.

The impact of the radio as a communication channel, although limited, did reach a wider audience than the written word. In order to improve the situation, extension staff should promote the purchasing of radios, by informing the farmers when programmes concerning their area are to be broadcast. If they hear of someone being interviewed whom they know, it may encourage them to buy their own radios. In the long term, education should also act as a motivation to buy radios.

7.8.3 Farmers days

During January and February, 1982 farmers days were organised in nine locations in the district. Farmers days usually commenced at approximately ten o'clock in the morning at a prominent farmer's house who had a good stand of maize. Approximately 50 to 80 people would attend. The programme at a typical farmers day did not vary much and usually followed the following pattern:

It was opened with a prayer, followed by a short introductory speech explaining the purpose of the day, and introducing the various guests from outside the area. Usually a number of Extension Officers from other wards, publicity staff from Head Office in Zwelitsha, as well as some staff from the district office in Keiskammahoek also attended.

A few Extension Officers would then give lectures on some applicable topics for the specific time of the season. After this participants would inspect a field of maize nearby, usually belonging to the owner of the homestead where the proceedings were held. In the field further discussions took place, questions were asked and answered. Sometimes certain practices such as stalkborer insecticide application or the correct way of hoeing were demonstrated. While these proceedings were continuing a few local women prepared the lunch and the proceedings ended with a meal.

Forty nine per cent of the contact farmers indicated that they attended one farmers day during 1982, eight per cent attended two farmers days, while five per cent attended three farmers days. Eighty two per cent of those who attended said that they found it useful and that they learnt something of benefit to them. Eight per cent said that it was fairly useful, while six per cent judged it as being average.

Some speeches at farmers days were often recorded by the publicity section of the Department of Agriculture and Forestry. These were then edited and broadcast on the radio at a later stage.

At two farmers days attended by the writer, it was observed

that a cordial and jovial relationship between the Extension Officers and the general farming community was lacking. The extension staff sat on chairs or benches or stood on one side, while the men and women attending sat on the ground, usually in the shade of a tree. It was conspicuous that there was very little informal verbal contact between the two groups. This inevitably led to ineffective communication and could be improved if the extension staff worked positively to improve their credibility and mix more freely with the farmers. This also suggests that a cultural gap exists between the extension officers and their farmers. The extension staff should take positive steps to close this gap, live amongst the farmers, associate with them and participate in their social and other activities to become fully accepted by them.

7.8.4 Film shows

The departmental film unit visited the district during September 1981 and again during April 1982. Film shows were held at various venues.

It is often difficult to obtain films which are relevant to a particular agricultural programme as they are expensive and take a long time to manufacture. In this area, not all the aspects of the programme were covered but it did bring a

message concerning certain aspects, such as the importance of good seed and cultivation techniques. Three main films were shown, namely 'Food from the soil', 'Good seed for better crops', and 'Farmer, foundation to the community'.

According to the survey, 49 per cent of the contact farmers attended a film show. Twenty one per cent indicated that they were committed and could not attend, while five per cent said that they were too old to attend. The attendance figures showed that very few men, a few more women and a large number of children attended the film shows.

The reasons mostly given for not attending were vague and it was concluded that film shows were regarded as something essentially for children and women. It was regarded as undignified for an adult man to attend such shows which they believed was "something for the children".

Table 7.2 gives an indication of the attendance figures of the shows held during September 1981.

Table 7.2 ATTENDANCE FIGURES FOR FILM SHOWS IN THE KEISKAMMAHOEK DISTRICT, SEPTEMBER 1981.

DATE	LOCATION	ATTENDANCE		
		MALES	FEMALES	CHILDREN
15/09/81	Gwili-Gwili	4	12	349
15/09/81	Mnandi	1	6	480
16/09/81	Ndlovini	2	13	35
16/09/81	Ngobozana	16	32	300
17/09/81	Myukwana	5	28	264
17/09/81	Ngxalawe	7	13	98
18/09/81	Cata	3	23	416
21/09/81	Red Hill	12	15	0
21/09/81	Lower Gxulu	9	21	305
22/09/81	Upper Wolf River	45	64	500
22/09/81	Lower Wolf River	11	19	60
23/09/81	Upper-Ngqumeya	9	18	473
23/09/81	Lower-Ngqumeya	12	25	147
24/09/81	Lenye	30	27	264
24/09/81	Burnshill	8	14	150
28/09/81	Zanyokwe	13	41	273
28/09/81	Fort Cox	6	16	64
29/09/81	Rabe	27	42	221
30/09/81	Ngcamngeni	11	12	195
30/09/81	Sonwabile	20	37	68
01/10/81	Ngudle	15	27	305
21 SHOWS		266 34,5%	505 65,5%	4 967

After each film show, time was allocated for questions and discussion.

During April and May 1982 18 film shows were held with 145 males, 354 females and 3 623 children attending. The response varied from place to place but an outstanding feature was the fact that the rural farmer was not yet aware that he, who had access to the land, had to produce food for the man who lived in the town or city and who had no means of growing his own food.

The use of film shows to reach the adult population is very limited. However, the use of films cannot totally be disregarded because a large number of children attended. This may result in a long term investment because the new generation may adopt the new messages. The study did not include the impact of films on the youth.

7.9 MARKETING

Suitable markets are regarded as a motivational factor towards higher production (Mosher, 1966; Bembridge, 1984b). At the commencement of the programme, the purchase price of maize was fixed at R10,00 per bag of maize. The programme thus made provision for the marketing of the maize at a reasonable price.

7.10 DISCUSSION

A number of factors have been identified in this chapter as constraints, and contributing towards the lack of success of the programme. In short, the constraints can be summarised into two interrelated categories. Firstly, there was the human element as far as the staff was concerned. They lacked managerial ability, motivation, leadership qualities, credibility and dedication. Secondly, policy or programme factors including poor institutional support, lack of adequate training in management, poor supervision, imposition of additional non-extension duties, lack of transport and communication, and lack of Subject Matter Specialists.

CHAPTER 8

CONCLUSION AND RECOMMENDATIONS

8.1 INTRODUCTION

This chapter attempts to bring together the most important aspects of the findings of this study and discusses implications for future extension programmes.

8.2 PHYSICAL RESOURCES

A farmer can do very little to change his physical environment. To solve the problem, it is the farmer who must adapt to the environment.

There are arable lands which are situated on sloping terrain which could cause severe soil erosion. The steep slope of some areas can thus pose a hazard towards erosion and should be avoided for crops. The district as a whole is perhaps better suited for forestry, grazing and browsing than for dryland maize production, although there are areas with high cropping potential.

With sound veld management the area has good potential for cattle and goats, but it will take some time to rehabilitate the veld which has been subjected to all the adverse consequences of uncontrolled communal grazing and overstocking over a long period of time.

The introduction of grazing management systems and stockfarming aimed at increased income per livestock unit should be investigated. Natural resources per se are not a constraint to agricultural development of the area.

8.3 INFRASTRUCTURAL DEVELOPMENT

Infrastructure is a phenomenon which is related to the human potential of an area. Markets are generally lacking in the district and even the facilities provided by the CMB do not always function according to normal requirements of supply and demand.

As the programme included the marketing of maize, the lack of markets did not seem to have any effect on the programme, mainly because farmers produced little for sale. It was found however that farmers were dissatisfied with the marketing of other commodities.

Commercial activities in the rural areas were almost non-existant and the few shops only stocked the most basic items. This was not a direct constraint towards the programme, but necessitated the introduction of the 'package deal' because inputs were not readily available in the district. There is great scope for the improvement of local retail outlets and services. Businessmen with entrepreneurial ability will be able to render valuable services for the rural people by providing inputs and consumer goods.

Transport facilities did not affect the programme to any extent and can be regarded as satisfactory for local conditions.

The district is well served by streams which carry a substantial amount of water and there are a number of dams of considerable size. No irrigation is practised by any of the local farmers. The programme was devised for dryland areas and was not affected by the water resources as such.

The establishment of irrigation schemes, especially small-scale schemes should be investigated. Participatory water reticulation schemes to provide potable water in the villages also needs high priority.

Electricity is not used by any farmers in the district because they are unable to afford it. Electricity can however have a

large impact on development if subsidised as a development tool.

The district is well served by numerous schools and a number of other educational facilities are within short range, but there are numerous people who do not realise the value of education. The programme was affected by the low education levels of the contact farmers as a large percentage were illiterate. There is therefore scope for functional numeracy and literacy programmes. The Department of Education should gear their policy towards a situation where compulsory education can be introduced in Ciskei.

The district is fairly well served with medical facilities. However, with the large number of old people needing medical care, it is a facility which needs to be extended and improved upon.

Although the postal system did not create any problems, the lack of telephone communication posed a problem for the extension staff.

The role of the two Tribal Authorities was not investigated in this study. Their role in agricultural development varies from village to village, often depending on the chief's or headman's interest in agriculture. It is important to develop local

leadership and obtain the co-operation and participation of the Tribal Authority during the planning and implementation stages of a project.

The functional efficiency of the extension service was not evaluated during this study. Suffice it to say that the results of the investigation suggested that by implication the situation had not improved since the Bembridge and Penberthy (1980) report was published. In any future programme serious attention will have to be given to a number of aspects concerning extension of which the following are important:

(i) An operational policy and direction,

(ii) improved management, motivation and staff stability from the top down to field level,

(iii) realistic salaries and adequate working conditions. The latter includes housing, offices, communication and transport,

(iv) appropriate in-service training related to job requirements,

(v) recruitment of suitable staff, especially senior staff.

Unless these measures are implemented a high turnover of staff

in the Department of Agriculture and Forestry can be expected to continue.

8.4 THE LAND TENURE SYSTEM

There is no doubt that the communal system of land ownership contributes to the deterioration of the soil and grazing resources. This leads to low agricultural production. The traditional system of land ownership is a very contentious subject and is deeply rooted in politics and traditions of the people. Most political leaders are unlikely to attempt changing land tenure unless there is popular grass roots support. Population pressure and famine may eventually force changes.

People will have to realise that every man cannot be a farmer. Cities, towns and villages will have to be established including development of present locations (villages). A master plan should be drawn up, after thorough research has been undertaken on settlement patterns for the whole of Ciskei. Planned residential centres can develop gradually, while existing residential areas which are planned for agricultural land can be phased out by refusing further new extensions and settlement. Agricultural land should be zoned for specific types of land use. The present size of landholdings are too small to make a living and will have to be enlarged. Fewer

farmers will thus be able to be accommodated on the land. Conditions should be created for negotiability of land rights so that individuals with entrepreneurial ability are able to acquire economic units of land for farming. Farmers to be selected according to certain predetermined criteria. The freehold system is not at this stage considered as an acceptable system. New land tenure systems need to be devised whereby land has an economic value. Such systems should make provision for a farmer to purchase the land rights after they have proved that they have the ability to make a living from the land and are farming according to sound conservation principles.

8.5 THE HUMAN POTENTIAL

The human potential including traditions, peculiarities and attitudes is often overlooked. The reason may be due to the fact that such information is often very difficult to obtain. It is also because the agricultural planners and technicians are specialists in the field of agriculture and lack knowledge concerning human aspects and they ignore the importance of the human factor. Many of the contact farmers were generally too old to farm. They were at a stage of life when their habits and attitudes were fixed and rigid with very little scope for change being envisaged. It was found that the condition of their health also left much to be desired. To remedy this

aspect will take a long time. Illiteracy will have to be eliminated and farming prospects made much more attractive to enable young men to earn a good living from agriculture.

The farmers did not lack farming experience in terms of time, but their experience had not gained them much new knowledge of agricultural practices. Very few contact farmers had experience of commercial farming on European owned farms. This situation can only be improved with sound extension education where the farmer is exposed to modern appropriate technology during his farming career.

A large number of contact farmers were females. In Black society women have always been responsible for tilling the soil. In modern times the role of the women has also changed considerably in that they often migrate to work outside the rural areas at certain stages of life in order to supplement family income.

Because of the large number of women in the rural areas, not only should female extension officers be appointed and trained, but home economics officers are equally important to raise the standard of living of the people. Women should also become more involved in the planning and implementation of agricultural and rural development plans.

The population growth rate and average family size of 6,42 is regarded as being too high. Here again education can play a significant role in reducing the number of births. Knowledge concerning the use of contraceptives is not the only factor involved. Education in general terms will create a higher standard of living which will automatically reduce the number of births and bring about smaller families. Family planning programmes should also be encouraged.

In Ciskei the Christians are more progressive towards development than the non-Christians or pagans. Apart from any other moral or religious considerations, it will benefit agriculture and development in general if more people are converted to the Christian faith, which in turn, will promote and stimulate the local churches and church organisations. It is implicit that extension workers should work with and through the various religious organisations.

The inhabitants of the Keiskammahoek District consisted approximately of equal proportions of Xhosa and Mfengu who are often antagonistic towards each other. It is very important to be aware of this division when planning extension programmes. In areas where the one group is dominant, extension staff belonging to that particular ethnic group should be appointed.

Low education levels are prevalent throughout Ciskei and can be regarded as one of the most important constraints towards development in general. It is an urgent priority that the education system be upgraded and efforts made to introduce compulsory education as soon as possible.

A large proportion of the contact farmers were in poor health which affected the programme because cases were found where farmers could not attend to their fields. The general health in the district, however, can be improved, firstly, by improved education, and secondly by the appointment of more home economics officers working diligently to establish home vegetable gardens, improved diets, general hygiene and home life.

8.6 SOCIO-ECONOMIC FACTORS

Leadership in the rural areas is very weak, even though organisation participation is fair. Organisation participation can do much to uplift the farmers and organisations can be utilized by extension staff. There is a need for a suitable organisation at village level with and through whom to plan extension programmes.

Extension staff as well as home economics staff should encourage the formation of branches of the existing Zenzele

(do-it-yourself) organisation for women, as well as possibly the establishment of a new organisation such as an Agricultural Union for Women to promote the interests of women in agriculture.

The migrant labour system has distinct disadvantages for agricultural development. Because a man cannot make a living on his small piece of land, he seeks an easier livelihood elsewhere. This tendency may be reversed if opportunities are provided so that he could make a living on his land. This can be achieved if co-ordinated planning could make larger plots available in conjunction with the necessary institutional support and services. The establishment of industrial centres such as Dimbaza adjacent to Keiskammahoek District can be of benefit as farmers could obtain outside work while still residing at home.

Opinion leaders are individuals who can influence people to adopt or reject new innovations. The contact farmers selected for the maize programme could not be regarded as opinion leaders as they were not selected according to any prescribed criteria. It was found that their role as opinion leaders was very weak. Very little research, if any, has been done on opinion leadership in Southern Africa and what role it plays in the rural areas. The validity of applying studies, done in overseas countries, in the Southern African context are

questioned. It is therefore urgently necessary that research concerning this matter should be carried out locally to establish their influence and potential in extension programmes. There is therefore a great need for leadership development.

The high incidence of theft was not anticipated. This is an aspect which cannot be solved easily by outsiders and should be left for the community to solve themselves.

This factor could be reduced indirectly with better and more education. The youth should be taught respect for other people's property, while improved education will promote higher salaries and subsequently a higher standard of living which will reduce stealing. This is however a long term solution.

8.7 PROGRAMME IMPLEMENTATION

8.7.1 Institutional support

The policy of the Department of Agriculture and Forestry was to give a high priority to the programme. In practice however it soon became ineffective because of frequent staff changes in the top structure. Retraining and reorientation was necessary after each change in staff. There were too many different projects and problems in Ciskei which needed the attention of

(iii) the policy of carrying out a large proportion of farming operations for farmers is questionable. It is not regarded as effective extension or the most economical way to produce food. The crux of the matter was that the government was producing food at a high cost for the farmer on his own land, at his risk and cost, while he only had to hoe, do weeding, apply insecticides and harvest.

The price paid for the maize was fixed prior to planting. The farmers knew well in advance what they were going to receive. The maize was collected at the farmer's place of residence and no problems were experienced with the marketing.

Regular planned staff training sessions soon ceased to take place. Apart from the initial training, the weekly or fortnightly sessions were replaced with the monthly staff meetings, payment of salaries and submission of itineraries. The training function, one of the cornerstones of the T & V system was thus lacking and was one reason why the programme could not succeed. Training should be included in every extension programme and carried out as planned. Senior staff appeared to lack competence as trainers.

It was found that the SMS did not play any significant role during the programme and that applicable research data was lacking. This is a constraint which should be avoided, as

incorrect recommendations will severely damage the credibility of the whole programme and the department, including the extension staff. Lack of suitable competent staff was a major constraint in this study. There was no agronomy specialist in the department in the latter stages of the programme.

8.7.2 Management of the programme

The management of the programme left much to be desired. This was due mainly to two factors. Firstly, the staff at all levels were not able to implement management principles despite being given training. They lacked motivation, commitment and enthusiasm to make the programme a success. Some also lacked the necessary potential as managers. Secondly, there were numerous other factors which interfered with the management functions. This included lack of transport and communication facilities, as well as other non-extension duties which were highly disruptive to the programme.

Ineffective management from Head Office staff can thus be regarded as one of the main reasons for the failure of the programme. Lack of suitably trained staff played a major role. Also, too many extraneous duties were foisted on staff, thereby detracting from implementation of the programme.

The programme did not generate much enthusiam at Head Office

level. Head Office staff generally had very little to do with the programme apart from attending the steering committee meetings and occasional phone calls to the district office. The two Chief Extension Officers compiled only one report each on their extension staff and did little further internal monitoring. Interest from Head Office was greatly lacking and the control function virtually non-existent. The two Chief Extension Officers at Head Office should have been designated to the programme without other duties. More training in practical management was needed. However, this cannot be effective unless there is strong direction and commitment from Head Office.

The two senior officers at Keiskammahoek were unable or unwilling to adequately supervise and control the field extension officers. Lack of supervision from Head Office combined with the low degree of respect which they enjoyed from subordinate staff were major constraints to the management of the programme. There were also transport and communication problems as well as many other distracting duties. All these problems could be solved with proper management. The two posts of Senior Extension Officer at Keiskammahoek can be regarded as the key posts in the programme. It is therefore of the utmost importance that these control posts should be filled by selected competent staff.

The senior district staff require guidance, support and supervision from Head Office. They should devote their full time to supervising the programme and supporting field staff.

The Extension Officers did not work according to the original plan of visiting contact farmer groups on four days of each week. They continued to work in their original ad hoc unorganised way, and not even according to predetermined work plans. They were not properly supervised and controlled and worked according to their own whims, going to Keiskammahoek and elsewhere when they pleased. They showed a complete lack of management, motivation and sense of responsibility. This can be regarded as a direct reflection of the department's inability to provide the necessary leadership, motivational support and reinforcement. Young inexperienced officers especially, need to be strictly controlled. They should be taught from the outset to work according to a fixed plan of work and not according to their own inclinations.

On the other hand, the study has shown that it is difficult to work according to a fixed programme in rural areas where social activities are more important than economic activities.

Extension staff need to get certain messages across to farmers at definite times. However, there needs to be more flexibility

in extension programmes. Instead of visiting four groups of farmers as planned in the programme, it may be advisable to reduce time spent on direct extension programmes to three days per week. Planning should take cognisance of known social and other activities. Supervision and control at all levels is of the utmost importance.

The communication channels used in the programme were not very successful. Because of high illiteracy rates, mass media (radio and films) were not completely accepted and group methods were not effectively used. Extension Officers tended to rely mostly on individual contacts. There are efficient ways of traditional communication such as role play, drama, singing, dancing and mythological characters which could be used by extension staff to get messages across more effectively. In short, much more imagination is required in communication. It is important that Extension Officers should study traditional communication systems in their wards and adapt them for use in communication programmes.

It appears as though a cultural gap exists between the extension staff and the farmers which could be a communication barrier. This is a matter which could be investigated further.

A summary of constraints found in this study and suggested solutions if further programmes are to be implemented, are

given in table 8.1.

Table 8.1 SUMMARY OF PHYSICAL, INFRASTRUCTURAL, HUMAN, INSTITUTIONAL AND MANAGERIAL CONSTRAINTS TO EXTENSION AND SUGGESTED SOLUTIONS

FACTOR/VARIABLE	PROBLEM/CONSTRAINT	POSSIBLE SOLUTION
1. Agro-Ecological Factors		
1.1 Topography	Soil erosion	Avoid too slopy lands.
1.2 Climate	Periodic droughts	Irrigation schemes. Moisture conservation technology.
2. Constitutional Factors		
2.1 Trading Stores	Limited stocks	Shops should be upgraded. Private enterprise should be encouraged.
2.2 Educational facilities	Low educational levels generally.	Reform of the educational system. Functional numeracy and literacy programmes.
2.3 Post and Telephones	Too few telephones.	Each Extension Officer be provided with a telephone.
2.4 The Extension Service	Unorganised and inefficient.	Implement modern management principles.
2.5 Land Tenure	Small traditional holdings.	Politically feasible land reform programme.
3. Human Factors		
3.1 Age, sex ratio and Migration	Only very old people or females at home to farm.	Agrarian reform to attract younger farmers.
3.2 Family Size	Too large families.	Education and family planning programmes.
3.3 Religion	Pagans are not keen to adopt modern agricultural methods.	Extension to work with church groups.
3.4 Ethnic composition	Intergroup conflict.	Exercise care with the appointment and placement of extension staff.
3.5 Health	Large position of contact farmers in poor health.	Improved nutrition. Health and hygiene programmes.
4. Programme Implementation		
4.1 Policy	Operational agricultural development policy lacking.	Department should be committed to an operational policy.
4.2 Programme Inputs and credit	Ineffective mechanisation.	Encourage farmer contractors.
4.3 Marketing	Marketing facilities inadequate.	Marketing outlets need to be improved for all produce.
4.4 Training	Training was ineffective.	Training programmes according to fixed schedules.
4.5 Research support	Lack of research support.	Adaptive research programme to provide suitable technology.
5. Management		
5.1 Head Office control	Lack of Head Office control.	Experienced extension directorate with full powers to implement extension programmes.
5.2 District Control	Inadequate district control.	Management training for all supervisory staff. Improve transport and communication facilities.
5.3 The village programme	Lack of control over field extension officers.	Provide for motivational needs, control and supervision.
5.4 Communication channels	Mass media generally ineffective.	Investigate use of traditional channels of communication. Training in use of group techniques. Balanced communication programme according to needs.

8.8 CONCLUSION

It appears that under present circumstances little progress will result from attempts to encourage traditional farmers on small holdings to produce maize. There are many constraints which need to be overcome.

Development strategies should be replanned bearing in mind the following:

(i) in order to assist small-scale women farmers, Home Economic Officers or female extension officers should encourage home vegetable gardens where maize can also be grown on a small scale. Attention should also be given to improving family diets,

(ii) it appears unlikely that the existing human potential resident in the area are capable of developing any viable farming enterprises, even with an efficient extension service. Agrarian reform of some kind aimed at encouraging bona fide farmers should be a priority if policy is to develop a farming class in Ciskei. At the same time consideration needs to be given to providing residential sites, employment opportunities, services and pensions to non-farmers,

(iii) the selection of prospective farmers and extension workers should be made from the school stage onwards. They should be trained at school, college or university level according to curricula which will enable them to become independent commercial farmers and/or capable agriculturalists. After prospective farmers have completed their training they should be assisted to establish themselves and given some practical in-service training. This procedure would have to be well researched and supported by all relevant institutions.

(iv) farming should be an economically viable enterprise in terms of family income whether it be from farming or a combination of farming and outside employment. Any farming scheme should be economically self sustaining. If this is not the case, there is something wrong with the implementation, management or the philosophy of the project,

(v) great care must be exercised in selecting suitable and appropriate technology. It has often happened that developing agencies buy the most modern, impressive and expensive equipment which is often totally unacceptable and impractical and has to be sold again at a great loss, or left to go to ruin because nobody will buy it. What is needed is a technology generating system, whereby solutions to constraints in the farming system are researched and acceptance tried out with selected farmers, before advocating widespread adoption. For

example, the most practical way of ploughing a one hectare piece of land in the rural areas is by means of a team of oxen,

(vi) a priority is to educate the masses, both children and adults. This is seen as the most important means of developing the population as education, if properly planned and appropriate to development will, on the long term, solve or improve many of the development constraints identified in this study.

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APPENDICES

A P P E N D I C E S

KEISKAMMA DISTRICT EXTENSION PROGRAMME
AGRONOMY EXTENSION - CONTACT FARMERS

Personal details:

Name :.....
Sex :.....
Education :.....
Family size :.....

Arable land :.....
Cattle :.....
Head oxen :.....
Adults over 21 :.....
16 - 21 :.....
children 7 -15 :.....
cildren under 7:.....

MAIZE PRODUCTION	1980/1	1981/2	1982/3	1983/4	1984/5
Conservation works					
Adequacy (Good, fair, poor)					
Land preparation					
Ploughing date					
Depth of ploughing					
Fertilizer kg					
Manure tonnes					
Total area planted					
Area under scheme					
Planting date					
Cultivar					
Plant population (in row spacing					
Cut worm bait (date applied)...					
Stalk borer control (") ...					
Weed control					
Date first cultivation					
Date second cultivation					
Date third cultivation					
Adequacy (Good, fair, poor) ..					
6 - 8 weeks					
Total yield					
Yield under scheme					

Remarks re : Problems etc.: _____

CONTACTS
(TARGET FARMERS)

DATE	TYPE OF CONTACT (Code)	TIME SPENT	ADVICE GIVEN AND REMARKS	FOLLOW-UP DUE

APPENDIX 3

SMALL FARMER PERCEPTION AND ADOPTION OF A MAIZE PROGRAMME

IN THE KEISKAMMAHOEK DISTRICT

1983

CARD NO. 01 (1-2)

Enumerator: _____ Date: _____ (3-4)

Administrative area: _____

1. Name of Respondent: _____

2. Sex (1 2): M | F (5)

3. Ethnic Group _____ (6)

4. Relationship to Head of the Household (7-8)

1	2	3	4	5	6	7	8
Head	Wife	Son	Daughter	Brother	Sister	Parent	Others

5. Status of Head: (11)

1	2	3	4	5	6
Chief	Headman	Sub-Headman	Elder	Councillor	None

6. Occupation of respondent. (Enumerator - please write down everything which he/she is doing.) (12)

_____

_____

_____

7. Occupational Status of Head of the Household: (13-14)

1	2	3	4
Retired	None	Home Commuter (daily)	Commuter (weekly)

5	6	7	
Away (employed)	Full-time farmer	Other	Specify

8. Marital Status: (16)

1	2	3	4	5
Mar. Mon	Mar. Poly	Sing.	Wid.	Div.

9. Age Group (Calculate):

0	N/A	
1	< 20	
2	21-30	
3	31-40	
4	41-50	
5	51-60	
6	61-70	
7	> 71	

11

10. How many years have you been in:

		No. of Years	
1.	Urban employment		18-20
2.	Urban unemployment		21-23
3.	Non-agricultural rural employment		24-26
4.	Labourer on a white farm		27-29
5.	Farmer in a black area		
6.	Other occupation		

11. If you work elsewhere for part of the year state:

Place of work	Period of time	
		30-32
		33-35

12. How long have you been farming here? ..... years. 36-37

13. School education (Calculate number of years at school)

		Respondent	Spouse	
1.	None			38
2.	1-4 yrs (Std 2)			39
3.	5-6 yrs (Std 4)			40
4.	7-8 yrs (Std 6)			
5.	9-10 yrs (Std 8)			

		Respondent	Spouse
6.	11-12 yrs (Std 10)		
7.	Past matric level		

14. Who taught you what you know about agriculture? 41-43

15. Where did it occur? 43-44

16. Vocational training (Specify):

		Respondent	Spouse	
0	Nil			45
1	Trade			46
2	Agriculture			47
3	Commerce			
4	Mining			
5	Industry			
6	Profession (Specify)			

17. Family size at time of interview:

		Number of people	
	Adults		
1.	Elders 55 yrs and older		48
2.	Mid-aged 35-54 yrs		49
3.	Young adults 15-34 years		50
	Children		
4.	Own: Older children 7-15 yrs		
5.	Younger children 6 and under		
6.	Other dependents:		

18. Housing Standard (Enumerator's own evaluation)

1	Pole and mud/thatch	
2	Pole and mud/iron	
3	Brick under iron	
4	Brick under iron steel	
5	Windows and doors	
6	Brick or iron water tank	

51 ☐

19. Transport: (He may have more than one - mark all he has got)

1	None	
2	Horse	
3	Animal drawn vehicle	
4	Bicycle	
5	Motor-cycle	
6	Car	
7	Bakkie	
8	Lorry	

52 ☐ 53 ☐ 54 ☐

20. Land Tenure:

1	No land rights	
2	Certificate of occupation	
3	Quitrent	
4	Freehold	
5	Hired land	
6	Share cropped	
7	Other	

55 ☐

21. Would you like a system where a farmer could buy or sell farms or do you prefer the present system?

1	2	3	4	5
Buy & sell a very good thing	The possibility should be con=sidered. Can be a good thing	I do not feel strongly about the mat=ter	I feel a bit reluctant about the matter	Land should not be bought & sold

56 ☐

22. Any comment?

57 ☐

23. Is it possible for you to live from farming, as the only income?

1	2
Yes	No

58 ☐

24. If No, what do you require or what must be changed to make a living from farming only?

59-60 ☐☐

25. Would you be interested in hiring land from a neighbour who is not using his land properly?

61 ☐

26. Why?

62-63 ☐☐

27. Would you be interested in share cropping on a neighbours land which is not being properly used?

64 ☐

28. Why?

65-66 ☐☐

29. What is the total area of the land at your disposal?
..... ha.

67-68 ☐☐

30. What is the total area used for crops every year?
..... ha.

69 ☐

31. What crops do you usualy grow?

Crop	Area of land	
		☐☐ 70-71
		☐☐ 72-73

32. What do you think about the quality of your soil to grow crops?

1	2	3	4	5
Very good	Good	Fair	Poor	Very poor

74 ☐

33. What is the problem if poor or very poor?

_____

_____ 75-76 ☐☐

34. Have you got Grazing rights?

1	Cattle	
2	Goats	
3	Sheep	
4	Other	
5	None at all	

☐ ☐ ☐
77 78 79.

CARD No.

1-2 ☐☐ 0 2

35. Church Membership:

1	No official church	
2	Ancester worship	
3	Methodist	
4	Dutch Reformed	
5	Anglican	
6	Congregational	
7	Presbyterian	
8	Other (Specify)	

3 ☐

36. What role do you play in the church?

1	Ordinary member	
2	Lay preacher	
3	Elder	
4	Deacon	
5	Other (Specify)	

4 ☐

37. Condition of your health:

		Respondent	Sponse
1	Good		
2	Average		
3	Bad		

5-6 ☐☐

38. If in bad health, what is the cause of your problem?

_____

_____ 7-8 ☐☐

39. What do you read?

1 I can't read
2 I can read but I don't
3 I read a book occasionally
4 I read magazines occasionally
5 I do a lot of reading, Books & Magazines

9 ☐

40. Do you read Farming Journals or publications?

1	2
Yes	No

10 ☐

41. If No, Why not?

_____

_____ 11-12 ☐☐

42. How much time do you spend away from home?

..... days per month

or ..... days per year

13-14 ☐☐

43. Where do you usually spend this time?

_____

_____ 15-16 ☐☐

44. What is the purpose of going away?

_____

_____ 17-18 ☐☐

45. To which organisations, clubs or committees do you belong? 19-20

46. What role do you play in the organization? (e.g. ordinary member, chairman or secretary). 21

47. How did it happen that you became a farmer? 22

1 My parents lived here & I followed suit
2 I lost my job and had to come here
3 I worked elsewhere & retired here
4 I chose farming because I like it
5 For the profitability
6 Other reasons

48. What do you feel about the status of farming in Ciskei? 23

1	2	3	4	5
Very high status	High status	Average	Low	Very Low status

49. How far is the households water supply from the house? 24-25

..... Meters
or ..... Kilometers

50. Where does it come from? 26

1	2	3	4	5
Dam	Stream	Piped with a tap	Tank with rainwater	Other

51. How far is the toilet from the house? 27-28

1 No toilet or 2 ..... meters

52. Where do you get the money from to make a living? (Enumerator - There may be a few sources per household. Please mark all the sources). 29-31

1 Sale of own manufactured goods
2 Sale of grown crops
3 Sale of cattle
4 Sale of goats
5 Sale of sheep
6 Remittances from husband
7 Remittances from children
8 Other sources
9 Specify

53. Do you make any plans for the future with regard to the improvement of your situation? 32

1	2
Yes	No

54. If yes, what have you got in mind for:

Your financial situation: 33-34

Crop farming: 35-36

Animal husbandry: 37-38

Your children with regard to education 39-40

Your children with regard to work 41-42

Your house and furniture

_____

_____ 43-44

55. Who do you think will be willing to help you to realise some of these plans?

_____ 45-46

_____

56. Do you think it is a good proposition for a young man to start a career in agriculture on the scale you are farming?

1	2
Yes	No

47

57. Give reasons for your answer above.

_____ 48-49

_____

58. What do you think must be done to make farming more attractive to young people?

_____ 50-51

_____

_____

_____

59. Which is the most important crop which you would prefer to grow?

1 Maize
2 Sorghum
3 Peas
4 Beans
5 Wheat
6 Potatoes
7 Cabbage
8 Onions
9 Lucern
10 Other

52-53

60. Why do you prefer this crop to others?

1 It is profitable to sell
2 It is preferred for food
3 They grow better than other crops in this area.
4 Any other reasons

54

61. Do you practice inter-cropping? (i.e interplant maize with pumpkins etc.)

1	2
Yes	No

55

62. What advantage do you see in inter-cropping as opposed to growing the same crop on different pieces of land?

_____ 56-57

_____

_____

63. Do you use manure?

1	2
Yes	No

58

64. Why?

_____ 59-60

_____

How much?

_____ 61-62

_____

65. Do you use fertilizer?

1	2
Yes	No

63

66. Why?

_____ 64-65

_____

How much?

_____ 66-67 ☐☐

_____

67. Have you changed your views on the use of fertilizer since the scheme started?

1	2
Yes	No

68 ☐

68. Would you rather plant your own maize seed, or do you prefer to buy hybrid seed every year?

1 I prefer my own traditional seed.

2 I prefer hybrid seed

69 ☐

69. Why is that?

_____ 70-71 ☐☐

_____

70. Have the scheme changed your view in any way?

_____ 72-73 ☐☐

_____

_____

71. Why do you think weeding is necessary?

_____ 74-75 ☐☐

_____

_____

72. Do you practice crop rotation?

1	2
Yes	No

76 ☐

73. If No, why not?

_____ 77-78 ☐☐

_____

74. What is your opinion about planting cash crops which are not food, e.g. cotton or sunflowers?

79 ☐

1	2	3	4	5
I will not plant inedible things	It is not worth investigating	I feel neutral about it	It should be inves= tigated	It is a very good thing

CARD No. 3 ☐ 0 3

75. If your land was near a river, will you irrigate your land?

1	2
Yes	No

3 ☐

If no, Why not?

_____ 4-5 ☐☐

_____

Why do you say so?

_____ 6-7 ☐☐

_____

76. Do you think the betterment scheme of a few years ago was of any use?

1	2	3	4
Of much use	It made no difference	Of no use	I don't know much about the scheme

8 ☐

(a)

77. What advantages and disadvantages did you experience or do you know of?

Advantages	Disadvantages

9-10 ☐☐ 11-12 ☐☐

(b) Do you consider theft to be a problem in your area?

1	2
Yes	No

13 ☐

(c) If yes what do you suggest must be done to solve the problem?

_____ 14-15 ☐☐

_____

_____

78. Are you sending your children to school?

1	2	3
Yes	No	No children to send

16 ☐

79. Are you interested in the activities of the local school?

1	2
Yes	No

17 ☐

80. If yes, in what way do you participate or assist the school in any way?

_____

_____

18-19 ☐☐

81. Do you think the rural schools are better than the urban schools?

1	2	3
Yes	No	Do not know

20 ☐

82. Why do you think so?

_____

_____

_____

21-22 ☐☐

83. Do you think the teachers are doing a good job?

1	2	3
Yes	No	Do not know

23 ☐

84. What do you think about the agriculture which is taught at school?

_____

_____

24-25 ☐☐

85. To which cities or towns do you go to?

_____

_____

26-27 ☐☐

86. (a) How often?

_____

_____

28-29 ☐☐

87. How often do you listen to the radio?

1. I do not have a radio
2. 1 - 5 programmes a day
3. 5 - 10 programmes a day
4. I keep it on all day in the house

30 ☐

88. How often do you listen to the agricultural programmes?

1. I have no radio
2. I have a radio, but do not listen
3. 1 - 5 programmes per month
4. 6 - 10 programmes per month
5. All programmes concerning agriculture

31 ☐

89. Do you believe everything you hear on the radio concerning agricultural programmes?

1	2	3	4
Yes everything is true	Most things are true	Some are true some untrue	Most things are lies

5	6
I do not believe anything	I do not listen

32 ☐

90. How do you rate the agricultural programmes?

1. I do not listen to them
2. I think they are very good
3. I think they are fairly good
4. I think they are average
5. I think they are weak
6. I think they are very bad

33 ☐

91. What would you suggest to improve the radio programmes on agriculture?

_____

_____

_____

34-35 ☐☐

92. Where did you hear about the package deal maize growing scheme?

_____

36 ☐

93. Did you also hear about it on the radio?

1	2	3
Yes	No	No radio

37 ☐

94. What caused you to accept the package deal loan. 38-39

95. Why did you not attend the film shows concerning improved agriculture? 40-41

96. Have you ever borrowed money for farming operations before? 42

1	2
Yes	No

97. If Yes: 1. When (year)? 43-44
2. From whom? 45-46
3. For what purpose? 47-48
4. What amount?
5. Did you repay everything? 49

98. Do you think a farmer like you should borrow money for farming activities? 50

1	2
Yes	No

99. Do you think the new extension programme was an improvement? 51

1	2
Yes	No

100. Why? 52-53

101. How did you experience the maize improvement scheme in which you participated? 54-55

102. How many farmers days did you attend during 1982? 56-57

103. How did you rate the farmers' days you attended?

1	2	3	4	5
Very useful Learnt much	Fairly useful Learnt some=thing	It was avera=ge	Not too good Did not learn much	Useless I learnt nothing

58

104. Would you like to continue with a scheme like this? 59

1	2
Yes	No

105. Do you think the scheme is an improvement on your usual production? 60

1	2
Yes	No

106. What problems did you experience apart from the drought? 61-62

107. Did you get all the inputs on time? 63

1	2
Yes	No

108. What would you suggest to improve the scheme? 64-65

109. Did you get a second loan during the 1982/83 season? 66

1	2
Yes	No

110. (a) If no, Why not? 67-68

(b) Did you accept the full package deal as it was offered? 69

1	2
Yes	No

(c) If No, what parts did you accept? 70-71

(d) Why? 72-73

94. What caused you to accept the package deal loan. 36-39

95. Why did you not attend the film shows concerning improved agriculture? 40-41

96. Have you ever borrowed money for farming operations before? 42

1	2
Yes	No

97. If Yes: 1. When (year)? 43-44
2. From whom? 45-46
3. For what purpose? 47-48
4. What amount? 49
5. Did you repay everything? _____

98. Do you think a farmer like you should borrow money for farming activities? 50

1	2
Yes	No

99. Do you think the new extension programme was an improvement? 51

1	2
Yes	No

100. Why? 52-53

101. How did you experience the maize improvement scheme in which you participated? 54-55

102. How many farmers days did you attend during 1982? 56-57

103. How did you rate the farmers' days you attended?

1	2	3	4
Very useful Learnt much	Fairly useful Learnt some=thing	It was avera=ge	Not too good Did not learn much

5

Useless I learnt nothing

104. Would you like to continue with a scheme like this? 59

1	2
Yes	No

105. Do you think the scheme is an improvement on your usual production? 60

1	2
Yes	No

106. What problems did you experience apart from the drought? 61-62

107. Did you get all the inputs on time? 63

1	2
Yes	No

108. What would you suggest to improve the scheme? 64-65

109. Did you get a second loan during the 1982/83 season? 66

1	2
Yes	No

110. (a) If no, Why not? 67-68

(b) Did you accept the full package deal as it was offered? 69

1	2
Yes	No

(c) If No, what parts did you accept? 70-71

(d) Why? 72-73

CARD NO. 04

111. What was your average maize yield before the scheme started?

_____ Bags /ha

112. What was your yield during 1982? _____ Bags /ha

113. What was your yield during 1983? _____ Bags /ha

114. How many, if any, other farmers asked your advice about the maize scheme? _____

115. How often does other farmers seek advice from you?

		Times per month
1.	Crop farming	
2.	Cattle farming	
3.	Money matters	
4.	Social matters	
5.	Tribal matters	

116. With whom did you discuss the possiblility of joining the scheme before you decided to accept the loan?

_____

117. Did this person have any influence on you to accept the scheme?

1	2
Yes	No

118. What is your opinion about taking a loan to plant maize in this district?

1	2	3
Good idea	Good with some resevations	Good for some people bad for other

4	5
To risky with the low rainfall	a bad idea

119. Did you agree with all the different inputs received through the package deal or do you think there are things which should be changed?

1	agreed	
2	disagreed	

Comments: _____

_____

_____

120. Do you think this district is well suited for maize production?

1	2	3
Yes	No	Does not know

121. What is your reason?

_____

_____

122. Have you seen better maize being produced elsewhere?

1	2	3
Yes	No	I have not been elsewhere

123. What would you suggest must be done to improve the maize in this district, or do you think it must remain as it is:

1	2
remain	improve

Comments: _____

_____

_____

124. Are you in a position to plough your own fields with oxen?

1	2
Yes	No

125. How many draught animals have you got? _____

1. I have my own oxen
2. I can borrow oxen
3. I can hire oxen
4. No I have no means to use oxen

126. How much must you pay to plough with hired oxen? (Ploughing costs) R _____ per ha.

127. Do you think it is still a good thing to use oxen to plough with?

1	2
Yes	No

42 ☐

128. What is the reason for your answer?

_____

_____

_____

43-44 ☐☐

129. Why do you plant maize?

(Enumerator - The most important reason)
(If more than one reason is given, tick them all

1. I am not quite sure
2. Because my father taught me
3. To eat as green mealies
4. To sell for money
5. To eat as dried mielies (Umnqusho)
6. In order to retain my rights on the land
7. I store some of the crop to eat in winter
8. Other _____

45 ☐

130. Who does the weeding of the maize?

1	2	3
No weeding done	Self only	Self with children

4	5	6
Self and wife	Hired labour	Other (Specify)

46 ☐

131. Can you easily obtain labour for agricultural work?

1	2
Yes	No

47 ☐

132. What problems can you foresee with labour obtained from your area?

_____

_____

_____

48-49 ☐☐

UNIVERSITY OF FORT HARE

FACULTY OF AGRICULTRE

PROGRAMME EVALUATION

Name : _____

Wards : _____

No. of Cultivators : _____

No of Co-operator farmers : _____

What channels of communication did you use? : _____

_____

Did you visit Co-operator farmers regularly according to a time schedule?

_____

How often? : _____

How often did SAO's hold training sessions for you? : _____

_____

How often did SAO's visit Co-operator farmers with you? : _____

_____

How often did SAO's visit you in the field? : _____

Do you feel you got the training, support and guidance you needed to efficiently perform your task? : _____

What is your opinion of the success of the programme in your area? :

_____

What were the main problems you enountered with the programme? : _____

_____

_____

What further training do you feel you need for a maize extension programme? : _____

_____

Can you suggest any improvements for next years programme? : _____

_____

Do you feel the recommendations on maize growing were correct for farmers in your area? : _____

_____

If not, why not? : _____

_____

Are you confident that you can assist farmers to improve their maize yields? : _____

_____

If not, why not? : _____

_____

How often do you visit the office at KK Hoek? : _____

What was the purpose of such visits? : _____

_____

How many farmer's days did you attend in the district? : _____

_____

List the records which you keep : _____

_____

_____

APPENDIX 5

CARD NO. 01

QUESTIONNAIRE FOR EXTENSION OFFICERS

KEISKAMMAHOEK MAIZE SCHEME

1-2

1. Name _____ 3-4
2. Administrative area _____ 5-6
3. Service record in the Public Service _____ 7-8
4. Period of time in present ward _____ 9-10

5. If he left area, ask why?

_____ 11-12

_____

6. Educational and training career _____ 13-14

_____

7. Number of families in ward _____ 15-17
8. Number of farmers you have to serve _____ 18-20
9. Distance of dwelling from nearest & furthest farmer _____ 21-22 23-24
10. Means of transport to visit farmers _____ 26
11. Means of communication? (Telephone and post) _____ 26
12. Give a brief summary of the training you have had since the scheme started in Keiskammahoek. (Lecturer, Topic & duration of course), including monthly training sessions.

_____

_____ 27-28

_____

_____

_____

13. Are you satisfied with the training you have had, since the project commenced?

1	2	3	4	5
Very satisfied	Fairly satisfied	Satisfied	Fairly dis-Satisfied	Very dissatisfied

29

14. How many monthly training sessions did you attend at Keiskammahoek since 1/6/81 when the scheme started?

Attended ☐ Missed ☐ 30-31 32-33

15. Do you feel there are certain topics which need more training on in your present situation?

1	2
Yes	No

34

16. If yes what are they? _____ 35-36

18. How often do you go to Head Office? _____ 37

19. For what reasons? _____ 38-39

20. How often have Head Office staff visited your ward? _____ 40-41

21. Reasons? _____ 42-43

22. Do you think there are things which should improve in your relation with Head Office? _____ 44-45

23. Who is your contact person at Head Office with regard to your work? _____ 46

24. How frequently do you visit the office at Keiskammahoek? _____ 47-48

25. For what purposes? _____ 49-50

26. How long does such a visit take you. Travelling time included. _____ 51-52

27. How often does other senior officers from Keiskammahoek visit you in your ward? _____ 53-54

28. What are the reasons for such visits? _____ 55-56

29. Do they also meet your contact farmers? 57

1	2
Yes	No

30. If yes, what is discussed? _____ 58-59

31. Are you happy with the guidance you receive from your seniors at Keiskammahoek? 60

1	2
Yes	No

32. If no, what is the problem? _____ 61-62

33. Do you feel free to discuss problems with any of the senior staff? 63

1	2
Yes	No

34. If you consult them with regards to any problems are these problems solved soon and efficiently? 64

1	2
Yes	No

35. What problems do you have which has to be solved? _____ 65-66

36. Have you consulted specialists during the programme with regard to problems with crops? 67

1	2
Yes	No

37. Were you informed at Keiskammahoek every two weeks what your duties the next two weeks should be? 68

Yes	No

38. How did you experience the meetings at Keiskammahoek with the two Senior Officers? 69-70

16. If yes what are they? _____ 35-36

18. How often do you go to Head Office? _____ 37

19. For what reasons? _____ 38-39

20. How often have Head Office staff visited your ward? _____ 40-41

21. Reasons? _____ 42-43

22. Do you think there are things which should improve in your relation with Head Office? _____ 44-45

23. Who is your contact person at Head Office with regard to your work? _____ 46

24. How frequently do you visit the office at Keiskammahoek? _____ 47-48

25. For what purposes? _____ 49-50

26. How long does such a visit take you. Travelling time included. _____ 51-53

27. How often does other senior officers from Keiskammahoek visit you in your ward? _____ 53-54

28. What are the reasons for such visits? _____ 55-56

29. Do they also meet your contact farmers?

1	2
Yes	No

57

30. If yes, what is discussed? _____ 58-59

31. Are you happy with the guidance you receive from your seniors at Keiskammahoek?

1	2
Yes	No

60

32. If no, what is the problem? _____ 61-62

33. Do you feel free to discuss problems with any of the senior staff?

1	2
Yes	No

63

34. If you consult them with regards to any problems are these problems solved soon and efficiently?

1	2
Yes	No

64

35. What problems do you have which has to be solved? _____ 65-66

36. Have you consulted specialists during the programme with regard to problems with crops?

1	2
Yes	No

67

37. Were you informed at Keiskammahoek every two weeks what your duties the next two weeks should be?

Yes	No

68

38. How did you experience the meetings at Keiskammahoek with the two Senior Officers? 69-70

39. Have you found that specialists were readily available for consultation?

1	2
Yes	No

71 ☐

40. Do you think it is in fact necessary to have access to subject matter specialists in the course of your specific work?

1	2
Yes	No

72 ☐

41. Why do you say so? _____

_____

_____

73-74 ☐☐

42. Do you think winter ploughing is necessary in this district?

Yes	No

75 ☐

43. Why? _____

_____

_____

76-77 ☐☐

44. Where do you receive your salary? _____

_____

78 ☐

45. How long does it take you to arrange all your financial matters on that day? _____

_____

79-80 ☐☐

CARD NO. 02

46. What do you understand is meant by a Training and Visit System?

_____

_____

_____

_____

1-2 ☐☐

3-4 ☐☐

47. Is this an improved system in comparison with the previous system you were used to? _____

_____

5 ☐

48. Why? _____

_____

6-7 ☐☐

49. Do you think it is an applicable system for the Keiskammahoek District?

1	2
Yes	No

8 ☐

50. Why? _____

_____

_____

_____

9-10 ☐☐

51. How do you think can it be extended in future? _____

_____

_____

_____

11-12 ☐☐

52. How many contact farmers do you have? _____

13-14 ☐☐

53. How did you select them? _____

_____

_____

15-16 ☐☐

54. How many of your contact farmers received loans from the A.P.L.F. for maize production?

1	2
First year	Second year of Scheme

17-20 ☐☐☐☐

55. Do you think a scheme such as this one will work in the Keiskammahoek District?

1	2
Yes	No

21 ☐

If no, how do you think it should be changed?

_____

_____

_____

22-23 ☐☐

57. What is your opinion about mechanised ploughing for the scheme?

1	2	3	4	5
Tractors are absolutely essential	Tractors are useful & save time	Tractors or oxen can be used depending on availability of oxen	Oxen will suit these small farmers better	Oxen should be used at all costs

24 ☐

58. Can you elaborate on your choice above. _____

_____

25-26 ☐☐

59. What is your general view about the use of oxen by small farmers? _____

_____

27-28 ☐☐

60. Do you think tractors are absolute neccessities for rural development.

1	2
Yes	No

29 ☐

61. What ploughing system to you suggest?, for small farmers? _____

_____ 30-31 ☐☐

62. Do you thing improved seed is the best recommendation to these farmers?

Yes	No

32 ☐

63. Why? _____

64. What size of land, do you think, must a farmer have, in order to make the purchase of a tractor an economical proposition?

_____ ha. 33-34 ☐☐

35-37 ☐☐☐

65. How often do you visit your contact farmers?

1	2
Individually	In Groups
per month	per month

38-41 ☐☐☐☐

66. Have you got a fixed date or day every week or month to visit certain farmers? Where were you yesterday? _____

42-43 ☐☐

Have you got a programme? _____

1	2
Yes	No

44-45 ☐☐

67. Does a farmer know in advance when you are going to visit him?

1	2
Yes	No

46 ☐

47 ☐

68. If yes, how does he know it? _____

_____ 48-49 ☐☐

_____

69. How do you think does the farmers view the whole scheme?

_____ 50-51 ☐☐

_____

_____

70. What do you think is the Contact farmers opinion about the scheme? _____

_____ 52-53 ☐☐

_____

71. Did you find that some farmers were unhappy because they were not chosen as contact farmers? _____

_____ 54 ☐

72. During the course of the programme, did a farmer ask you a question which you could not answer because you did not know the answer?

1	2
Yes	No

55 ☐

73. If yes, what did you do about it? _____

_____ 56-57 ☐☐

_____

74. How often does the contact farmers come to consult you at your office or house? _____ 58-59 ☐☐

_____

75. How is this recorded? _____ 60-61 ☐☐

_____

76. What records do you keep? _____ 62-63 ☐☐

_____

_____

_____

77. How often do you make entries in your records? _____ 64-65 ☐☐

_____

_____

_____

78. What records do you have of your contact farmers? _____ 66-67 ☐☐

_____

79. Have you made use of any of the following extension methods? (Give details of each.)

Mass Media: _____ 68-69 ☐☐

_____

80. Group methods: _____ 70-71 ☐☐

_____

81. Individual contact: _____ 72-73 ☐☐

_____

82. Do you think maize is the ideal crop for this district?

1	2
Yes	No

74 ☐

83. If no, what do you suggest in its place? _____ 75-76 ☐☐

_____

_____

84. What is your overall opinion of the scheme? _____ 77-78 ☐☐

_____

_____

_____

_____

85. Do you really believe the fertilizer you are told to recommend to the farmers is the best recommendation? 79 ☐

Yes | No

CARD NO.

86. Why? _____ 1-2 0 3

_____ 3-4 ☐☐

87. Why do you recommend to farmers to plant improved seed rather than their own traditional seed? 5-6 ☐☐

_____

_____

88. Why is winter fallowing done? _____ 7-8 ☐☐

_____

_____

89. Why must maize plants be weeded? _____ 9-10 ☐☐

_____

90. For what purposes are fertilizer + manure used? _____ 11-12 ☐☐

_____

91. When is the maize plant most sensitive to drought? _____ 13-14 ☐☐

_____

92. What is your opinion about intercropping? _____ 15-16 ☐☐

_____

93. Why is it practiced? _____ 17-18 ☐☐

_____

94. What do you recommend to farmers concerning intercropping? _____ 19-20 ☐☐

_____

_____

CISKEI DEPARTMENT OF AGRICULTURE & FORESTRY

EXTENSION PROGRAMME KEISKAMMA DISTRICT

1981/82

KEISKAMMA DISTRICT

FIRST REPORT AND WORK PROGRAMME

June 1981 - June 1982

INTRODUCTION

The first priorities for training are the farmers and extension staff of the Department. This is the key area where maximum effect on output can be achieved.

The programme sets out in broad detail the agricultural extension programme for Keiskamma District for the next 12 months. Programmes for animal health, home economics, health and nutrition, water supplies and social welfare will follow.

EXTENSION

The Priorities

Farmer acceptance and implementation of the recommendations are vital to higher output. Therefore, the crop recommendations have been analysed to determine which factors influence output and revenue to the greatest extent. These have been studied to determine which aspects of husbandry are more easily taught and acceptable to farmers in the area.

To obtain higher output from farms it is essential that farmers not only understand the recommendations, but put them into practice. By implementing the training programme as detailed in this Report, the extension service and farmers will be better equipped to raise production.

The Extension Timetable

The extension programme has been tabulated to show the major elements of information that will be conveyed to the extension staff and farmers over the next 12 months period (Annexure 1).This programme will be reviewed in 9 months' time and amended as appropriate for the succeeding 12 month period.

Each year is broken down into quarterly periods in which selected factors are emphasized according to the growing season (Annexure 3).

EXTENSION PROGRAMME : JUNE 1981 - JUNE 1982

Period	Extension Campaign
1. June - September	Encourage farmers to participate in maize production campaign. Arrange necessary inputs.
2. October - December	The campaign will concentrate on advising contact farmers on selected production practices on a time-bound basis.
3. January - March	Continue advice and demonstration of selected maize production practices. Encourage farmers to participate in wheat production programme. Arrange inputs for wheat.
4. April - June	Land preparation and planting for wheat. Advise contact farmers on wheat production practices. Harvesting of maize. Autumn and winter ploughing for maize. Evaluation of 1981/82 programme and programme for 1982/83.

Extension work programme for each quarter given in Annexure 3.

MEANS OF COMMUNICATION

The basic means of communication can be broken down into Mass, Group and Individual.

Mass: This is non-selective and comprises the mass media: Radio, Newspapers, and Hoardings and Posters.

Group: Usually selective with an interested audience. Film shows, Exhibitions, Displays and Demonstrations come into this category.

Individual: Specifically to one or two captive audience. This includes the use of leaflets, manuals, charts and pocket books.

Traditionally extension staff have relied almost entirely on individual methods of communication. Although this is perhaps the most effective means of disseminating information, it requires a very large well-trained staff to maintain regular direct contact with every member of the farming community.

Because of the size of the area, and the limitation this imposes on staff and transport facilities, this individual approach would be impossible to maintain.

Objectives

a) To persuade farmers of the need to increase productivity.

b) To persuade farmers to adopt improved methods of cultivation.

In order to achieve these objectives, the new campaign should utilise the three basic methods of communication: MASS, GROUP and INDIVIDUAL, fully integrated into an intensive training campaign following the Standard Adoption Process.

THE ADOPTION PROCESS

Mass Communication

During the initial stage of the Adoption Process, mass media are used to create awareness of the new campaign. Radio and mass media advertising are first used to focus attention on the need to produce more crops. Meesages should be simple. Slogans, such as "Produce more Maize", and "Help Feed the Ciskei Nation" are often sufficient to remind farmers and staff of the need to increase productivity.

Group Communication

(a) In the second stage, news sheets, articles and radio braodcasts are used to explain why Ciskei needs to produce more maize in order to earn more money, to increase the country's internal earnings, and, most important of all, to improve everyone's standard of living.

(b) Extension staff, armed with modern extension training aids, such as films, wall-charts and leaflets, visit every village and explain how productivity can be increased by more efficient use of available resources. Farmers become interested in improving their position and seek further information.

(c) Field demonstrations are organised to demonstrate the principles of good management and show the results of adopting the recommended practices.

Individual Communication

The extension staff visit as many contact farmers as possible to give individual advice and encouragement. Their objective is to persuade farmers to accept their advice and then promote the message amongst his friends and neighbours.

A training programme will be drawn up to teach extension staff how to use the latest techniques to communicate effectively with farmers. A series of courses will be organised at Fort Cox Agricultural College.

Result

This type of integrated approach, utilising the existing mass communications networks more fully and teaching new techniques for use by the extension staff in the field, will influence farmers to produce more crops for the benefit of themselves and the country.

6

MASS METHODS OF COMMUNICATION

In order to create awareness of the campaign mass methods are used. The following recommendations concern the use of all the mass media available:-

Radio

The SABC Radio Station produces a number of radio programmes, aimed specifically at the agricultural community, which have a potential audience of many farmers. They provide general information on improved farming methods for a variety of crops and livestock.

(a) A series of programmes should be written and produced to publicise the new campaign. These should be produced in conjunction with the SABC Radio Station.

(b) The Department should allocate a suitable staff member to assist in radio script writing and general production duties, and also liaise with the SABC Radio Station.

(c) New material should be written and produced to promote the new campaign, using weekly Discussion Programmes and Radio Forum Programmes as vehicles for the messages.

Weekly Discussion Programme

~~(a) This would be~~ presented by a well known extension officer or farming personality. The presenter would require special training in interviewing techniques and be equipped with a portable tape recorder so he could include recorded interviews with farmers.

(b) Leading farmers would be interviewed and invited to give a personal account of how the Department has assisted them to produce better crops and so earn more money.

(c) From time to time a resident expert should be called in to discuss farmers problems and answer questions, e.g. why it is necessary to plant new improved seed.

(d) Listeners would be encouraged to write letters and put questions to the expert. In this way the Department would be able to gain some additional feedback on the most important problems as seen by the farmers themselves. The best letter of the week could be read out and answered, and the sender rewarded with a prize, say R 5.00.

7

Radio Forum Programmes

(a) The Department should organise listening groups of farmers to participate in a new series of farm forum programmes to introduce modern methods of production.

(b) Programmes should be broadcast once a week, at a time when farmers can meet together in groups with a radio.

(c) Each group would elect a leader who would be responsible for arranging weekly meetings and chairing the discussions after each broadcast.

(d) Extension Officers should join the listening groups to answer questions and arrange follow-up visits to individual farms.

(e) A short course on organising radio forums would be provided in conjunction with the SABC Radio Station.

Bill Boards

Throughout Ciskei bill boards are used to promote commercial items and could be successfully used in for example, an Operation Feed the Nation campaign. Because of their relatively low cost and high exposure it is recommended bill boards are widely used to promote the new campaign.

Five bill boards should be erected near Keiskammahoek in prominent positions, exhorting farmers to adopt improved husbandry.

Posters

Posters should be used to 'spearhead' the campaign and catch the attention of the farmers. For example, a poster could read: "YOUR COUNTRY NEEDS YOU:- GROW MORE MAIZE NOW!", or announce a field day of demonstration: "THE PROFESSIONALS ARE COMING! MEET THEM AT THE VILLAGE SCHOOL ON WEDNESDAY AND LEARN HOW TO PRODUCE MORE WHEAT!"

In general, the greater the number of posters used in an area the greater the impact. We should aim at maximum exposure so that every farmer is aware of the new campaign, and will attend meetings and field days and seek additional information from neighbours, friends and other farmers in the area.

GROUP METHODS OF COMMUNICATION

While mass methods are being used to focus the farmer's attention on the importance of the agricultural industry in general and the need to increase productivity, the Keiskamma District programme of group meetings demonstrates to farmers how they can produce better crops by adopting improved methods of cultivation and irrigation, as well as livestock.

Mobile Cinemas

The existing mobile training units should be used by the Department to promote improved methods of production to farmers in the area.

16 mm Films

(a) 16 mm films are widely used by extension services in many parts of the world. They have the advantage of combining sound and vision into a moving picture which can be both educational and interesting.

(b) They are also invaluable as, for example, the whole of the crop season from planting to harvesting can be demonstrated in just a few minutes.

Other Film Material

The Department should obtain copies of other general entertainment and educational films for use in the modile cinema. Short feature films, newsreels and cartoons could be used to supplement the evening's programme and provide extra incentive for farmers to attend the film shows regularly.

Organisation of Film Shows

(a) Wards should be notified well in advance to gain the maximum turnout.

(b) A set of blank posters should be prepared to announce the visit of the mobile cinema. These would be distributed in the various wards some days before the show.

(c) On the evening of the film, the Extension Officer should co-ordinate the programme with the projectionist making sure the equipment is working satisfactorily.

(d) After the film, the extension staff should use visual aids to summarise the main points in the film. The audience should be allowed plenty of opportunity to ask questions.

Exhibitions and Displays

(a) In order to promote a professional image, the Department should consider preparing exhibition and display materials which can be shown at Agricultural Shows and other traditional gatherings.

(b) Large display panels with coloured photographs and captions could be used to demonstrate the services of the Department, and show ways in which the extension service offers practical assistance to farmers. The panels would be constructed in sections, each panel measuring approximately 3' x 4', and mounted on a 6' tubular steel frame which can be taken down for easy storage and transport to the various shows.

Field Demonstrations

(a) If farmers could see for themselves how much money could be earned by growing better crops, they would soon follow the advice of the extension staff and adopt the recommended practices.

(b) At least one leading farmer in every ward should be assisted to grow better crops which would serve as an example to neighbouring farmers.

(c) The Extension Officer would arrange follow-up visits by other farmers to give practical advice to individual farmers in his groups.

INDIVIDUAL METHODS OF COMMUNICATION

When farmers have become aware of the campaign and have attended group meetings, film shows or radio forums, the Extension Officer would arrange follow up visits to individual farms. Individual methods of communication should then be used to persuade the farmer to adopt the recommended practices. The following extension aids are suggested :-

Wall Charts and Leaflets

(a) A set of wall charts should be designed and produced for distribution in wards and schools in the area. They should supplement the promotional campaign, encouraging farmers to attend film shows, field demonstrations,and listen regularly to radio broadcasts.

(b) Because of their relatively low cost and ease of distribution, single page leaflets should be produced in large quantities to hand out to every farmer. They should have a high visual content with line drawings and brief captions, summarising the messages. For example, these could be on each seasonal stage of the maize crop.

Extension Handbooks

(a) In order to provide extension staff with up to date information for their work, the Department must provide a loose leaf extension manual for use in the field. The book should have a hard durable cover, and should contain facts and information to aid the extension staff with advisory work.

(b) Chapters covering every aspect of crop and livestock production and extension techniques, would be included. Information would be presented in the form of illustrated notes for easy reference. As well as covering agronomic and livestock husbandry subjects and extension techniques, chapters on input costs and marketing information would also be included.

EXTENSION STAFF TRAINING

Programme of Fortnightly Instructions

A programme of weekly or fortnightly instruction for Extension Officers will be prepared centrally by the programme advisers. Irrigation techniques, extension principles and crop recommendations relevant to the following fortnight will be included. The emphasis will be on practical training. For example, plough setting, planting techniques, insect control, weeding etc. Training of Extension Officers will be carried out by the 4 Senior Officers.

Training of Supervisory Staff

A graduate agronomist will hold periodic training sessions with senior and junior field staff. University staff will assist with training all extension staff in extension and communication, as well as train senior staff in training methods, supervision and management.

Fortnightly Training Sessions

At fortnightly training sessions the relevant information will be conveyed to the senior officers who will then assist with further tuition and demonstration of the topic to their Extension Officers who attend the training session at the same time. Each session of approximately three hours will be attended by all staff in the District and will be held at Keiskammahoek.

Timetable for Introduction of Audio Visual Materials

A programme for the preparation of media materials and their introduction to the extension and training programme is attached. (Annexure 2)

Training of Senior Officers

(a) Programme advisers should arrange progress seminars at monthly intervals with the senior extension staff. These will take the form of reporting on the previous period, setting objectives for the next period, planning operations, and analysing efficiency.

(b) The format for these meetings should be prepared by the Programme advisers to ensure that the discussions are confined to relevant management topics.

(c) Staff will receive fortnightly on the job instruction of two to three hours duration in extension principles, and crop and livestock recommendations pertinent to the following two-week period. The instruction will take place at the District Office or in the field, wherever appropriate.

(d) The cropping and livestock calendar will be the basis for the course content, and will be supported with materials for training the Extension Officers and farmers. The Programme advisers and Senior officers will be directly responsible for the execution of the training operations.

(e) Senior staff from the University and the Department of Agriculture will be invited to lecture on particular subjects. Other courses will be offered to proven staff after two to three years of meritorious service.

Training Extension Officers

(a) Extension Officers will receive a fortnightly input of concise training and instruction. This will be confined to crop recommendations, input availability and costs, the extension approach to the farmer,and irrigation.

(b) All Extension Officers will be required to organise and establish a demonstration plot for each crop on land owned by a leading farmer in each ward. The farmer must, of course, agree to follow all the recommended practices throughout the season. These plots will then serve as a practical demonstration of the effects of good husbandry principles.

(c) Extension Officers must be committee to a high input assistance and actual manual work. this will demonstrate his ability and enthusiasm to the other farmers and improve his status.

ANNEXURE 1

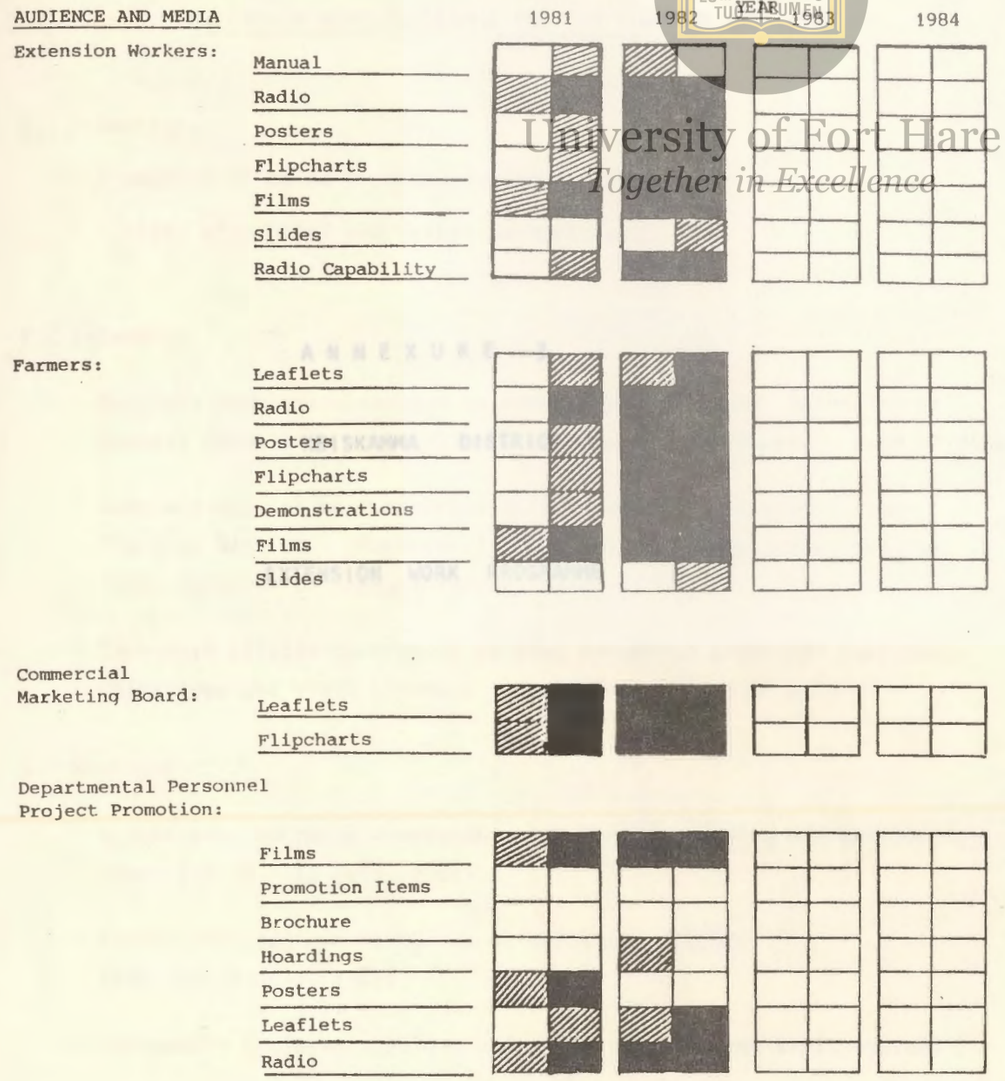
SELECTED MAJOR FACTORS 1981/82

	Crop promotion	Land preparation	Planting date	Variety	Fertilizer	Plant population	Pest control	Disease control	Weed control	Marketing Storage
MAIZE	●	●	●	●		●			●	●
BEANS										
POTATOES										
WHEAT	●	●	●	●						●
PEAS										

LIVESTOCK	Promotion	Animal Health	Feeding/ Nutrition	Management	Breeding
CATTLE	●	●			
GOATS					
SHEEP					
POULTRY					

ANNEXURE 2

SCHEDULE FOR THE PREPARATION AND INTRODUCTION OF INFORMATION AND TRAINING FACILITIES



ANNEXURE 3

KEISKAMMA DISTRICT

EXTENSION WORK PROGRAMME

JUNE - SEPTEMBER 1981

EXTENSION WORK PROGRAMME FOR THE QUARTER

1. Promotion

   - Promotion of maize growing programme - all media
   - Liaison with Chief and Tribal Authorities.

2. Extension

   - Complete population surveys in administrative areas. Selection of contact farmers in c-operation with local tribal leaders. (end of June)
   - Complete maps of each administrative area with assistance from Planning Section. Maps should show soils, arable areas, grazing land, location of contact farmers etc.
   - Each ward officer to draw up an area extension programme including objectives and visit schedule for each ward. (end of July)

3. Training

   - Attend pre-programme course on extension programming and methodology (Fort Cox 14 - 15 July, 1981).
   - Attend pre-programming course on maize production (Fort Cox - July, 1981)
   - Two-weekly training sessions under the training and visit system.

4. Maize Crop

   - Promotion of tractor hire for cartage of manure (last date 30th June)
   - Promotion of tractor hire for planting (last date 31st July)
   - Soil samples on major soil types (last date 31st July)
   - Promotion of crop loans (last date 30th August)
   - Promotion and assistance with orders for seed and fertilizer.

- Marketing promotion - Ciskei Marketing Board.

- Selection of demonstration farmers in co-operation with ward leaders. One per ward (last date 30th September)

- Select sites for Ecotope trials. One on each major soil type. To be run by University staff (last date 30th September).

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OCTOBER - DECEMBER 1981

EXTENSION WORK PROGRAMME FOR THE QUARTER

1. Maize production

- Advise farmers on land preparation for planting.
  (Most should have prepared lands in winter)

- Advise farmers on correct use of fertilizer.

- Advise farmers on use of suitable cultivars and seed selection.

- Advise farmers on planting of maize. If hand planting with two seeds per hole no thinning should be necessary. Ensure planters are functioning efficiently.

- Advise farmers on weed control.

- Advise farmers on Nitrogen top dressing five weeks after planting.

- Advise farmers on stalk borer control.

(All above on a planned schedule of visits)

2. Training

- Fortnightly training sessions under the training and visit system.

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JANUARY - MARCH 1982

EXTENSION WORK PROGRAMME FOR THE QUARTER

1. Maize production

- Continue to advise farmers on weed control.

- Promotion of maize production through discussions and field days, at demonstrations, and successful farmers.

2. Wheat production

- Promotion of wheat production

- Select contact farmers for wheat production.

- Promotion of ploughing for wheat production

- Promotion of crop loans for wheat production.

- Promotion and assistance with orders for wheat seed and fertilizer.

- Selection of farmers for wheat demonstrations.

- Promotion of marketing of wheat - Ciskei Marketing Board.

3. Training

- Attend pre-programme course on wheat production.

- Fortnightly training sessions under the training and visit system.

APRIL - JUNE 1982

EXTENSION WORK PROGRAMME FOR THE QUARTER

1. Maize production

   - Advise farmers on harvesting of maize.
   - Promotion of autumn and winter ploughing.
   - Complete evaluation of maize programme (last date 30th June)

2. Wheat production

   - Continue to advise on land preparation for wheat.
   - Promote wheat planting methods and techniques.

3. Training

   - In-service training session on evaluation of extension programme and preparation of extension programme for 1982/83.
   - Two weekly training sessions under the training and visit system.

CISKEI AGRICULTURAL PROMOTION LOAN FUND

BACKGROUND:
The Ciskei Agricultural Promotion Loan Fund came into being with the promulgation of the necessary legislation in 1978. Prior to this the Department of Agriculture & Forestry had granted a number of Medium and Long Term Loans to Primary and Secondary Co-operative Societies and these loans were taken over by the Fund. The operations of the Fund are controlled by a Board, appointed by the Minister of Agriculture, and its policies are directed at increasing agricultural production within the Ciskei by providing credit for the purchase of crop inputs such as seed, fertiliser and crop chemicals, as well as assistance to Co-operatives and Tribal Authorities.

In its first year, that is the 1978/79 season, the Fund granted 161 loans (value R16 366,00) to individual farmers. Since then there has been a rapid expansion in the Fund's activities and for the present year, 1982/83, the Fund has budgeted for 1300 loans valued at R130 000,00.

TYPES OF ASSISTANCE:
For individual farmers the Fund provides loans for crop production packages, fencing, machinery and equipment and land preparation costs by the Mechanical Unit.

The crop production packages for maize, wheat and peas have been determined by the Department of Agriculture and Forestry and these are revised annually to ensure the best possible results.

APPLYING FOR A LOAN:
Application forms are kept by all Agricultural Field Officers who will willingly assist any farmers who wish to avail themselves of the Fund's facilities. The application form is a simple document but it must be completed in full to avoid any delays when it is processed.

REPAYING A LOAN:
Short term production loans are repaid at the local Magistrate's Offices, and must be repaid within 12 months. Loans for other items can be over a longer period, with fixed annual instalments.

GENERAL:
The Board of the Ciskei Agricultural Promotion Loan Fund has adopted a number of policies to ensure the best possible use of the monies available to it. Briefly these are:

1. Short Term Loans must be repaid in full before further crop production applications can be considered and granted;
2. Farmers must prove their ability on a small crop programme before loans for a bigger area will be considered;
3. The application forms and the Acknowledgement of Debt must be correctly and properly completed;
4. Package deals for less than 1 Hectare will not be granted;
5. The Farmer must have a right to the land to be cropped, together with the necessary equipment and experience.

1982/83 CROPPING SEASON:
The Fund is presently dealing with applications for crop production packages for the 1982/83 season for which the Board has set a deadline of the 15th November, 1982. Applications received after this deadline will not be considered so Farmers who would like to apply for a loan should see their local Agricultural Officer without delay.

P. R. de la Harpe,
General Manager.

MONTHLY WORKS PLAN

APRIL 1982

DATE	P L A C E	WORK TO BE DONE
26	Keiskammahoek	To submit list for ploughed land.
29	Gwili-Gwili	To arrange a general meeting with headman about loans and winter crops.
30	Gwili-Gwili	To meet sub-headmen about the meeting.
31	Rabula	To attend the stock sale.
1	Gwili-Gwili	To make home visits about the meeting.
2	Gwili-Gwili	To hold the general meeting.
5	Gwili-Gwili	To work loan forms with farmers in my office.
7	Office	To work loan forms with farmers.
8	Office	To work loan forms with farmers.
13	Office	To enlist farmers wishing to do winter fallowing.
14	Office	To continue with the work.
15	Keiskammahoek	To submit the list and loan applications.
16	Gwili-Gwili	To arrange a committee meeting with headman which would be on 20/4/82.
19	Office	To do records.
20	Gwili-Gwili	To hold the committee meeting.
21	Gwili-Gwili	To visit lands to check maturity of maize.
22	Gwili-Gwili	do
24	Office	To do my returns.
25	Keiskammahoek	To submit my returns.

MONTHLY ITINERARY FOR MARCH-APRIL 1982

DATE	PLACE	WORK TO BE DONE
26/3/82	Mabheleni	Individual contacts
29/3/82	New Rest	Office Work
30/3/82	Gongqo	Individual contacts and arrange for a meeting.
31/3/82	Sale Pens (Rabula)	Attend stock-sale
1/4/82	Quza	Individual contacts
2/4/82	Mabheleni	Individual contacts
5/4/82	New Rest	Office work
7/4/82	Matolweni	Individual contacts
8/4/84	Gongqo	General meeting
13/4 - 7/5/82	L E A V E !	L E A V E !

MONTHLY ITINERARY

D A T E	PLACE TO VISIT	P U R P O S E
26-03-82	Upper Ngqumeya	To inspect Contact Farmer's lands.
29-03-82	Lower Ngqumeya	To inspect Contact Farmer's lands.
30-03-82	Upper Ngqumeya	To register farmers for the stock sale
31-03-82	Rabula	Attend stock sale
1-04-82	Upper Wolf River	To see the Chairman about Farmer's day
2-04-82	Lower Wolf River	To hold meeting with Extension Committee
5-04-82	Upper Wolf River	Hold meeting with Extension Committee
6-04-82	-	Public Holiday
7-04-82	Upper Wolf River	Fill loan forms.
8-04-82	Lower Wolf River	Fill loan forms.
13-04-82	Upper Ngqumeya	Fill loan forms.
14-04-82	Lower Ngqumeya	Fill loan forms.
15-04-82	Upper Wolf River	To measure lands.
16-04-82	Upper Ngqumeya	To hold general meeting from 10-00am - 1-00pm
	Lower Ngqumeya	Hold general meeting from 2-00pm - 4-00pm
19-04-82	Lower Wolf River	To measure lands.
20-04-82	Upper Ngqumeya	To measure lands.
21-04-82	Lower Ngqumeya	To measure lands.
22-04-82	Lower Wolf River	Office day
23-04-82	Keiskammahoek	Submit monthly returns.

ITINERARY FOR FEBRUARY 1982

D A T E	PLACE VISITED	WORK TO BE DONE
82-01-26	Burnshill	Ext. Com. Meeting
82-01-27	Lenye	Visit C. F. Lands
82-01-28	Qaukeni	" " " "
82-01-29		
82-02-01	Burnshill	Visit C. F. Lands & Ecotope
82-02-02	K/K/Hoek	Staff-Meeting
82-02-03	Ngxondora	Visit farmers.
82-02-04	Lenye	Community Meeting
82-02-05	H/Office	Office-Work.
82-02-08	K/K/Hoek	Staff-Meeting for S. Zone
82-02-09	ECOTOPE	
82-02-10		
82-02-11		
82-02-12	Ngxondora	Community garden meeting
82-02-15	Lenye	Visit C. Farmers
82-02-16	Burnshill	" " " lands.
82-02-17		
82-02-18	H/Office	Office-Work
82-02-19	Qaukeni	Visit C. F. Lands.
82-02-22		
82-02-23	Lenye	Visit C. Farmers & Meeting.
82-02-24	H/Office	Monthly returns.
82-02-25	K/K/Hoek	Submit Monthly returns.

ISEBE LOLIMO NAMAHLATHI e-CISKEI.
ICALA LEMFUNDISO EPHANGALELEYO KWEZOLIMO.
ISICHUMISO NOMGQUBA.

YONDLA UMHLABA OWONDLA IZITYALO.

SEBENZI SA ISIXA ESIFANE-LEKILEYO 'KWANO-HLOBO OLUFANE LEKILEYO LWESICHU-MISO.

OCTOBA noNOVEMBA.

1. Isichumiso nomgquba sinceda ekukhuliseni imbewu elungileyo kwaye yovelisa isivuno esincumisayo.
2. Umgquba omninzi ubaluleke kwanje ngesichumiso, kodwa sebenzisa zombini ekondleni intsimi yakho.
3. Sebenzisa olona didi lululo lwesichumiso olo lunconywayo ligosa lakho lolimo.
4. Igosa lolimo lokucebisa ukuba singangakanani na isichumiso onokusisebenzisa.
5. Sigalele isichumiso apho sinokuthi sisetyenziswe yimbewu.

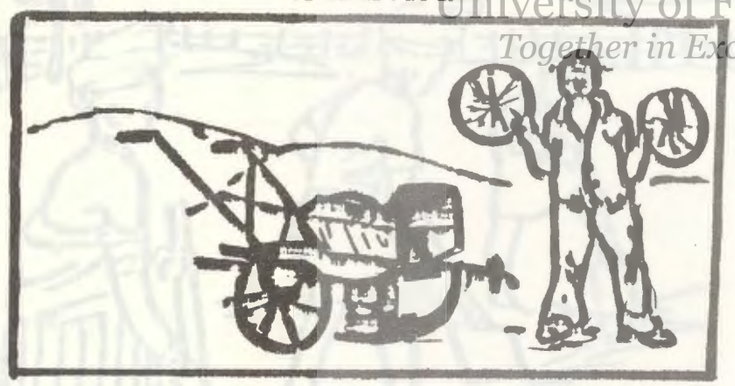
UMHLABA ULILIFA LAKHO
KODWA
WENZE UCHUME.

Dimbaza Printers

ISEBE LOLIMA NAMAHLATHI LASE-CISKEI ICALA LEMFUNDISO EPHANGALELEYO KWEZOLIMO.

IPLANTA.

SEBENZISA IPLANTA E-LUNGULEYO.



FAKA IPLEYITIYEPLANTA EYIYO.

OCTOBA NOVEMBA.

1. Qiniseka ukuba iplanta yakho ikwimo elungileyo enokuthi isebenze kakuhle.

2. Faka ipleyiti yeplanta eyakuthi ifanele imbewu yakho kwaneyakulungela ukutshiyana okuyimfuneko kwembewu.

3. Oku ke kwakukuqinisekisa ukuba utyale inani lembewu elililo e-akileni ukuze uzuze isivuno esisiso.

4. Iplanta yakho ibaluleke kakhulu kwaye yonceda ekunikeni ulwazi lwesivuno sakho sokugqibela.

UMHLABA ULILIFA LAKHO
KODWA
WENZE UCHUME.

DIMBAZA PRINTERS

ISEBE LOLIMO NAMAHLATHI e-CISKEI

UKUXABANGELA KWA NOKUHLAKULA

XABANGELANI IZITHUBA PHAKATHI KWEZITHOMBO ZENU ZOMBONA

HLAKULANI UKUKHUSELA IZILIMO ZENU

NOVEMBA – DISEMBA – JANUARI

1. XABANGELANI IZITHUBA UKWENZELA UKUGCINA UBUNINZI BEZITHOMBO ZIKUGABA OLUFUNEKAYO.
2. XABANGELANI KWANGEMBEWU ENYE ELUNGILE YO OBE UYITYALILE.
3. KANYE XA UXABANGELA YIBA UHLAKULA UMBONA WAKHO KANANJALO.
4. UKUHLAKULA KUQINISEKISA UKUBA ISILIMO SAKHO SIYAKUKHULA KAKUHLE SINGABINAKHO UKUKHATHAZWA KUKUSHIYISELANA NOKHULA.

UMHLABA WENU ULILIFA LENU KODWA WENZENI UVELISE

Dimbeza Printers