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THE SURVEY OF MANAGEMENT ON COMMUNAL
FARMERS OF NORTH WEST WITH SPECIAL
REFERENCE TO LIVESTOCK FARMERS OF
MADIKWE DISTRICT AND BEING SPECIFIC ON
CATTLE FARMERS

BY

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DATED SUBMITTED: APRIL 2004
DECLARATION

I KEOBAKILE DANIEL MOICHWANETSE, declare that this dissertation for the degree of Masters in Business Administration at the University of North West hereby submitted, has not previously been submitted by me for a degree at this University or any institution, that is my own work in design and execution and that all material contained herein has been duly acknowledged.

.................................
K.D. MOICHWANETSE
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Above all, I thank my Heavenly Father who has always provided me with strength, hope and endurance even during those times when I felt weak hopeless and self pity.
ABSTRACT

The purpose of this survey is to identify and investigate the impact of management on communal cattle farmers of Madikwe in the Province of North West. Quantitative research was conducted to find information from some of the stakeholders such as farmers, herdsmen and youth.

The survey method was used to conduct the study. The population approached were farmers, herdsmen and chiefs. 4000 respondents were expected to complete the questionnaires, but only 350 respondents returned usable questionnaires which were analyzed.

The quantitative research conducted revealed that communal farmers of Madikwe are not practicing sound farm management. These farmers are not maximizing profits and keeping accurate records for cattle farming.
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CHAPTER ONE

ORIENTATION

INTRODUCTION

I am currently working at Madikwe district for the Department of Agriculture, as an Animal Health Technician. Madikwe district is an area of livestock production. There are forty thousand head of cattle at Madikwe. I have realized that most of Madikwe farmers are communal and are practicing extensive cattle farming. I have noticed that these farmers are not practicing sound farm management. In other words, there are no systems in place to keep records of their animals. A farmer will not be able to tell you exactly how many animals he has. If you ask the farmer a question pertaining mortalities, he will not give you a definite answer. He will not be in a position to tell you about the money he spends on medicines, dips, supplementary feeding and vaccines. The camps whereby their cattle are grazing is the tribal land. These farmers are not allowed to improve these camps, through proper fencing and boring water. In the case of the tribal land, each and every cattle owner has the right to graze his animals. The problems that are encountered by farmers are overgrazing and over stocking. According to Boehlje and Eidman (1984) in their book of “farm management”, they described management as the science of the art of combining ideas, facilities, market a worthy product or service profitable. A farmer who is practicing sound farm management will be able to keep the mortality rate of his cattle very low, at 3%. He will also have a vaccination programme.

Livestock farming is a major occupation of their socio-economic and cultural values. Livestock has been a major source of livelihood for the people over the years. However, the communal farmers do not have the appropriate knowledge, skills ad expertise in the farming enterprise.
They still have a tendency to produce from hand to mouth and they are not producing for market purposes. The Madikwe farmers are not practicing sound techniques and they also lack the proper managerial skills of farming. According to Maree and Casey (2003) they stressed that the farmer is regarded as the manager of his farm and he is responsible to set objectives and plans to achieve these objectives. He is also responsible to exercise control and makes decisions. According to Maree and Casey (2003) decision making is an important element of management and it takes place in the changing world with many uncertainties. The cattle production in Madikwe is described as extensive communal farming. The animals are kept by an individual, but grazing and water resources are shared by all in the communities. According to Maree and Casey (2003) the rational decision making is the basis of sound management. If a farmer makes a decision on grazing of his veld, if he overstocks and overgrazes, his veld condition will deteriorate badly. Allan Savory (1999) stressed the fact that livestock especially cattle are generally seen as an enemy of the land rather than its saviour. Van Zyl et al (2000) stressed that there are four generic functions of the management process, namely; planning, organization or implementing, coordination and control.

AIMS

The aims of livestock production are as follows:-

(i) Profit maximization
(ii) Poverty alleviation
(iii) Job creation

PROFIT MAXIMIZATION

The success of each and every business is driven by its profit. If a business cannot generate profit, it should be closed. If one looks and investigates the records and verbal information from cattle farmers at Madikwe, one is little bit uncertain about the profit. In other words, there is no clear written evidence to show that Madikwe farmers are maximizing profits. The Madikwe farmers who generate profits are very few. The
editor of “Farmers Weekly of the 8th August 2003, Mr. Burgess on page 26, stressed that farmers are supposed to group themselves to discuss issues such as diseases, industries share technical information, financial, human resource management and marketing issues. The farmers can attain success in the farming operation through discussion groups. In the case of Madikwe farmers, this aspect of group discussion is not practiced. The farmers are working individually.

According to Maree and Casey (2003), a farmer should have the following records, namely; production records, financial records and asset records. The financial statement will have the following: the balance sheet, income statement and cash flow statement.

According to van Zyl et al (1999), profitability is the percentage ratio between the profit earned in a given period and the capital used to realize that profit. They further mentioned that an indication of the profitability of the farm business and to the farmer, would be the interest on capital e.g.

\[
\text{Net farm income} \times 100
\]

\[
\text{Farm profitability} = \frac{\text{Average total capital employed}}{1}
\]

Mr. Molefe as an example

\[
\text{Profit} = R153\,060 \times 100
\]

\[
R1\,089\,280
\]

\[
= R14,05\%
\]

**INTERPRETATION**

According to the profit of Mr. Molefe, it shows that he is earning a net farm income of R14.05 per R100 total capital in the farm business. Van Zyl et al (1999) expressed that farm profitability is an excellent basis of comparison between farm business, regardless of whether the land was bought or inherited. My observations and analyses at
Madikwe show that the Madikwe farmers are still lacking managerial skills and the financial management ability to calculate the profit.

**POVERTY ALLEVIATION**

The aim of the Government is to alleviate poverty through agricultural projects. The Government Departments are coordinating these aspects e.g. the Department of Agriculture, Health and Education are collaborating to alleviate poverty. Local government is steering all these efforts. In Madikwe district the Department of Agriculture has initiated a programme to provide the communities of Ramokgolela with one-month old chickens. The one month old chickens are raised by Ramokgolela communities to alleviate poverty. This is part of food security in the Madikwe district. This is poverty alleviation by using chickens as food and selling extra for cash which they can use to buy other needed commodities. The cattle farmers of Madikwe are encouraged to improve their farming skills through educational campaigns which are run by the Department of Agriculture. The campaign is to capacitate the farmers in order to be market orientated and not only subsistence. Livestock farming is the only source of income for most communities of Madikwe. The campaign of educating farmers is a good opportunity to recruit emerging farmers. The emerging farmers are new entrants to farming. The emerging farmers are equipped and capacitated about the farming enterprise. The emerging farmers will be encouraged to recruit other members and educate them about the economic importance of Agriculture. The farmers of Madikwe are educated about the population explosion.

The officials from the Department of Agriculture have drafted educational programmes to equip and capacitate these farmers. The modus operandi is for the entire district. According to Cloke (1993) the research has produced a plethora of articles of population dynamics in rural areas. He stressed the importance of “population deconcentration,” associated with the physical movement of urban residents to the countryside. The cattle farmers of Madikwe are the only ones who can alleviate poverty
in their own district by practicing farming which is market orientated and not from hand to mouth, as they are practicing currently.

JOB CREATION

Livestock farming is a business. If the business farming is well managed, the farmer, who is the Manager of his business should be in a position to create employment. South Africa is currently encountering the problem of a high rate of unemployment. The financial institutions such as banks and Agribanks are in a position to provide loans to farmers. The farmers are encouraged to recruit and select employees. The Agribusiness is a final place for agricultural products such as meat, milk, hides and skins. The Agribusiness is the place where most employees are hired to earn salaries. In the case of Madikwe area, the only people who are employed mostly by farmers are the herd-men. These herd men are not employed on a permanent basis and are not registered by the farmers. The herd men have tendencies of vacating the cattle posts without the knowledge of the farmers especially if there is a grievance and misunderstanding between the farmers and the herd men. The conditions of employment between the farmer and the herd man are not clearly spelt out before the commencement of their employment.

OBJECTIVES

According to Casey and Maree (1993), the first task of the farmer, who is the manager on the farm is to identify and set objectives for the farm business. They further reiterated that the objective should give direction, facilitate planning and enable the farmer to determine the past, present and future direction. The objectives should be realistic, rated as short, medium and long terms. These objectives should be easy to maintain and according to van Ryssen (2003), the development of breeding objectives for beef cattle breeding can be described in terms of phases:

(i) Specification of the breeding
(ii) Livestock of the breeding
(iii) Marketing system
(iv) Identification of income and expense in commercial herds.
(v) The determination of biological traits influencing income and expense.
(vi) The choice of the selection criteria
(vii) The estimation of phenotypic and genetic parameters.
(viii) The economic weights.

OTHER FACTORS

(ix) The other objective is the commercialization of the communal farmers of Madikwe so as to take fully advantage of domestic and export markets and business opportunities.
(x) The development of a strong farmer support structure that will kick start and sustain commercial beef farming in the Madikwe area.

THE SPECIFICATION OF THE BREEDING

Maree and Casey (1993) define a breed as an interbreeding population of animals with similar production and morphological characteristics and presumed to breed true for these. In other words, the farmers at Madikwe should know which breed they are interested in. If they want to breed for meat, they should concentrate on meat breeds such as Afrikaner, Brahman and Bonsmara. According to van Ryssen (2003) when selection is applied to the improvement of the economic value of the animal, it is generally applied to several traits simultaneously. They further stressed that when these traits differed in variability, heritability, economic importance and in correlation among their phenotypes and genotypes, then selection index has been more effective than independent culling levels. In the case of Madikwe there are several farmers who are trying to be specific with breeding. The only problem is that in communal breeding situations there are no proper bulls. The farmers are not managing their bulls well. Each farmer introduces any bull, which he/she prefers.
The farmers of Madikwe can concentrate on Afrikaners and Brahams because of the following: The Afrikaners are able to adapt easily to the new environment. They have the ability to walk long distances to search for water and grazing. The Afrikaners can calve with ease. It is a tough breed, which can withstand harsh conditions and drought. It can do well for cross breeding. The Brahams have the following characteristics: they are also tough breeds that can withstand harsh conditions. If a Brahman bull is used for cross breeding, the upgrading of livestock can be realized with good incomes. The fertility and mothering abilities of these breeds are satisfying.

LIVESTOCK PRODUCTION

According to Van Ryssen (2003), the specification of the production and marketing system involves the description of how the animals are fed and managed, the age composition of the herd, the replacement policy and the age of animals at slaughtering and marketing.

According to Maree and Casey (1993), there are three production systems which are known:

(i) Weaner production
(ii) Production of steers raised for slaughtering
(iii) The speculative beef production.

WEANER PRODUCTION

This is a situation whereby weaners are raised from the herd and sold for profit.

THE PRODUCTION OF STEERS FOR SLAUGHTERING

It is a situation in which steers are raised from the herd and are for slaughtering purposes. The percentage of females is determined by the marketing age of the steers.
SPECULATIVE BEEF PRODUCTION

This is the situation whereby the farmer can buy steers and sell them at a later stage. He can also sell cows or calves. At Madikwe the prevalent method of livestock production is speculative beef production. The speculators are running around Madikwe district to search for animals, which are to be sold. The communal farmers of Madikwe are very disadvantaged because the marketing places are far from them. These speculators are cheating them. They are paying these farmers very low prices.

MARKETING SYSTEMS

According to van Zyl et al (1999) the farm business should be structured in such a way that it can be reorganized and restructured when consumer preferences and market conditions change. They further mentioned that production should be market oriented, which is something that is constantly being called for in South African Agriculture. The communal farmers of Madikwe are far from market places. They depend on the speculators who are cheating them. The Madikwe farmers are not making use of the Agricultural technicians and Animal Health technicians for marketing advices. They lack the latest marketing information, which will help them to reject the price offers from speculators. The aim of the producer or a farmer is to maximize profit. The generation of profit needs proper planning and good marketing strategies. The farmers at Madikwe are not doing this. They are not planning the production well to meet the market demands. As a result they are failing to attain the good profits. According to Van Ryssen (2003) the primary performance traits for beef breeders are growth rate, feed conversion, feed intake and lean meat. All these traits are of economic importance. He further mentioned the secondary traits, of economic importance such as fertility, longevity and calving ease of cows.

THE IDENTIFICATION OF INCOME AND EXPENSES
According to van Zyl et al (2003) it is essential for farmers to market their product instead of selling it. They further said that the farmers should first secure the market before deciding what to produce. Van Ryssen (2003), mentioned that the identification of income and expenses in herds enables the development of a profit equation. (Profit = Income - Expense).

In other words a farmer should be able to know how much his input was so that when he deducts output the remainder is his profit.

According to van Ryssen (2003) the cost of animal products depends primarily upon the efficiency of three basic functions, namely the reproduction, female production and the growth of the young ones. He further mentioned that there should be a distinction among the costs of production, reproduction and progeny growth to the market size. The income of the farmer is from the sale of the weaners, surplus heifers and cull cows. The expense depends on the food intake, husbandry costs and marketing (van Ryssen (2003). The communal farmers of Madikwe are not keeping records to verify the costs incurred.

THE DETERMINATION OF THE BIOLOGICAL TRAITS

According to Maree and Casey (1993) the biological traits are the fertility, adaptability, growth ability and carcass quality. The above traits should be economic based. A farmer of Madikwe should be in a position to select for traits such as a fertility and adaptability of an Afrikaner. The communal farmers of Madikwe are not able to show on records that they are targeting certain economic traits. There are no records for birth rate, mortalities and prevalent diseases of animals.

THE DERIVATION OF ECONOMIC VALUES

Van Ryssen (2003), stressed that livestock breeding has moved from pure breed appearance orientation to a performance orientation. The most important traits for the farmers are production, fertility, calf survival and mature weight. Van Ryssen (1993)
further stated that the economic value of trait depends on management decisions. It is imperative for the farmer to know exactly what trait is the targeting.

If the farmer is targeting for the birth weight, it should be clearly spelt out in his objectives. In the case of the Madikwe farmer, this aspect will be difficult to confirm or reject. The problem is the poor recording of the animals performance. The goal of the farmer is to maximize profit and minimize costs. According to Vermaak et al (2004) reproduction is the main limiting factor relative to production efficiency. They further stated that the young cows should be well managed and be matched to the environment. It is necessary to improve the reproduction of a cow.

THE CHOICE OF SELECTION CRITERIA

According to Maree and Casey (1993) before selection can take place, the environmental influences should be minimized. They further stated that contemporary animals should be treated alike. This is the only way in which the assessment of animals can be accurate. Maree and Casey (2003) recommend the usage of the “Estimated breeding Value”. This method is based on complex calculations by using genetic and phenotypic parameters. The “Estimated Breeding Value (EBV) according to Vermaak et al (2004) stated that maternal efficiency will continue to move up the list of producer priorities. According to Maree and Casey (1993), the important economic traits are: birth weight, carcass qualities, weaning weight, reproductive performance and longevity. It is important for farmers at Madikwe to know these criteria.

THE ESTIMATION OF GENOTYPE AND PHENOTYPE PARAMETERS

It is imperative for cattle farmers to keep records of their cattle. The performance of cattle, their genetic make up and phenotype are crucial records which are supposed to be kept by the farmer himself. In Madikwe district, the records for livestock are not kept. According to Maree and Casey (1993) the usage of the “Estimated Breeding Value” (EBV) as the method which is a complex of calculations, which is using genetic and
phenotypic parameters. According to them, this can only be calculated by using powerful and sophisticated software. They further stated that this method is advanced and very accurate. If this method is used properly, it is possible to compare animals, which were born in different years.

THE ECONOMIC WEIGHTS

According to van Ryssen (2003), animal traits are taken to be appropriate economic weight. He further stated that it is easier to work with economic weights if they are all scaled relative to each other. He said that the easiest way of doing that is to standardize weights by dividing through the standard deviation of each trait, so that the value refers to a change of one standard deviation in each trait. The communal farmers of Madikwe are not aware of the economic weights although some farmers have noticed them. According to van Ryssen (2003) the economic values can only be estimated.

COMMERCIALIZATION OF COMMUNAL FARMERS OF MADIKWE

The communal farmers should aim to change from producing from hand to mouth. They should rather aim to commercialize their beef cattle industry. They can only afford to do that if they change their farming attitudes. Their farming should be market orientated. They should be able to maximize their profits and minimize their costs. If they are prepared to change, the officials from the veterinary Division are willing to facilitate their initiatives. This can be done through meetings, in which farmers are equipped about financial management and financial record keeping systems. According to van Ryssen (2003) breeding and management involve decisions followed by actions. The decisions are based on the information of the environment, markets and traits. He added that the better the information, the better the decisions.
STATEMENT OF THE PROBLEM

The livestock farmers of Madikwe are not practicing sound farm management. The yardstick used is that they don't keep financial records, asset records, production records and livestock census records. The Madikwe cattle farmers are communal farmers and mostly are practicing subsistence farming. Those who are farming for market purpose are few. The majority of farmers are producing from hand to mouth. These farmers are not keeping proper records for the mortality rate of their animals and it is difficult to trace the number of cattle that died on a particular year. There is no profit maximization on their respective farms.

There is no proper communication between farmers and officials from the Department of Agriculture. The Tribal Authority is the sole controller of these communal camps. The communal farmers of Madikwe are encountering serious problems such as overstocking of the camps, overgrazing and veld fires which are not well monitored.

THE SCOPE OF THE STUDY

The cattle farmers are based at Madikwe and their farming is a communal one. The type of grazing camps are under the control of the Tribal Authority. The emerging farmers have the rights to graze their cattle with those who already have cattle. The communal farmers of Madikwe are not practicing sound farm management. The average herd size is twelve cattle per farmer. These farmers are lacking management skills, production techniques and financial management. They are also not market orientated in their farming practice. The Department of Agriculture through its technicians is attempting to capacitate these farmers through educational campaigns, but only a few farmers are adapting the techniques. According to van Zyl et al (1999) a successful farmer is the one who keep records of his assets, finance and land. The effective record keeping system should meet a number of requirements. The record should be useful, specific and easy to read. The other aspect, which the farmer should have, is the information for his business. Accurate and effective financial management
is the one, which has the detailed information (van Zyl et al. 1999). The communal farmers of Madikwe are very far from the market places. The closest auction place is at Sikaatskop which is fifty-six kilometres from Madikwe location. The other cattle auction place is at Swatruuggens and is seventy kilometres away from Madikwe. Madikwe farmers are lacking market information.

**THE IMPORTANCE OF THE STUDY**

As an Animal Health Technician who is working with communal farmers I have realized some problems. The most serious problems, which I am encountering on daily basis, are as follows:

(i) the communal farmers of Madikwe are not keeping records. These records are cattle registers, assets registers and finance registers.

In other words the communal farmers do not have the most accurate or simple information on hand. The accurate records are the one(s), which can be used to analyze how the business is running or performing. If there are no accurate records on the farm, the whole farming business is a failure. Why are some farmers progressing and other farmers are retrogressing? This question can be answered by comparing the commercial farmers with the communal farmers.

<table>
<thead>
<tr>
<th>Communal Farmers</th>
<th>Commercial Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. the records for cattle census and finance are not kept.</td>
<td>The financial and cattle records are up to date.</td>
</tr>
<tr>
<td>2. There are no management skills.</td>
<td>The farmers are applying ‘managerial skills.</td>
</tr>
<tr>
<td>3. The farming business is not driven By the market.</td>
<td>Farming is market driven</td>
</tr>
<tr>
<td>4. There is no specific breed kept by farmers.</td>
<td>There is breed specification e.g. Afrikaner or Brahman</td>
</tr>
<tr>
<td>5. There is no profit maximization</td>
<td>Profit is maximized and generated.</td>
</tr>
</tbody>
</table>

It is therefore vital to carry out this study in order to improve the farming pattern and techniques for the communal farmers of Madikwe district.
THE STUDY ENVIRONMENT

As an Animal Health Technician from Veterinary Services which is an arm of the Department of Agriculture, Conservation and Environment, I have realized that the communal cattle farmers of Madikwe need to be researched. Why are commercial farmers progressing? The crucial and primary problem is that the communal farmers are not keeping records. There should be records on financial management, cattle census, mortalities on cattle, asset register, labour register and cattle performance register. There is no information pertaining to markets and market prices.

The cattle farmers will not be in a position to tell you how much they pay for a weaner of 200 kg which is sold on the hoof. If one compares the profit which is maximized by a commercial farmer to the one which is supposed to be maximized by the communal farmer, there is a great gap between them. There are some inhibiting factors which are hampering cattle production such as:-

(1) Lack of managerial skills
(2) Land managerial skills
(3) Land tenure system
(4) Breed type
(5) Lack of capital, labour and market information.

The record keeping is the key to success for the communal farmers of Madikwe. The officials from the Department of Agriculture are willing to facilitate and monitor their progress in the cattle industry.
# THE PLAN OF THE STUDY

The plan of study are as follows:

<table>
<thead>
<tr>
<th>CHAPTER ONE</th>
<th>Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPTER TWO</td>
<td>Literature review and theoretical foundation</td>
</tr>
<tr>
<td>CHAPTER THREE</td>
<td>Defining the problem and formulation of the hypothesis or research questions.</td>
</tr>
<tr>
<td>CHAPTER FOUR</td>
<td>Research design and analysis.</td>
</tr>
<tr>
<td>CHAPTER FIVE</td>
<td>Results and interpretation</td>
</tr>
<tr>
<td>CHAPTER SIX</td>
<td>Discussions, conclusions, implications and recommendations.</td>
</tr>
</tbody>
</table>
CHAPTER TWO

LITERATURE STUDY AND THEORETICAL FOUNDATION

INTRODUCTION

The Madikwe Communal farmers are not practising sound farm Management. What is management? "The term management refers to the process of getting activities completed efficiently and effectively with and through other people." Robbins and Coulter, (1996). They further stated that the process of management represents the functions or primary activities engaged in by the manager. The functions which were stated by Robbins and Coulter (1996) are as follows:- Planning, organizing, teaching and controlling. A farmer himself is the manager of his own farm. He is supposed to plan his livestock production in a very organized fashion. He is supposed to maximize profit. If the farmer is not in a position to generate income from his farm as a business, he should rather quit farming. The communal farmers of Madikwe are not maximizing profits. They are practicing a subsistence type of farming. There are a few who are doing their best to generate a reasonable income from farming. The crux of the matter pertaining to the Madikwe communal farmers is lack of keeping records. If farming is a business, record keeping should be done. A farmer who regards farming, as a business in cattle industry should have records of his cattle, financial records, mortality records, vaccination programme for diseases and asset registers. According to Burgess (2000) to make sound management decisions, information is of utmost importance.

MANAGEMENT

The Madikwe farmers are the managers of their own livestock. They are responsible for their own cattle. They should make sure that they regard livestock production as their own businesses. The only serious problem which is hampering livestock production at Madikwe is lack of sound farm management. According to Boehije and Eidman (1984), planning is the basic management function because it provides the modus operandi to
accomplish the objectives. They further stated that “farm management” was the science of the art of combining ideas, facilities, to market a worthy product or service profitably”. If one assesses the situation at Madikwe, there is no farm management at all. The Madikwe communal farmers are not farming according to new techniques. They still have beliefs and taboos which hamper their production e.g. in the case of a disease known as “Lumpy skin disease,” a farmer will still apply fat from dead pigs to treat that disease. The concoction that is used to treat “Lumpy skin disease” will not heal an animal. The farmer as a manager of his farm is supposed to set up goals and objectives for his livestock industry. The farmer must select the proper breed, proper bulls and is supposed to consult the experts from the Department of Agriculture for technical advices. The Madikwe farmers do not regard farming as a business. Maree and Casey (1993), regarded decision making as an important element of management. Van Zyl, et al (1999), stresses that there are four generic functions of the management process; namely, planning, organization or implementing, coordination and responsibility to control other factors of production such as land, labour and capital. According to the research which I am conducting at Madikwe, farmers are not regarding themselves as managers of their farms and the Madikwe farmers are taking a long time before they visited the people who are taking care of their animals and the management decisions are left on the hands of the farm workers. One serious situations is when the farmer will only inspect his cattle at the cattle post during weekends only. The cattle are supposed to be inspected by the farmers for diseases, parasites, theft and death or mortalities. These functions are performed by the general worker at the cattle post. The record keeping functions such as or for mortalities, cattle census, and financial statements and marketing information is not done at all at Madikwe. It is imperative for Madikwe communal farmers to seek information pertaining to marketing at the office of Agriculture at Madikwe. The serious problems which Animal Health Technicians are encountering at Madikwe is that farmers are not seeking advices. In order for the Madikwe farmers to succeed in the livestock industry, they should seek technical advices from Agricultural officers because livestock farming is a dynamic and unique industry.
AIMS

It is the responsibility of the farmer to set up aims for

(i) Profit maximization.
(ii) Wealth maximization.
(iii) Poverty alleviation.
(iv) Job creation.

PROFIT MAXIMIZATION

According to van Zyl, et al (1999), “profitability is the percentage ratio between the profit earned in a given period and the capital used to realize that profit.” They further explained that the farmer should be able to compare the interest earned and the capital invested elsewhere.

The farmers are farming on communal land and they intend to maximize profit on yearly basis. If the communal farmers of Madikwe are not maximizing profits, they should rather close their farming enterprises. There are communal farmers at Madikwe who acquired loans from Landbank to purchase cattle. If these farmers are not producing well in order to pay their loans, their animals will be repossessed. The maximization of profits will depend on good production, sound management and cattle breeds. If cows are not able to produce calves on yearly basis, farmers should practice the sound management of culling such cows. The farmer should be able to diversify. He/she should have other enterprise such as crop production, combined with livestock production. The concept of diversification will assist the farmer to equally distribute the risk between livestock production and crop production. If one assesses the situation of cattle farming at Madikwe, the communal farmers of Madikwe are not maximizing profit. Financial records are not kept by farmers to verify their profits. On the other hand the calving percentage is extremely low. The farmers can only be assessed by checking the number of calves which were born in a specific year. The performance is influenced by a number of factors such as poor management, lack of production techniques and the
overgrazing of camps. The communal farmers of Madikwe are not producing for the purpose of marketing. The Technicians from the department of Agriculture are not consulted on a regular basis for technical advices. The communal farmers should be developed for profitable beef businesses.

WEALTH MAXIMIZATION

According to Gitman (2003), as the business increased the proportion of debt in its capital structure, a strategy involving maximizing earnings per share would also maximize owner’s wealth.” The higher the risk the higher the returns. The Madikwe communal farmers can also increase their wealth by accepting the higher risk. Livestock farming is a business which involves higher risk. If a farmer has 100 cattle, these animals can easily be wiped out due to diseases. A disease such as Anthrax can cause high mortality if all animals are not vaccinated. The wealth of the communal farmers of Madikwe can be maximized, if farmers are willing and prepared to accept risks.

POVERTY ALLEVIATION

The government of the day is aiming to alleviate poverty among all South Africans. The Government cannot alleviate poverty on its own. The communal livestock farmers of Madikwe can assist the Government by producing livestock which is market-orientated. The government is providing loans to emerging farmers through “Landbank”. If communal farmers of Madikwe are able to secure these loans, this is poverty alleviation. The communal farmers of Madikwe will be able to buy cattle with the loan. If these animals are managed properly, the communal farmers will be able to improve the standard of living of their own families. There are a number of communal farmers at Madikwe who own cattle through the aid of Land bank. The rural communities of Madikwe are able to earn a living and in addition to educate their children by rearing livestock in communal areas. The rearing of livestock serves as a source of income for most communities in Madikwe district.
JOB CREATION

The communal farmers of Madikwe have general workers who work at their different cattle posts. These herdsman are able to earn a living. The farmers have created jobs for them. If a farmer is managing his livestock well as an enterprise, the general worker will have a permanent job for his entire life. If communal farmers produce enough cattle for the markets, this will end up in the establishment of Agro-industries. There will be much manpower needed for Agro-industries. There will be job creation at Agro-industries. The employees will be needed for the process of livestock products such as hides skins, meat and milk.

OBJECTIVES

According to Maree and Casey (1993), “the first task of the farmer, who is a manager is to identify and set objectives for the farm business”. “The objectives give direction, facilitate planning, and enable the farmer to determine the past, present and future direction”. It is clear from the above statement that livestock farming depends on farmers. If the communal farmers of Madikwe are not in position to set up objectives for their livestock, they are doomed to fail. They should consult the experts from the Department of Agriculture to assist them with livestock production management. According to van Zyl et al (1999) “they mentioned that the objectives guide the planning process and enable the farmer to establish his point of departure as well as his destination.” They further mentioned that some objectives are business oriented while others are aiming at satisfying non financial needs.” The communal farmers of Madikwe should be in a position to know what they want and what they want to achieve from their livestock production system. At this point in time the communal farmers do not have clear cut objectives which guide them in livestock farming. If the farmers of Madikwe had definite objectives on the ground, I would be able to pick them up during the research process. The communal farmers of Madikwe did not consult the Agricultural Technicians when they bought their cattle for advice and other technical implications.
If farmers are having objectives in place for their cattle production, they could be in a position to know that the objectives are supposed to be quantifiable, reliable and attainable. According to van Rysse (2003) the breeding objectives and the derivation of economic values are as follows:

(i) Breeding objectives and economic selection index.
(ii) Breeding, production and marketing system.
(iii) Identification of sources of income and expense.
(iv) The determination of biological traits influencing income and expense.
(v) The derivation of economic weights.

The last three are the additional information, namely,

(1) New breeding plan
(2) Animal Improvement Act.
(3) Animal performance.

**BREEDING OBJECTIVES AND ECONOMIC SELECTION INDEX**

According to van Rysse (2003), "when selection is applied to the improvement of the economic value of the animal, it is generally applied to several traits simultaneously", when these traits differ in variability, heredity, economic importance and in the correlation among their phenotypes and genotypes. Index selection has been more effective than independent culling or sequential selection.

In the case of simultaneous selection for several traits, the objective is to achieve maximum genetic progress towards a stated economic goal. According to Burgess (2004) breeders are supposed to concentrate on the scrotal circumference and calf tempo for the reproduction traits of the estimated breeding values. He further stated that the scrotal circumference which is measured at twelve months of age after a growth test is an excellent reference point. This trait is highly heritable. The research has indicated that the scrotal size is correlated to the quality and quantity of the sperm, pregnancy percentage and yearling weight. Burgess (2004), further stated that bulls with a scrotal size smaller than 34 centimetres and larger than 40 centimetres were less
efficient in reproduction. For instance a bull with small scrotal size will be infertile and will not be an appropriate one for breeding purposes.

According to Van Ryssen (2003), the breeding objective, has the following advantages namely:-
- It will enable breeders to use the combination of estimated breeding value that gives most genetic progress.
- It will enable breeders to target specific markets.
- It will enable the estimated breeding values to be used more efficiently.

The breeders will have financial rewards through the entire industry.

SECONDARY SEXUAL CHARACTERISTICS

According to Burgess (2004), “if testosterone is secreted in sufficient quantities, the head of the bull will be masculine, with coarse hair on the head and the neck.” He further stated that the active bull will have well defined muscle, with darkening of the neck. The bull with a high libido will have sound secondary male characteristics and well awake eyes. The scrotum is supposed to hang symmetrically from the bull. The Madikwe communal farmers do not have the objectives for their livestock at all as indicated by Burgess (2004). Farmers are not in a position to distinguish bulls with high libido. According to Burgess (2004), once the objective of the herd has been set, bulls must be selected and brought to the herd. A farmer cannot buy a bull that cannot mount females, and produce. If the bull is not fertile, the objective to be achieved is retrogressive. A communal farmer of Madikwe must get a person who is knowledgeable and experienced whenever he is intending to buy a bull. The age, health status and physical appearance of the bull must be inspected before purchasing. The selection of a bull must be strict, or else the reproduction of a cow will be adversely affected.
BREEDING, PRODUCTION AND MARKETING SYSTEM

According to Vermaak et al (2004) the breeding for beef cattle has evolved over the years to meet production standards, resources, consumer demands and marketing practices. "The National Beef Cattle has published the estimated breeding value that is covering a broad range of traits such as growth, weaning, yearling weight, and calf tempo. The communal farmers of Madikwe are able to improve the breeding, production and marketing system if their management is sound. The farmers are supposed to farm in an environment which cattle can be able to adapt and adjust easily. If I compare the environment on which cattle are reared in Madikwe, it shows that farmers did not inspect the environment before they brought in cattle. The animals such as Brahmans and Afrikaners can adapt easily to Madikwe areas. The cattle such as Simmentalers are not adapting easily to the farming environments of Madikwe. These are the exotic breeds. According to Van Ryssen (2003) the specifying of the breeding system involves the definition of the breed in the production system. He further stated that the role of breed influences the amount of genes which are present in various segments of the production system. The production and marketing involves the description of how animals are fed, managed and the replacement policy that is used.

If one analyzes the breeding, production and marketing system, the communal farmers are considering the marketing aspect only. The auction sales are far from Madikwe. The road conditions are also bad. The breeding and the production aspects are not considered by the Madikwe communal farmers. According to Van Ryssen (2003), there are factors that determine the expression of an animals genotype such as:

- The probability that the mating results in a female offspring is kept for breeding purposes.
- The degree of relationship of the animal to the descendants in which his/her genotype is expressed.
- The number of years after mating is considered.
IDENTIFICATION OF SOURCES, OF INCOME AND EXPENSES

The research which is conducted at Madikwe, has revealed that the communal farmers are not in a position to identify their income and expenses. According to Van Ryssen (2003), the identification of sources of income and expenses will enable the farmer to develop a profit equation. It is imperative for the Madikwe communal farmers to be able to know their own expenses and income. If the farmer has a reasonable income in the farming enterprise he/she will be able to continue with livestock farming. The income of the communal farmer will depend on the selling of the weaners, heifers and the culled cows. The cows may be culled for poor performance or if the cows have reached old age. The income can also be increased through the selling of animal products such as milk and meat. According to van Ryssen (2003), the animal products will depend on the three basic functions, namely the reproduction, female production and the growth of the young ones.

REPRODUCTION

The reproductive capabilities of the animals is controlled mainly by the farmer who is the manager. The farmer can manipulate the reproductive efficiency of the animals through proper and sound management. The farmer should be able to select a good fertile bull which has all the necessary characteristics. If the farmer chooses a bull with deformed sex organs such as an undeveloped scrotum and old bulls which have less libido, he is going to encounter a poor calving percentage. A bull should be clinically healthy and it should be inspected by a vet for venereal diseases such as vibriosis, trichomoniasis and brucellosis. In the case of a cow, it should be inspected for venereal diseases too. The process of herd health management should be carried out for the entire herd.
PRODUCTION

A farmer at Madikwe should be able to improve the productive capabilities of the animals by applying sound farm management. A farmer of Madikwe is expected to have products such as milk and meat from the herd. If cows and bulls are vaccinated for diseases such as anthrax, backquater and heifers for brucellosis, the farmer will controls diseases. The communal farmers of Madikwe are supposed to dip the livestock in order to control tick borne diseases such as gall sickness and red water.

DETERMINATION OF BIOLOGICAL TRAITS INFLUENCING INCOME AND EXPENSE

According to van Ryssen (2003), a distinction can be made between the primary and secondary traits. According to his explanations the primary traits are the followings:- growth rate, feed conversion, feed intake and lean meat percentage. The secondary traits are the fertility, longevity and calving at ease. It is imperative for communal farmers of Madikwe to have an idea of those traits. A farmer should be in a position to target a particular trait, e.g. growth rate for the calves. The primary and the secondary traits will affect both the income and the expense of the farmer. If the farmer has cows which cannot calf on a yearly basis, ultimately income will decrease. The cow which has problems of calving at ease, is a drawback for the farmer. It is a great loss. According to Vermaak, et al (2004), the reproductive performance of the cow is the main limiting factor relative to production efficiency. They further stated that the reproductive problems which are encountered by producers to get the first calf heifers rebred. They mentioned that the producers cannot afford to lose a female at this stage of her reproductive life. The situation in Madikwe is that the communal farmers are not aware or the importance of reproductive performance of their cows.

It is advisable for officials from the department of Agriculture to educate farmers about the importance of primary and secondary traits. The farmers should be informed about the importance of the reproductive performance of cows.
HOW TRAITS AFFECT INCOME AND EXPENSE OF FARMERS

The aim of the communal farmers of Madikwe is to maximize profits. They intend to have high calving percentage at the end of each year. If bulls are not fertile, obviously cattle will not be having calves. If cows are aborting or are giving birth to still-born calves, this will be a great loss to farmers. If cows and heifers are positive for brucellosis, it simply means the farmer must cull them. These animals are only slaughtered at a special abattoirs. The farmer will be getting less money for these cows and heifers. A bull which has a low libido will cause economic loss to the farmer. Venereal diseases such as brucellosis, vibriosis and trichomoniasis can cause serious economic losses to a farmer. The expenditure will be higher than the income. According to Vermaak et al (2004), mentioned the following tactics to improve the reproductive performance of the young cows: namely:-

(1) The producer should match the cows to the environment.
(2) The young cows should be managed properly. The heifers should be fed properly before calving.
(3) The young cows should be exposed to sterile bulls before breeding seasons.
(4) The young cows should be synchronized even with natural services, such as bull serving. It is important for the communal farmers of Madikwe to keep records such as performance records, production and disease records in order to check for the traits which have been achieved by them on specific year(s).

DERIVATION OF ECONOMIC WEIGHTS

The aim of livestock producers is to maximize profits and minimize costs. The economic traits such as weaning rate, growth rate and milk production will influence the economic weights. The economic weights and the profit maximization are synonymous. If a farmer wants to improve his/her income, he/she must start with the improvement of the economic traits. The economic traits such as fertility, calf survival and mature weight of cows are influencing the profits of the producers. In Madikwe
areas farmers are not keeping records for the economic traits of their animals. It is difficult or impossible for a researcher to determine the profits which are supposed to be generated by the producers. According to Van Ryssen (2003), “by expressing profit as a function of traits in the breeding objective, the economic value can be obtained by differentiating with respect to each trait. When estimating the economic value of a trait, only terms involving that trait need to be considered.” He mentioned also that breeding and management involve decisions followed by actions. The decisions will be based on information of the environment, markets and traits. It is vital for farmers of Madikwe to keep records for the performance of their cattle. The records will help the farmers in decision-making and improve the farmer’s management. If the productivity of animal products are increased, the profit maximization will increase too.

### TABLE 6.B SUMMARY OF SELECTION TRAITS AND THEIR EASE AND COST OF MEASUREMENT

<table>
<thead>
<tr>
<th>Breeding objective</th>
<th>Selection trait</th>
<th>Ease of measurement</th>
<th>Cost</th>
<th>Heritability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>Preweaning</td>
<td>H</td>
<td>L</td>
<td>L/M</td>
</tr>
<tr>
<td></td>
<td>Weaning weight</td>
<td>H</td>
<td>L</td>
<td>L/M</td>
</tr>
<tr>
<td></td>
<td>Final weight</td>
<td>H</td>
<td>L</td>
<td>L/M</td>
</tr>
<tr>
<td></td>
<td>(700day)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reproductive rate</td>
<td>Calving rate</td>
<td>H</td>
<td>L</td>
<td>L/M</td>
</tr>
<tr>
<td></td>
<td>Testicle circumference</td>
<td>M</td>
<td>M</td>
<td>L/M</td>
</tr>
<tr>
<td>Temperature</td>
<td>Flight speed</td>
<td>H</td>
<td>L</td>
<td>M/H</td>
</tr>
<tr>
<td>Heat tolerance</td>
<td>Rectal temperature</td>
<td>M</td>
<td>M</td>
<td>L/M</td>
</tr>
<tr>
<td>Tick resistance</td>
<td>Tick count</td>
<td>L</td>
<td>H</td>
<td>M/H</td>
</tr>
<tr>
<td>Worm resistance</td>
<td>Faecal egg count</td>
<td>L</td>
<td>H</td>
<td>L</td>
</tr>
<tr>
<td>Buffalo fly resistance</td>
<td>Visual fly count</td>
<td>M</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>Cancer eye</td>
<td>Eyelid pigmentation</td>
<td>M</td>
<td>L</td>
<td>M/H</td>
</tr>
</tbody>
</table>

Low = Heritability
ML = 25%
HM = 25-50%
H = 50%
The table above is according to Maree and Casey (1993). They reported that the weaning weight is more heritable than pre-weaning weight, because the birth weight with a high heritability is a component of weaning weight. They further mentioned that the heritabilities of fertility are low. A communal farmer of Madikwe should be able to check the traits and be able to draw a conclusion to see which traits are of economical value for him/her.

NEW BREED PLAN

The communal farmers of Madikwe should be capacitated in the new techniques applicable in cattle industry. The advanced technology is the breed plan. According to Burgess (2002), the estimated breeding values for reproductive, carcass, effective and type of traits can be calculated through breed plan. He said the bottom line was not the wide range of extra traits that could be evaluated through breed plan, but that it was no longer cost efficient to develop registration, performance and evaluation system for countries. The growth traits such as birth weight, feed efficiencies and cow weight can be measured through breed plan. This system is much cheaper. A farmer is supposed to submit the performance data of his animals. The farmer will be able to know which animal to choose for breeding and this will improve genetic performance.

ANIMAL IMPROVEMENT ACT

According to Burgess (2004), the long and eagerly awaited “Animal Improvement Act” came into effect on 21st November 2003. It heralded a bright new era for the South African livestock industry. He said the old Act 62 of 1998 was affecting aspects such as production, animal based food and fibre. The new Act is a boost for the South African livestock industry. The farmers will benefit from the Act as follows: The animal breeders will be protected and there will be control of persons who will be offering reproductive services. There will be the establishment and maintenance of animal breeders societies. The Act will allow breeders to develop animals with good genetic qualities. The communal farmers should know the Act which is governing livestock industry.
ANIMAL PERFORMANCE

If we talk about animal performance we simply mean the production and reproductive efficiency of animals. The aim of the farmer is to maximize profits. Farmers can only maximize profits if the cows give births to calves on yearly basis. Farmers should be able to measure performance of his/her animals through record keeping. If farmers are not keeping records, they will not be in a position to measure animal performance. At Madikwe District, it is really difficult or impossible to measure the performance of livestock, because there are no records kept by farmers. There are some farmers whose cows are not calving on yearly basis. It is difficult for farmers to pick them up quickly. The performance of cattle is influenced by a number of factors such as climate, topography, nutrients, diseases and management style of farmers.

ILLUSTRATION OF ANIMAL FERTILITY AND PERFORMANCE TABLE 6.2 ACROSS TO MARREE AND CASEY (1993)

<table>
<thead>
<tr>
<th>Breed</th>
<th>Average calving Percentage</th>
<th>Average calving Interval (days)</th>
<th>Net Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaners</td>
<td>74</td>
<td>460</td>
<td>100</td>
</tr>
<tr>
<td>Heveford</td>
<td>78</td>
<td>462</td>
<td>97</td>
</tr>
<tr>
<td>Santa</td>
<td>92</td>
<td>372</td>
<td>141</td>
</tr>
<tr>
<td>Santa Gertrudis</td>
<td>78</td>
<td>420</td>
<td>103</td>
</tr>
<tr>
<td>Simmentaler</td>
<td>78</td>
<td>416</td>
<td>88</td>
</tr>
</tbody>
</table>

The Hereford, Santa Gertrudis and Simmentaler have a high calving percentage. They still have the high fertility even if they are not supplemented during winter and drought. The Afrikaner can adapt very well to most conditions. Afrikaners are adapting well under the harsh conditions of Madikwe.

MARKETING

A market is a place where sellers and buyers meet. According to van Zyl et al (2000), marketing should be planned. They mentioned that the first step in developing marketing plan would be to study the environment in which the farm business will be
operating. The study will provide the farmer with information on consumer needs, preferences and spending patterns. According to van Zyl et al (2000), the research should include sales, price, competitors and the size of the operations. In Madikwe the situation is different. The communal farmers of Madikwe are not seeking information, pertaining to marketing from the officials of the Department of Agriculture. The farmers are not aware of the present price of a mature cow when it is sold on hoof at the auction. The other discouraging point is that the auction sales are far from most farmers. The speculators are rife at Madikwe. Speculators are cheating the communal farmers of Madikwe. The officials from the department of Agriculture are negotiating with relevant buyers to buy cattle for the Madikwe farmers. According to A. Savory in his book of "Holistic Management" (1999), marketing has to do with strategy, how to develop that farmers needs, and get it to customers through profit. He describes selling as one aspect of marketing strategy. He mentioned that in selling and marketing of cattle, cattle are marketed at auction pens, slaughter houses (abattoirs) and directly to consumers. The best option is to market the product directly to the consumers to avoid the costs of middlemen.

BREEDS

The Province of North West has different types of breeds. In the district of Madikwe there are Afrikaners, Brahmans, Bonsmara and Herefords. The communal farmers of Madikwe are rearing mostly Brahmans and Afrikaners. These two breeds are known as the "Indigenous breeds." According to Maree and Casey (1993), "these breeds have established themselves as easy-care, well adapted animals." They further mentioned that these breeds have great variation and they provide an excellent opportunity for selection and future improvement. These two breeds are doing excellently under the harsh environmental conditions of Madikwe. The only problem at Madikwe concerning these breeds is that farmers are practicing poor farm management like poor record keeping, no vaccination programmes for disease control and no proper dipping for external parasites. The breeding systems which are practiced by communal farmers are hampered by the interference of tribal authorities. The tribal councillors are allowing
more farmers to graze their animals on a small piece of land. This will result into over
grazing, over stocking and lack of breeding programmes. There is no proper system of
bull selection and replacement of heifers. The officials from the Department of
Agriculture are attempting to equip farmers with the production techniques, but farmers
are not willing to adopt them. The communal farmers do not intend to produce for
market purposes, but are still producing from hand to mouth. They are not prepared to
commercialize their livestock industry.

GRAZING SYSTEM

At Madikwe there is no specific grazing system practiced by communal farmers. The
crux of the matter is that there is overgrazing and over stocking of camps. The
overgrazing practice is noticeable because farmers are locating more animals for a
longer period at the same camp or camps. The grazing area is divided into camps, but
there are more animals per camp. On average, a camp is allowed to have sixty
animals, but farmers are doubling the number of animals per camp. There is no good
planning as far as grazing is concerned. There is no rotational camp system in practice.
In other words, there are no camps which are being rested to allow grasses to re-grow
well.

The grasses are overgrazed to such an extent that bare patches have been created and
cattle have established small roads within camps. This situation will result in water and
wind erosion. The veld conditions in most camps at Madikwe have deteriorated. The
conditions of most livestock are bad, most cattle are emaciated and delibitated during
winter. The communal farmers are not practicing veld management principles, which
were outlined to them by officials from Agriculture Department. According to Savory
(1999), if a proper grazing system is practiced, such as rotational grazing system and
adequate number of animals will maintain soil cover. The Madikwe farmers should be
educated about veld management before they create a desert.

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VELD BURNING

According to Burgess (2002), fire has been used as a management tool for centuries, and burning has now become a science in its own right. He also says the problem is that it is often more difficult to make correct veld management decisions. Burgess (2002) also says research has shown that fire can do more harm than good. The situation in Madikwe is that communal farmers have a tendency to burn the veld. They are providing a number of reasons why they are burning the veld: To decrease the number of ticks that are present on the veld, to improve veld conditions and to assist better re-growth of the grasses. All these reasons are not acceptable because fire is deteriorating the veld’s condition. The moribund grasses can be controlled by fire, but this burning should be properly controlled and monitored.

According to Burgess (2002), he concluded by saying that fire should never be used to try to rectify the consequences of poor veld management. The farmers of Madikwe should be able to improve veld conditions, livestock improvement and maximize profits if they abstain from veld burning. They can only achieve the above if they equip themselves without the advantages and disadvantages of veld burning. The officials from the Department of Agriculture will continue to educate farmers about veld management.

RECORD KEEPING

Burgess (2004), provided readers with the following quotation, “If you want to be a successful farmer or rancher keep records.” He added that what we need is information and not records. The situation at Madikwe is that farmers are not keeping records at all. The only record that is available for livestock farmers are the records for anthrax and brucellosis vaccinations. Those cards are issued by Animal Health Technicians when they vaccinate the cattle. It is really difficult to assess whether a farmer is generating any income from the livestock industry. The records which are supposed to be kept by farmers are as follows: Livestock census register, financial register, asset register,
mortality register, disease register and budget register. According to Maree and Casey (2003), the records that must be kept on the farm are supposed to have the following elements:

- The records must be useful.
- The financial manager must have the knowledge to gather and arrange information correctly.
- The records must meet specific requirements of the management and decision making process.
- The records must be simple and easy to use. According to Burgess (2003), the records are the "view image" of the business. They tell you where you have been. The records helps the farmer to plan, to set goals and to have direction. The records are the information that inform the farmer to compare what happened to what was expected to happen.

**DISEASE AND PARASITES**

The production and reproduction of animals are inhibited by disease and parasites. There are different kinds of disease, e.g. bacterial, protozoal, viral and rickettsial diseases. An example of these diseases can be tabulated as follows:

(i) Bacterial diseases e.g. anthrax and botulism.
(ii) Viral Diseases e.g. rabies & lumpy skin disease.
(iii) Protozoal diseases e.g gallsickness and red water

The farmers of Madikwe have tendencies of not vaccinating their animals against diseases. In Madikwe area the prevalent disease is Lumpy skin disease. There are farmers who take the initiative of buying the vaccines and who approach the veterinary office for an assistance. These farmers wait for the Animal Health Technician during the Anthrax and Brucellosis vaccination campaign. The problem which farmers do not realize is that these Animal Health Technicians are vaccinating specifically for Anthrax and Brucellosis. The vaccine for Anthrax includes Blackquarter, as Blanthrax vaccines. These farmers are vaccinating for Blackquarter if the vaccines which the officers are
using is only for Anthrax. Animal Health Technicians are drafting an educational programme in which farmers are educated on prevalent diseases of Madikwe.

Farmers have tendencies of forgetting what is told to them in the past. The farmers are also educated about the importance of dipping and dosing their animals. The communal farmers are enlightened about venereal disease such as Brucellosis and vibriosis. The Animal Health Technicians are empowering farmers to prevent disease, because prevention is better than cure.

**ECONOMIC IMPORTANCE OF LIVESTOCK**

The livestock industry is playing a vital role in the economy of the country. If farmers produce more cattle this will lead to job creation. For instance, farmers will be able to improve their standard of living in addition they will be able to hire more herdsmen to take care of their livestock. The livestock industry is playing a vital role in the economy of the country. If farmers are able to produce more steers per year, this is job creation for South Africans. The main products which farmers gain from their cattle are meat, milk and skins. If these products are produced on large quantities and qualities, an Agribusiness will be established. The Madikwe farmers will be able to improve their living conditions if they maximize profit. There are some families around Madikwe who are still using oxen to pull carts and sledges to fetch water and firewood outside the farming season. Although traditional patterns of cultural behaviour are changing, ceremonial slaughterings at funerals, weddings and the payment of lobola should not be ignored in most rural communities (Maree and Casey, 1993). If the communal farmers of Madikwe can improve the cattle industry, it will result in the improvement of export of red meat. South Africa is part of the global village and farmers should be allowed to export red meat, hides and skins to the outside world, provided the meat meets the European Union standard of health.
EMPOWERING THE COMMUNAL FARMERS

I have realized that the communal farmers of Madikwe lack managerial and farming skills. The officials from the Department of Agriculture are supposed to go around and inform these farmers. They (the farmers), need to be capacitated. These farmers should be able to improve their farming through education. The extension programmes should be intensified in order to assist these farmers. The Land Bank and the Department of Agriculture should assist these communal farmers with loans to boost them financially. There are some farmers who want to start with cattle farming, but finance is the constraint.

The awareness campaign should involve staff from the Veterinary Division, who will educate farmers about the prevalent diseases and parasites in Madikwe. The other aspects that should be thoroughly explained to farmers are the marketing and sales of livestock. The farmers should be informed about demand and supply and how they influence prices. The farmers should be educated about farm management. Farmers ought to know about planning, control, coordination and organization of farm business. They should regard farming as a business and not as a pass time. The last aspect which a farmer is supposed to know is the commercialization of the livestock industry. The Madikwe farmers should stop the practice of cattle farming in which they are farming from hand to mouth. They should know the needs of the customer and their farming should be market driven i.e., they should deviate from communal farming to commercial type of farming.

FACTORS INHIBITING LIVESTOCK PRODUCTION

There are number of factors that inhibit livestock production in Madikwe District:-

(1) Animal nutrition
(2) Markets
(3) Educational background of farmers
(4) Traditional methods of farming
(5) Financial background of farmers.
NUTRITION

Nutrition plays an import part in the reproductive and productive efficiencies of animals. According to Maree and Casey (1993), nutrition in animal body is essentially the transfer and conversion of one commercial commodity into another value added commodity such as meat and milk. The situation in Madikwe is that most communal farmers are not supplementing during winter and summer. The cattle may suffer from mineral deficiencies such as phosphorous and calcium. The symptom of calcium deficiency is “Milk Fever.” The symptom of phosphorous deficiency is osteomalacia and pica. There are number of farmers at Madikwe whose animals are showing signs of mineral deficiencies. Nutrition plays a vital role in the growth of young animals. If the growing animals are not receiving sufficient balanced nutrition, symptoms such as retarded growth is noticed. In the case of winter and dry periods, farmers do not have sufficient grazing areas for their livestock. The Madikwe farmers are not practicing the rotational camp system for their livestock. The animals will be thin, emaciated and debilitated during winter months. Farmers are supposed to plan for the dry periods for their animals.

MARKETS

In the case of Madikwe, the auction sales are by far the most popular for most farmers. The only auction place for the entire district is at Silkaatskop. The distance from Madikwe location to Silkaatskop is very far, about 58 kilometres. In Madikwe district, the speculators are buying cattle from the farmers at a cheaper price and in turn they are selling these animals at higher prices at Swartruggens, Zeerust and Rustenburg. Officials from the Department of Agriculture are organizing buyers in Rustenburg areas to assist Madikwe farmers in connection with buying of these animals.

EDUCATIONAL BACKGROUND OF FARMERS
There are number of farmers who have a poor educational background. These farmers have serious problems in adopting the farming techniques in order to improve their livestock production systems. They are encountering problems in studying farming systems. These farmers need visual demonstrations to understand concepts and techniques.

**TRADITIONAL METHODS OF FARMING**

There are some farmers around Madikwe who are still clinging to the old methods of farming. These farmers do not allow women to walk through their livestock. In the case of lady Animal Health technicians it's a problem, because they are supposed to assist farmers. In most cases, the lady Animal Health technician is supposed to be accompanied by a man to assist these farmers. These sense, beliefs, norms, taboos and cultural practices are inhibiting farmers to adopt new techniques of farming.

There are some farmers who still use muti to treat their sick animals. Agricultural officials are encouraging farmers to adopt new techniques of farming, but not ignoring cultural practices. Farmers are informed about animal diseases such as Anthrax, Blackquarter and Lumpy skin disease and how to control them. They are also equipped about the control of internal and external parasites.

**FINANCIAL BACKGROUND OF FARMERS**

The farmers of Madikwe are having serious financial problems that are inhibiting livestock productive efficiencies. Some farmers started with cattle farming some years back, but they could not cope with the maintenance of the cattle they have on hand. These farmers are failing to maximize profit due to lack of financial support. In some cases farmers have managed to buy twenty cows, but they cannot afford to buy a bull for these cows.
There are some farmers who managed to buy bulls and cows with the money they got from their respective jobs. These farmers could not maximize profits due to lack of managerial skills, and as a result, they will end up abandoning farming. The latest information I have is that the Land Bank is currently offering assistance of twenty five thousand rand to farmers without collateral. The officials from the Department of Agriculture are obliged to inform farmers about this assistance. If farmers of Madikwe can be helped with finance, their production of livestock could improve. The other aspect that should be addressed under finance is financial management. There are farmers who cannot manage their finances effectively and efficiently. According to Maree and Casey (1993), farmers are supposed to have a cash book, a purchasing journal for credit purchase, a sale journal and all transactions are supposed to be recorded.

Farmers are supposed to keep records of their income and expenditures. The financial records are supposed to be simple, easy to read and they are supposed to be useful. If Madikwe farmers can be helped with this, they will be in a position to know whether they are progressing or retrogressing with cattle farming. They can be helped provided they are working hand-in glove with officials from the Department of Agriculture in Madikwe.

**LAND AND CAMP SYSTEMS AT MADIKWE**

Madikwe farmers are grazing camps which are controlled by Tribal Authority offices. The chief and his tribal councillors control the tribal land. Farmers are currently not paying the levies for using the tribal land. During previous governments farmers were leasing the camps. The serious problems which the farmers encounter from these camps are; overstocking, overgrazing, veld burning and poor management of these camps. In some instances there are no camps at all.

In some areas cattle are just grazing on the open veld. The above problems are also encountered in the open veld. In areas where there are camps, there is poor veld management. There are no rotational grazing systems. These problems are exacerbated by emerging farmers in Madikwe who are bringing in large numbers of
cattle to the small grazing area. They do not consider the carrying capacity and the veld conditions of the area.

**THE CURRENT LIVESTOCK STATUS IN MADIKWE DISTRICT**

The situation in Madikwe now is that the communal farmers are not practicing sound farm management. The type of farming which is used is that of subsistence. In other words, farmers are not producing for market purposes. This idea of producing from hand to mouth totally affects their efforts to maximize profits. The performance of their animals is badly affected by poor farm management. The performance of animals in reproduction and production are extremely low. They are low because farmers are not controlling disease and parasites, animal nutrition and proper selection of breeds. In the case of cattle which are in camps, there is overgrazing and overstocking. In other words there is no proper veld management at all. Farmers at Madikwe are not keeping records at all. If farmers do keep records, it will be possible for an Animal Health Technician to assess the managerial level of farmers. The records which are supposed to be kept are records for livestock census, financial records, asset records, mortality and animal performance. It is time for the officials from the Department of Agriculture, to assist Madikwe farmers by making them aware about the importance of good farm management. The human population of Madikwe is increasing on yearly basis. This will ultimately add to the increase of the human population of North West Province. These people need protein. The communal farmers of Madikwe should improve their livestock production to feed these people. That is why currently the officials from the Department of Social Services are talking about population explosion.

**CAMPARING CATTLE FARMERS WITH SOUND FARM MANAGEMENT TO THOSE WITHOUT SOUND FARM MANAGEMENT IN MADIKWE**

Farmers with sound farm management will do far better than those without sound farm management. The reproduction and production of their animals will differ from one another. It is the prerogative of the officials from the Department of Agriculture to make farmers aware about the importance of sound farm management.
The comparison can be illustrated as follows:

<table>
<thead>
<tr>
<th>Performance of cattle</th>
<th>Farmers with Sound farm Management</th>
<th>Farmers without Sound Farm Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive capabilities</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Growth rate of calves</td>
<td>Faster</td>
<td>Slow</td>
</tr>
<tr>
<td>Fertility of cows and bulls</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Birth weight of calves</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Weaning weight</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Heifers age of puberty</td>
<td>Earlier</td>
<td>Late</td>
</tr>
<tr>
<td>Young bulls age of puberty</td>
<td>Earlier</td>
<td>Late</td>
</tr>
<tr>
<td>Herd calving percentage</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Disease and parasites control</td>
<td>Better disease control</td>
<td>Bad disease control</td>
</tr>
<tr>
<td>Mortality rates</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Morbidity</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Feed conversion ratio</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Record keeping</td>
<td>Better records</td>
<td>No records</td>
</tr>
<tr>
<td>Management level</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Nutrition and feeding</td>
<td>Feeding is better</td>
<td>No feeding at all</td>
</tr>
<tr>
<td>Financial Management</td>
<td>Better</td>
<td>Worse</td>
</tr>
<tr>
<td>Profit maximization</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Breeds and selection</td>
<td>Better</td>
<td>Bad</td>
</tr>
</tbody>
</table>

The comparison shows us that in order for the communal farmers of Madikwe to achieve success in the cattle industry, they should practice sound farm management.

**THE ROLE OF LABOUR IN LIVESTOCK PRODUCTION**

Farm workers are supposed to work under conducive working conditions such as good accommodation, good food and clean water. The Labour Relation Acts outlines the conditions under which a worker is supposed to work. The farmer, who is the manager of his/her cattle post must ensure that the herdsman is not working under dangerous conditions. For example, a herdsman should not work in areas where lions are roaming. The other important aspect is the wage of the farm worker. The farmer and the farm worker should sign a wage agreement. The contents of the agreement should be binding. If the farmer has agreed to pay a farm worker one thousand rand per month, the farmer should stick to the agreement.
New legislature has been passed in which all farm workers are supposed to be paid six hundred rand per month. A farmer will face serious charges if he/she doesn’t comply with the legislation. All general workers who are working on the farm or cattle posts are entitled to be members of a union of their choice. In Madikwe district most farmers are not aware of the legislation which compels them to pay herdsman a flat rate of six hundred rand per month. These farmers will become aware if inspectors from labour department visit their cattle posts. In order for workers to be productive and effective, they are supposed to be well motivated, remunerated and trained. It is imperative for a farmer to train his/her workers the basic skills in aspects such as castration, vaccination and deworming of cattle.

CONCLUSION

According to Maree and Casey (1993), the first task of a manager is to identify and set objectives for the farm. They further stressed that the objectives should give direction, facilitate planning and enable the farmer to determine the past, present and future direction. A farmer can only take rational decisions if he/she is practicing sound farm management. Farmers are supposed to regard farming as a business. In order for farmers to succeed in the cattle industry, they should be able to plan, organize and control their farming activities. The farmers who will succeed will be able to keep records of assets, finance and a cattle census. The farmers should be able to have good quality breeds. They should avoid veld fires, improve their farming techniques and they should produce for the markets. They are supposed to prevent diseases and control parasites for their animals. Farmers are supposed to be skilled and knowledgeable managers.
The knowledgeable farmers are the ones that seek help and assistance from Veterinarians and animal Health Technicians timeously. They should have vaccination programmes for non proclaimed diseases such as Blackquarter, Lumpy skin and Botulism. They should have strategy in place for the dipping of external parasites. They should have a system in place for the control of internal parasites. Farmers are supposed to have licks which can be provided for their cattle during winter and summer months.
CHAPTER THREE

DEFINING THE PROBLEM AND RESEARCH QUESTIONS

INTRODUCTION

The specific problem, which I would like to base this research on, is the impact of management on communal farmers of North West, with special reference to livestock farmers of Madikwe district. The specification of the research is on cattle farmers. What can be regarded as a statement of the problem? The communal farmers of Madikwe are not practicing sound farm management. As a result they are failing to maximize profit and general livestock production is very poor. There is lack of consultation of communal farmers with Agricultural Technicians and Animal Health technicians. According to Robbins and Coulter (1996), the term management refers to the process of getting activities completed efficiently and effectively with and through other people. They further stated that efficiency and effectiveness are interrelated. In Madikwe district, communal farmers are not keeping records. According to Maree and Casey (1993), the records which are supposed to be kept by farmers are records such as production records, financial records, assets records, labour record and cattle records. According to the current situation at Madikwe, the communal farmers are keeping none of these records. The only records which are available at most cattle posts are the stock cards which are issued to the farmers by the Animal Health Technicians. The communal farmers of Madikwe are not in a position to inform any person about the mortalities and calving percentages of their animals. Maree and Casey (1993), regard the farmers as the managers of their farms and who are responsible to set objectives and achieve these objectives.

According to Robbins and MCoulter, (1996) the managerial functions are planning, organizing, leading, controlling and coordinating. According to the information that I gathered from Madikwe, most communal farmers are not exercising managerial functions.
It will be difficult for Madikwe farmers to measure the success and the failures of their farming enterprises, because of lack of managerial functions. According to Robbins and Mcoulter (1996), the planning phase will include aspects such as goals of farming, strategies to be implemented and the sub plans that should be developed by farmers to coordinate all farming activities. The aim of the cattle farmer at Madikwe is to maximize profit. He/she can only manage to maximize profit if he/she is implementing sound farm management and applying new farming techniques. If the farmer is not keeping financial records such as a balance sheet, income statement and cash flow statement, he/she cannot substantiate that he/she is maximizing profit. The financial records are the ones used to verify or to substantiate a case of profit maximization. The mortalities on cattle should have records that the animals were checked by a veterinarian and Animal Health Technician to specify the disease. The immunization programme should be drawn up through the advice of a Veterinarian.

**RATIONALE OF THE PROBLEMS**

It is imperative and crucial to conduct research, “on the impact of management on communal farmers of North West, with special reference to the livestock farmers of Madikwe district, specifically on cattle farmers. The reasons for conducting such research are as follows:-

(i) Aims and objectives
(ii) The maximization of profit.
(iii) The keeping of records for cattle census, labour records, financial records and production records
(iv) The asset management systems, e.g. building maintenance, livestock fences and crush pens.
(v) The grazing systems, such as rotational grazing
(vi) The types of breeds that are kept, e.g. Brahmans, Afrikaners and Bonsmara.
(vii) The labour management system; farmers should allow farm workers the freedom to associate with unions of their choices. The working conditions and the payments should be agreed between farmers and farm workers.
(viii) The grazing land should be clearly marked out whether for leasing or buying purposes.
(ix) The communal farmers should be in a position to adopt the commercial farming system.

**THE CURRENT STATE OF AFFAIRS AT MADIKWE**

The communal farmers are not practicing sound farming management. They are farming from hand to mouth. They are not farming for market purposes. They are still using the traditional methods of farming; e.g. a bull is still selected from the calves which are born from the herd. This practice is influencing in-breeding because bulls are allowed to mate with their mothers and sisters and this in the end will result in poor reproduction and production of the offspring like poor birth weights and other deleterious effects. There are only a few farmers who are buying bulls to upgrade their herds. The farmers still regard themselves as rich and they are basing their wealth on the number of animals they have but not on the quality of their animals. The beliefs, taboos and norms are still hampering livestock production at Madikwe. The women or ladies are still not allowed to enter kraals or crush pens. The advanced farmers are not practicing these taboos and norms.

**THE MAXIMIZATION OF PROFIT**

The Madikwe farmers are not maximizing profit, the reason being that their farming is not market orientated. According to van Zyl, et al (1999) profitability is the percentage ratios between the profit earned in a given period and the capital used to realize that profit. It is difficult to assess the profit, which is supposed to be generated by Madikwe farmers because of lack of financial records. From interviewing farmers, it was found that cows and calves are dying at a high rate. The calving percentage is also very low, e.g. a calving percentage of twenty percent is extremely low compared to the 60% recommended for average farmers.
RECORD KEEPING

The research conducted at Madikwe will be a great help for farmers to be able to keep records such as production records, mortality of animal records, cattle census, labour records, financial records and asset records. If farmers are encouraged to keep records, farming will be regarded as a business. The farmers of Madikwe will be able to assess and benchmark whether to continue to farm or to venture into other enterprises where they would be able to maximize profit. Farmers are conducting farming as part-time business. They will be able to learn from research results that farming can compete with other enterprises. Farmers who are farming on full time basis are encouraged to serves as an example to other farmers.

THE GRAZING LAND

The management aspect is impacting negatively at Madikwe. The grazing land is a serious problem for farmers. The grazing camps are controlled by the tribal authority. The farmers do not have the right to improve these camps through renovating crush pens and erecting fences. They do not have the ability to do that, but the crux of the matter is that those camps do not belong to them. The tribal authority has the right to allow anybody to bring or to introduce his cattle to these particular camps. The new entrants do not have problems in introducing their animals. This practice is resulting in overgrazing and over stocking of the grazing areas. This is a very serious problem. The Government should buy grazing areas for the prominent farmers. The land restitution and land redistribution Department should provide grazing land to prospective farmers. The land issue should not be the responsibilities of the tribal Chiefs.

THE BREED TYPE

The choice of breeds depends solely on the farmer himself. According to Maree and Casey, (1993) the first decision a beef producer has to make, is whether to produce beef from any one of the existing breeds or to use a form of cross breeding. In Madikwe
the farmers make their own choices on breeds to use. The only problem, which exists, is the choice of the proper or pure bulls. The herd can’t improve quickly if each and every farmer has his/her bulls. A certain farmer will use a proper bull on his/her herds. The problem will be encountered if his fellow farmers have inferior bulls in their respective herds. The farmers with inferior bulls are not prepared to cull all these inferior bulls from their herd. This is a classical example of poor management and lack of managerial skills by our farmers. Madikwe farmers are supposed to be informed and capacitated by officials from Department of Agriculture on breeds and breeding.

LABOUR RELATIONS

The farm workers would be productive and effective if working conditions were better. The farm workers are supposed to work in a risk free or less dangerous situation. They are supposed to have reasonable salaries which are not less than six hundred rands per month. In Madikwe district, the herd men are still earning less for working in these tribal camps. Their residential areas are not in good condition. These workers are not registered and there is no binding contract, which is signed. There are no legitimate agreement between farm workers and the farmers themselves. There is no labour management principles e.g. workers are not entitled to sick leave, vacational leave and they do not have any medical benefits. There is no labour management.

FARMERS AS MANAGERS

The communal farmers of Madikwe are the managers of their own cattle. They are responsible for the problems, which are experienced in their herds. These farmers lack managerial skills, technical know how and production knowledge. All the problems which are experienced in farming enterprises are directly caused by the farmers themselves. The poor or small profit in farming is caused by the communal farmers of Madikwe.
COMMUNAL FARMERS ARE NOT ADOPTING COMMERCIAL FARMING SYSTEMS

The difference between communal farmers and commercial farmers is that the commercial farmers are market oriented. The communal farmers of Madikwe are not market oriented, but are driven mostly by the high numbers of cattle which they have. This is a serious problem which is impacting negatively on cattle management. Malherbe (1998) stressed that if a farmer wants to become a commercial beef farmer he must consider the following factors:

(i) Market potential.
(ii) Available capital
(iii) Fodder production potential.
(iv) Management skills.

MARKET POTENTIAL

The Madikwe communal farmers are encountering a very serious problem pertaining to auction. The nearest auction sale is at Silkaatskop, which is fifty-eight kilometres from Madikwe. The Madikwe communal farmers are not driven by the market to maximize profits. These farmers still need help from Agricultural experts to assist them to farm in order to maximize profit. The auction sale at Rustenburg is 110 kilometres away from Madikwe area. There are number of auction sales at Zeerust town which is 55 kilometers away. The speculators are the ones who are cheating the communal farmers of Madikwe by buying their cattle at cheaper prices.

AVAILABLE CAPITAL

The subsistence farmers are not aware that there are funds available for their farming. There are some farmers who thought that Agribank was only available during the Bophuthatswana Government era only, but this is not the case now. In the case of commercial farming, the capital input costs are very high, according to Malherbe (1998). He further emphasized that the commercial beef farmers were implementing new
technology and were maximizing the returns. The Madikwe subsistence farmers are not using the integrated enterprise, whereby the farmer can combine cattle farming with crop farming.

**FODDER PRODUCTION POTENTIAL**

According to Malherbe (1998), it is a prerequisite for a profitable beef farmer to produce at least sixty percent of feed from his own farm. He further said that, a farmer could have enough natural grazing, but the profitability of the enterprise would depend on the availability of the crop residues and the ability to produce silage. The problem which hampers the Madikwe farmers is that there are no enough natural grazing. The overgrazing and the overstocking are problems especially during winter months.

**DISEASE AND PARASITES WORKSHOPS**

The Veterinarian and Animal Health Technicians are having the working programmes to educate Madikwe farmers about disease and parasites. The strategy is to make farmers aware about the importance of disease and parasites. At Madikwe the prevalent diseases are Lumpy skin disease and African Swine fever. The Technicians are conducting these programmes for the whole year. Farmers are equiped and capiticated about internal and external parasites. They are informed that they are supposed to dip on regular basis to control the external parasites. The Animal Health Technician are working jointly with the Extension officers during the awareness campaign. Farmers are informed about the importance and vaccinations for proclaimed diseases such as Anthrax and Brucellosis. The effectiveness of these awareness campaigns are realised by the turning of farmers for Anthrax vaccination in cattle and Rabies vaccinations in dogs.
PRODUCTION SYSTEM

The farmer is supposed to choose between three systems of production, namely; the weaner calves, tollies and a speculation system. In the Madikwe district, the speculation and the tollies systems are the relevant ones. According to Malberbe (1998), farmers are supposed to choose whether they prefer to finish their animals off on the veld and so straight to the market. He further emphasized that those animals which are slaughtered on the veld are older animals. The Madikwe farmers are supposed to consult animal experts for advices.

AIMS AND OBJECTIVES

The serious problems encountered by the farmers are the lack of aims and objectives. The communal farmers of Madikwe are not spelling out clearly their aims and objectives in the cattle industry. Management aspects will be drastically affected if the aims and objectives of the farming enterprise are not clearly defined. Agricultural Technicians are supposed to be consulted by farmers with the relevant advice pertaining to aims and objectives of farming.

THE DEMAND FOR FOOD FROM LIVESTOCK

The growth in urban population and income in developing countries is responsible for the great increase in demand for food from animal product. (Burgess 2000). He further emphasized that this trend has resulted in the changes of diet of billions of people, opportunity for most rural poor. The farming activities are on rural communities. They should feed the urban people to earn a living. The farmers should be prepared to reap potential benefits by producing enough cattle (Burgess(2000)).
CONCLUSION

The communal farmers of Madikwe are facing the seriousness of problems management of their livestock industry. The solution to their problems is to practice sound farm management. They should start from the scratch by keeping records of their livestock, financial records, asset records and production records. These farmers are the managers for their farms. They should be in a position to set up goals and objectives. The farmers of Madikwe are supposed to maximize profits. South Africa is part of the global village. They should be able to produce quality meat to be able to export. The communal farmers of Madikwe should be able to work hand-in-glove with Technicians from the department of agriculture.
CHAPTER FOUR

RESEARCH DESIGN AND ANALYSIS

INTRODUCTION

I have conducted research at Madikwe among communal farmers. My intention was to target farmers whose cattle were grazing areas without camps and those with camps. I conducted my research by using Annexure A. Farmers were requested to complete the questionnaires and give them to Animal Health technicians who were working in their areas. As the supervisor of Madikwe district, I took seven Animal Health technicians to assist me with the research project. Each Technician takes forty-five questionnaires. I firstly interviewed a few farmers who visited our office at Madikwe to demonstrate to the Animal Health Technician how the questionnaire was completed. Animal Health Technicians completed the questionnaires after vaccination programmes for Anthrax or after educational talks with farmers. There are four thousand farmers at Madikwe. We intended to interview with questionnaires about ten percent which is four hundred. Only three hundred and fifty questionnaires were completed.

METHODS OF RESEARCH

All available literature which has some bearing on this investigation were consulted. Thorough studies of both primary and secondary sources were made to gather information for the impact of management on communal farmers of Madikwe. The survey Methods such as the structured interviews and questionnaires are typically used in quantitative research, according to Welman and Kruger, (1999).
SAMPLING

THE PROBABILITY SAMPLES

In the case of the probability samples, each member of the target population has a known equal and non-zero chance of being selected in the sample. In the probability sample, the following conditions should be satisfied:

(i) The size of the population should be known.
(ii) The sample size should be specified.
(iii) Elements must have a known and equal chance of being included in the sample.

QUESTIONNAIRES

Questionnaires were developed and protected. The purpose of the questionnaires was to gather information from farmers, chiefs, headmen, herdsmen and youths who were responsible for cattle. The communal farmers of Madikwe were targeted.

INTERVIEWS

Semi-structured interviews were conducted. The aim was to obtain information from communal farmers on an individual basis.

POPULATION SIZE

The population of this study was made up of farmers (cattle owners), herdsmen, young people (who represents parents), chiefs and herdmen. I was targeting four hundred and fifty population (450).
SAMPLE SIZE

Currently there are four thousand communal farmers at Madikwe. I was targeting four hundred communal farmers, about ten percent. The number of respondents was about three hundred and fifty. Therefore 10% is 350 is 35%.

AGE AND LANGUAGE

I was targeting communal farmers irrespective of their ages. The youth who brought in cattle for vaccination were interviewed. Women and herdsman were also interviewed. The language that I used was Tswana. I used Tswana to enable communal farmers to understand me clearly.

SOCIO ECONOMIC STATUS

I know that most communal farmers are illiterate. I preferred to use the Tswana language to accommodate everybody. Some youth were prepared to communicate through English, but I used Tswana language more frequently than English.

MEASURING INSTRUMENTS

Several key data collection instruments were used for the purpose of data collection:

(1) A questionnaire was used to survey the opinions and knowledge of communal farmers of Madikwe.

(2) The semi-structured interviews were used for information seeking. Some farmers were regarded as sages.
RELIABILITY AND VALIDITY OF THE QUESTIONNAIRES

I used the questionnaires and structured interviews because I think they are more reliable. A questionnaire is reliable because you interview the farmer directly and record the information. The way I planned it was more convenient for farmers. Farmers attended the vaccination or educational meetings for animal diseases. In the case of Anthrax vaccination it was a super arrangement. I could talk about cattle which were just in front of me. Farmers could show an Animal Health technician the number of calves that were born in the current year. If farmers were only issued with questionnaires to complete, there could have been fewer than three hundred and fifty respondent. Farmers could have ignored the questionnaires as it was costly to post them to my office. In areas where I could not reach farmers, the Animal Health Technicians were given a helping hand. The manner in which the questionnaires were completed revealed how committed those farmers were, because they were giving information to Animal Health Technicians in their area. The important aspect about questionnaires is that the name of the respondent was not needed. Farmers like the situation when information is highly confidential. Farmers realize the importance of questionnaires, because they regard it as something educational for them.

INSTRUMENTATION

Research instrumentation is the means by which various approaches to research are operationalised. According to Welman and Kruger (1999) there are four main instruments or tools for research, mainly, interviews, questionnaires, records and other documents. The interviews and questionnaires have been used in this study.

INTERVIEWS

An interview, according to Welman and Kruger (1999) is a social encounter between two people or more. Interviews have particular focus and purpose. The interviewer has the aim of obtaining certain information from the person interviewed. The value of
results obtained through interviewing will be determined by the interviewer’s skill of deriving information from the interviewee. The interviewer wants to obtain first hand information from the interviewee about what the researcher wants to establish regarding specific general knowledge concerning the study which is being conducted.

**ADVANTAGES OF INTERVIEWS**

(i) It is limited to information that is needed for a certain purpose.
(ii) It is conducted along a specific set of guidelines and its nature is clearly defined and specified.
(iii) It is a planned conversation with direction and format
(iv) The interviewee can pose questions during interviews.

**DISADVANTAGES**

(i) Two or one interviewers will not be able to interpret and assess information in the same way from the same respondent.
(ii) Interviews are costly because some respondents do not honour appointment times.
(iii) Interviewers concentrate on words and forget to listen for feelings and facts behind the words.

**SAMPLING PROCEDURES**

Madikwe district is where I conducted this research project. The questionnaires were developed and were distributed with the help of Animal Health Technicians, to assist communal farmers to complete them. Farmers were interviewed and information was noted.
DATA COLLECTION PROCEDURES

As supervising Animal Health Technician, I requested the co-workers, the other Animal Health technicians, to give me a helping hand in assisting communal farmers to complete questionnaires. They all agreed and we formulated a team. I was in charge of providing questionnaires and provided more questionnaires where there was a shortage. We planned the completion of questionnaires in our day to day activities. Each Technician had thirty-five questionnaires. There are seven Animal Health Technicians who are field workers. The rest of 158 was left to me. Farmers were interviewed in order to complete questionnaires. In-depth interviews were also used to gather information pertaining to farm management. Farmers were interviewed irrespective of their age, sex, socio economic status and educational background. Farmers were willing to divulge information to the veterinary staff of Madikwe. I was supervising the team and collecting information.

THE RESULTS OF RESEARCH CONDUCTED AT MADIKWE

The results of Madikwe research project can be listed as follows:-

(1) The majority of communal farmers who rear cattle are over sixty-five years of age.

(2) The majority of them are men.

(3) Most farmers have had cattle for more than ten years.

(4) The calving percentage at Madikwe is extremely low (5-20%).

(5) There are no record keeping systems at Madikwe.

(6) Cattle are under the control and observations of herdsmen.

(7) Infrastructure is poor and stock losses are due to disease and parasites.

(8) Management skills are insufficient.

(9) Marketing is a serious problem at Madikwe.
RESULTS IN GENERAL

The research, clearly reveals that management is a serious problem at Madikwe. If management is the central problem., farming of cattle at Madikwe is about to fail. The reason why young men and women are not paying attention to cattle farming is because the income or profit from cattle farming takes a long time before it can be realized.

The majority, more than seventy percent of farmers are over sixty years of age. The young and able people, who are still energetic and resourceful have flocked to towns and cities for better payment. It is a known fact that old people are having the tendencies of fearing to risk. Cattle farming involve more risks and farmers should be prepared to accept risks, because the higher the risk the higher the returns. The people who are old are not willing and prepared to take higher risk. For instance the older farmers will not risk to have a loan of purchasing one hundred cattle. The return in cattle farming takes more than two years unlike other short term enterprises like the taxi industry, which brings income in a short time.

DATA ANALYSIS

I have used the questionnaires and structured interviews for gathering information from farmers. The research methods for the structured interviews and the questionnaires are the quantitative research, according to Welman and Kruger (1999). These interpretations of data could be interpreted as follows:-

PERIOD OF FARMING

According to the research which I conducted at Madikwe, I have realized that most communal farming have been involved with cattle for a period which is more than twenty years. The profit from their cattle farming is less than R5 00 0.00 per year. This really shows that farmers are generating less profit per year. The young and active cattle owners are discouraged by the less profit which is generated from cattle farming.
The period clearly shows us that farmers are progressing very slowly with cattle farming. The major problem is lack of managerial skills and poor production planning. It clearly shows us that farmers are not maximizing profit and they are not market driven. The communal farmers of Madikwe are practising the subsistence type of farming. The subsistence type of farming is characterized by production which is from hand to mouth.

**CALVING PERCENTAGE**

According to the survey which I conducted, it reveals that the calving percentage of Madikwe communal farmers are extremely low (5-20%). If the calving percentage of a particular herd is low, we can now question the management style of the farmer. In cattle industry, calves which are born on yearly basis are profits for the farmer. If few calves are born, clearly farmers are failing to maximize profits.

There are number of factors to be considered when calving percentage is low e.g. management style of the farmer, production and reproductive abilities, diseases and nutrition. A farmer as a manager of his farm, should be able to diagnose the root cause of poor calving percentage.

**RECORD KEEPING SYSTEMS**

Madikwe communal farmers are not keeping records for their livestock production. Livestock farming should be regarded as business, that is why it is imperative to keep records. According to survey which I conducted, it shows clearly that farmers are not keeping records. The majority of communal farmers are not recording the animal performance or their own assets. About ninety percent of farmers are not having any record. What does that imply. The researcher will draw a conclusion that farmers are not managing their farming at all. All information that is given verbally by farmers are in correct and some information are been thumb sucked. Madikwe farmers are not having records for their financial expenditures, profits, livestock census, climate and asset
registers. If farmers are not keeping records, there is no management at all. Cattle farming should be closed as a business. Farmers who are not keeping records cannot be in a position to detect the mortality rate of the herd. The commercial farmers are keeping records and that is the reasons why they can progress in farming through profit maximization.

PROFIT MAXIMIZATION

According to the research which I conducted at Madikwe, I have realized that farmers are not maximizing profits. The majority of farmers, about seventy five percent of farmers are earning less than five thousand rand per year. If a business can generate a profit which is less that five thousand rand per year, it is a poor business. Farmers should scrutinize their financial books and investigate the root cause of poor profits from their farming business. It is imperative for farmers to have better returns at the end of each financial year. If farmers are not in a position to generate profits they should close their businesses.

According to the auction which is held at Silkaatskop, mature cattle are sold on average at two thousand rands and young steers one thousand rands. If one considers the transport cost of about two hundred and fifty rands per cow, the farmer is selling the mature cattle at one thousand and seven hundred and fifty rands.

INFRASTRUCTURES

Madikwe farmers are not having infrastructures I am referring to infrastructure such as crush pens, store houses, catchment kraals and loading zones. The majority of communal farmers, especially those who are having cattle posts, are not having infrastructures. Those who are having cattle in camps are not even having crush pens. Cattle are not supposed to be driven for long distances for inspections, Anthrax vaccination and dipping. In the case of sick animals, officials from veterinary offices are
struggling to handle a sick animal due to lack of infrastructures. Livestock losses are
due to disease and parasites. Farmers are losing animals due to diseases and
parasites. According to the research study, I have realized that farmers are not
reporting sick animals. Farmers have tendencies of reporting animals after they have
been sick for a longer time. In some instances they report animals if they are starting to
die. It is difficult for Veterinary officers to claim that there are diseases which are not
prevalent in Madikwe, because farmers are not reporting diseases. In order for a Vet to
have a comprehensive record at Madikwe district, it will depend on the number of
reported cases by the farmers themselves. We don’t know which disease is prevalent
and which is not prevalent. On monthly basis we are compiling reports about diseases
which were diagnosed and treated for that month. We are sometimes missing other
diseases which were supposed to be reported by farmers. The other serious problem
which is encountered by communal farmers is that they are not dipping their animals to
control external parasites.

The dipping tanks are not effectively utilized by farmers. According to the research
which I conducted, I tried to interview farmers to describe the symptoms of diseases
before the death of animals. According to the symptoms which were described by most
farmers, most animals died from tick borne diseases such as Gallsickness and
Redwater. If farmers cannot dip their cattle for ticks which they can see, it will be
difficult for them to dose their animals against internal parasites. It is imperative for
livestock owners and farmers, to report sick animals so that the proper diagnosis can be
carried by veterinary officials from Madikwe Veterinary offices.

MANAGEMENT

According to research findings that was conducted at Madikwe, communal farmers are
managing livestock production for themselves. They don’t rely on other farmers who are
progressive to acquire managerial skills. There are experts within the department of
Agriculture who can render some services to farmer and this is free of charge. It will be
difficult for Madikwe communal farmers to progress well with cattle farming without the
help of the officials from the department of Agriculture. In most cases, the officials from the Department of Agriculture will render other services to farmers, but no aspect such as farm management. If farmers are having the specific problem on management, they are at liberty to request for a help. After I have conducted the research project, I think it is advisable for officials from the Department of Agriculture to draft a program to educate farmers specifically on farm management. Farmers are suppose to regard themselves as managers and they are suppose to set up aims and objectives for their own farms. The managerial functions such as planning, organizing, motivating, coordination and control are very crucial for Madikwe communal farmers. The whole research study was based on the impact of management on livestock production in Madikwe.

As the Animal Health Technician who is working in Madikwe, this research would give better results if I had worked in the same place five years ago. What I mean here is that I could have done the research before I started to work at Madikwe. I could have been in a better position to assist the communal farmers of Madikwe because I could have understood the inhibiting factors of cattle production. The research findings show me that management is the key aspect in livestock production. If farmers can continue to ignore management they will fail in their endeavours of livestock production as a business.

**MARKETING**

According to the research which I conducted at Madikwe there are no markets at Madikwe. Most farmers have indicated that it is difficult for them to market their livestock. This has been brought to the attention of the Department of Agriculture at Madikwe currently. Officials from the Department of Agriculture have taken the initiatives of assisting farmers with buyers. There are group of buyers who have been approached concerning cattle sales at Madikwe. These buyers are willing and prepared to assist Madikwe farmers. In any business, marketing plays a significant role. A market is a place where buyers and sellers meet.
DIVERSIFICATION

The research shows that Madikwe farmers are not diversifying. To diversify means the farmer is running more than one businesses. It is important for farmers to combine their businesses e.g. a farmer can be able to farm with cattle at Madikwe and plough mealies on dry land basis. In this scenario, the risk of the farmer can be spread between crop and livestock farming. If a farmer is able to maximize price on crop production, he/she can be able to buy vaccines and drugs for the cattle. It is high time now for Madikwe cattle farmers to be capacitated for the aspect of diversification.
According to the research conducted at Madikwe, the majority of farmers have no idea of farming with cattle and goats. They are still having the idea that they are supposed to specialize in one type of animal species.

CONCLUSION

The research that was conducted at Madikwe was a great help for Madikwe communal farmers and the Agricultural staff of Madikwe. According to the survey that was conducted it clearly revealed the followings: farmers are not practising farm management principles, farmers are not keeping records and they are not maximizing profits. There is no cooperation between Madikwe communal farmers and Agricultural staff. If the cooperation is existing, it is insufficient. The communal farmers of Madikwe can only improve their calving percentage and control diseases through the assistance of Veterinary officials who are based at Madikwe district.
CHAPTER FIVE

RESULTS AND INTERPRETATION

INTRODUCTION

The research which was conducted at Madikwe research was based on the survey of poor management on cattle production. The communal farmers of Madikwe are not practicing sound management at all on their livestock production. If one talks about management he/she simply means planning, organizing, coordination, motivate and control. The farmer as the manager of the farm does not implement planning and control of the farm. The communal farmers of Madikwe are practicing a subsistence type of farming. This type of farming is the farming in which the farmer is producing from hand to mouth. In this type of farming farmers are not market driven. If farmers are not market driven, there is no wealth at all. The effect of management can be clearly noticed on the production and reproduction of cattle. The performance of animals in totality is drastically affected by lack of managerial skills. The expertise and knowledge utilised by Madikwe farmers is not enough. Farmers are not keeping records for their income, stock census, assets, labour, climate and breed. Farmers as managers of their farms are not setting aims and objectives for their farms. Madikwe communal farmers are not having the latest information pertaining marketing and disease control.

MANAGEMENT

The farmers are the managers of their farms. They are supposed to manage all the activities on the farm or cattle posts. The farmers are responsible for labour, capital and land or grazing camp. Farmers are supposed to control and manage livestock. The key functions of the farmers are:- buying livestock, dosing livestock, castrating the unwanted bulls, dehorning and deworming of cattle.
Farmers can’t rely on general workers to perform the above functions alone. If general workers are supposed to perform the above functions, the supervision and control of farmers are important. The general workers are supposed to be supervised, not to act like farm owners or managers.

**DISEASE AND PARASITES CONTROL**

Farmers at Madikwe are not controlling diseases at the cattle posts and communal areas. These farmers are relying on Animal Health Technicians who are only responsible for the vaccination of cattle for Brucellosis and Anthrax. In the case of parasites, farmers are not taking initiatives of dosing their animals or dipping them.

**AIMS AND OBJECTIVES**

It is the responsibilities of farmers to set up aims and objectives for their business. According to the research I conducted, farmers are not having any aim or objectives for cattle industry. The aim of their cattle farming is to maximize profits. Farmers could not explain to me about their aims. As far as objectives are concerned, farmers from Madikwe have no idea about it. There are no objectives which were set up.

**MADIKWE FARMERS ARE NOT PROGRESSING**

Farmers are not practicing proper farming management principle, e.g. planning and control. Madikwe farmers are lacking managerial skills and are not applying the farming techniques, e.g. disease control. Farmers are not working hand in hand with Animal Health technicians for disease and parasite control and prevention. The results of the research will direct the Animal Health Technicians on the new approach to assist the farmer’s farming progress. The awareness campaign on how to farm profitably is still a necessity to Madikwe communal farmers.
FARMING AS A BUSINESS

I have realised that Madikwe farmers are not practicing sound farm management. A farmer is supposed to manage and control cattle farming as a business. There are farmers at Madikwe who are not regarding farming as a business. The farmer should be able to set objectives and aims for his farm. According to the results of my research, farmers are not keeping records at all. The records which are suppose to be kept by farmers are records such as financial records, climate records, labour records, production records, marketing records and livestock records. In all cattle posts individual communal farmers whom I visited, there were no records at all. Farmers are trying to keep records from their minds, which does not give correct information or data. Some farmers are relying on herdsman to have information for them.

RECORD KEEPING

It is imperative for a farmer to have records for the farming as a business. If records are not available, the farmer will not have any idea about the progress of the business. The financial records are very important for the farmer. A farmer should have records such as balance sheet, income statement and cash flow statement. If these records are not available, how will the farmer be in a position to maximize the profits? If the farmer does not have any idea whether he/she is generating a profit or not, the farmer should close the business. The strength of any business depends on the capital. If capital is not properly managed, the business will really collapse. The communal farmers are still perplexed as far as financial records are concerned. These farmers are not keeping any financial records for their farming enterprizes.

REPRODUCTION

The reproductive performance of animals at Madikwe is very low. The reproductive efficiency of animals is controlled and manipulated by the farmer himself. Madikwe farmers are not having proper records in which one can assess the reproductive
efficiency of animals very well. The information which I did research on is the one I got from farmers. The only available information was the number of cattle which was belonging to the farmer. It is difficult for one to draw a table about the reproductive efficiency of a particular farmer. The farmer will not be in a position to inform one about the reproductive ability of a particular cow e.g., there are no records for a abortion, mortalities and proper calving percentages on a particular herd. On average, the calving percentages differs; e.g. 10-20%, and 30-50%. The growth rate of the calves which was born in 2003 was very low. There are some calves with retarded growth. Farmers were not having a record in which they have recorded the following reproductive aspects e.g. fertility of both cow and bull, mothering ability, selection criteria and gestation length of the cow. As far as bulls are concerned, there are number of problems. There are some farmers who took the initiatives of purchasing bulls. These bulls are not well managed. The bulls are emaciated and they are running around with cows for the rest of the year. The ratio of bulls to cows is 3:100. In some instances a farmer will be having one bull per hundred cows as compared to the ratio of 1:25 recommended. The ratio of bulls to cows in the case of breeding is not considered. In the communal areas, there are some serious problems for instance, there are no systems in place as far as selection of bulls is concerned. A bull which does not qualify to be a bull, and which doesn’t have characteristics of a bull is selected to be a bull. The reproductive abilities of a cow such as calving rate, fertility and fecundity should be considered. The management style should be up to scratch. The animals should receive a required plane of nutrition. The farmer as the manager of the farm, is responsible for improvement of the reproductive efficiency of his/her cattle. There are some genital diseases which are prevalent at Madikwe, e.g. Brucellosis, Trichomoniases and Vibriosis. Brucellosis disease is more prevalent in most herds in Madikwe. The Veterinary staff had conducted some tests in the entire district. The blood samples were collected on heifers and cows. The results we got from Onderstepoort show more positive cases. According to the Brucellosis records at Madikwe, twenty cows are positive from each hundred samples taken. The genital diseases are impeding the reproductive capabilities of cows. Farmers from Madikwe are not reporting the disease animals at Veterinary office which is at Madikwe.
NUTRITION

Farmers are experiencing deaths due to nutritional problems. There are situations where cows are calving during winter or summer months. Farmers are not managing cows correctly or feeding them well. As a result, the cows will abort at some stage. Madikwe farmers are not providing their animals with supplementary feeds when needs arise. In winter the veld is decreasing in their nutritive value. Madikwe farmers are not supplying their animals with supplementary feeds. Animals will be showing signs such as pica, retarded growth, osteomalacia and muscular weakness. These symptoms shows that animals are lacking minerals in their feeds. In winter the grass is badly over grazed and overstocked. Farmers at Madikwe are not managing their veld properly. There are no rotational camp system at Madikwe. The other aspect is the burning of veld at Madikwe, especially during winter months. The grazing areas are having some bare patches. Most cattle are dying during August and September because there are no feeds at all. The veld conditions have deteriorated. It is advisable for farmers to supply their animals with winter and summer licks. Veld burning should be discouraged.

PRODUCTION

The production level of most animals at Madikwe is low. The production efficiencies of animals include aspects such as milk, meat, hides and skins.

PRODUCTION LEVEL OF MADIKWE CATTLE DUE TO POOR NUTRITION AND MANAGEMENT

<table>
<thead>
<tr>
<th>Breeds</th>
<th>Meat</th>
<th>Milk</th>
<th>Hides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrikaner</td>
<td>Medium</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Brahman</td>
<td>Medium</td>
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</tr>
<tr>
<td>Simmental</td>
<td>Medium</td>
<td>Low</td>
<td>High</td>
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<tr>
<td>Bonsmara</td>
<td>Medium</td>
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</table>
It is advisable for farmers to provide their animals with sufficient nutrition to their animals. The managerial skills should be good in order for farmers to run their business efficiently and effectively.

The productivity of animals are extremely affected by poor management. The growth rate of most animals are slow. Most animals are reaching puberty and mature stage very late. These animals are supposed to be mated, and if they reach puberty late, this delay will affect profit maximization of the farmer. There are animals with retard growth and these animals are affecting the income of the farmer. If a farmer is having animals with poor feed conversion ratio e.g. concentrates and roughages, obviously these animal will reach mature stage very late. In Madikwe there are animals with these traits. If a cow is having poor mothering abilities such as poor milk production, this particular cow will have serious problems in raising its calf. The farmer should buy some milk to raise the calf.

It is a draw back and costly to raise a calf. There are some animals which are having poor carcass qualities. The income of the farmer will be affected by the poor quality of carcass when the calf is sold. The evaluation of carcasses was done at the abattoirs of Silverkrans & Mabalstad.

**BREED**

Madikwe farmers are not having the criteria to select animals for farming purposes. Farmers are choosing animal for breeding purposes without considering body shape, legs and age of the animals. There are some breeds that can’t thrive well under the harsh environmental conditions of Madikwe. The breeds such as Afrikaner and Brahman are doing well at Madikwe. There are farmers who are having breeds which are not doing well under harsh conditions of Madikwe such as Simmentalers and Herefords. These breeds are not heat and tick resistant. Farmers from Madikwe are still in need of information on how to select breeds from the officials of Department of Agriculture.
TYPES OF RECORDS TO BE KEPT BY FARMERS

Madikwe farmers are not keeping records for their livestock farming. The importance of record keeping is that farmers are able to realise the income, losses, accurate returns and the idea of his expenditure. The records which are supposed to be kept by the farmers are the physical records, production records, financial records, labour records and marketing records. The Madikwe communal farmers are keeping none of the above mentioned records. That is the reason why management is a serious problem for these farmers. A farmer will not be able to assess the profit and calving percentage from the business, because there are no records to substantiate what he/she is saying. The success of every business depends on the sound management. Management is supported by proper records. Farmers from Madikwe are depending on the herdsman to have census of their animals.

The farmers themselves are not having any written documents of the cattle. If Madikwe farmers were having the necessary records for their cattle posts, they could be managing their livestock much better. If the farmers were able to have records for climate, they could be able to plan their breeding very well in time. Climate play an important role for livestock production e.g. especially the exotic breeds e.g. Simmentaler. The records will be having the information pertaining animal death, morbidity and animal performance in general. A sick animal will be identified and treated. All the sick animals can easily be identified by their eartag numbers. A cow which has aborted or is having Brucellosis, can be easily identified and be culled. This can be achieved through blood test like Rose Bengal. The farmers from Madikwe are still not aware about the importance of record keeping.
FINANCIAL STATUS OF FARMERS

The communal farmers of Madikwe are still in need of financial support in order to improve their cattle industry. Finance is still inhibiting livestock production at Madikwe. There are some farmers who have applied for loans at Land Bank, but they have not receive any feedback. There are some farmers who used the money from their packages they received from their previous employment and they don’t have money to run the business. Some farmers are willing and prepared to purchase breeds of their choice, but due to some financial constraints, they cannot afford to buy those breeds. The other communal farmers of Madikwe have secured loans. The problem they are encountering is how to manage their finance. These farmers have no knowledge of financial management. The Madikwe farmers are not keeping the financial records such as balance sheet, income statement and the cash flow statement. If Madikwe farmers are not keeping records, they will not be in a position to assess their profits and income. The officials from the Department of Agriculture have gone the extra mile to educate farmers about the importance of financial records and management, but farmers have failed to apply the knowledge they acquired. There are few farmers who are consulting officials from Department of Agriculture pertaining to financial management. The Land Bank has recently introduced a loan of twenty-five thousand Rand to farmers without collaterals, I think this will be a great boost to most communal farmers.

Factors inhibiting livestock production, are disease and parasites, feeds and nutrition, marketing, breeds and genetics, land tenure and cultural practices. The above mentioned factors are key factors that inhibit production.
TRADITIONAL AND CULTURAL PRACTICE

The type of farming which is practiced at Madikwe is subsistence farming. Madikwe farmers are still practising traditional methods of farming. There are some farmers who are still using muti to cure their animals. These farmers will prefer to use muti instead of drugs and vaccines which are used worldwide. In the case of women, there are still number of problems which are encountered. Farmers are encouraged to adopt commercial farming. They are encouraged to allow ladies to enter their kraals. Women are currently farming in the entire North West Province.

ECONOMY OF THE COUNTRY

Madikwe is a district of livestock production. The only problem is that farmers are not utilising the potential of the district effectively and efficiently. If livestock production of Madikwe can be improved through sound farm management, this will lead to a great contribution to the economy of the country. Farmers would be able to decrease the rate of unemployment that is escalating at Madikwe. The establishment of Agro-business could be established at Madikwe because animal products such as milk, meat and still will be produced.

MARKETING

Madikwe farmers do not have a market place where they can market their animals and they lack market information. The only place in Madikwe where farmers can market their livestock is Silkaatskop. This place is 65 kilometres from Madikwe location. The roads to Silkaatskop are in bad condition. There are no communication facilities between Madikwe and Silkaatskop, such as telephones or one way radios. The only communication device are cellphones. Those who are willing to transport their cattle to Silkaatskop are discouraged by the high transport cost to the auction place. Farmers are selling their animals with the help of speculators. These speculators are buying these animals at cheaper prices. The other alternative places for marketing is at
Rustenburg and Zeerust. The area of Rustenburg is 100 kilometres from Madikwe. Farmers do not have marketing information pertaining to the cost of a cow which weighs 450 kilograms. Farmers are sometimes selling their animals for ceremonial functions such as weddings and funerals. The officials from the Department of Agriculture are liaising with buyers from Rustenburg, Zeerust and Pretoria to assist with buying of cattle at Madikwe.

**ABATTOIRS**

The other places where farmers can sell their animals is at abattoirs. These abattoirs are inspected by Animal Health Technicians and Veterinary Public Health Officers. If animals are not clinically healthy, the officials will instruct the abattoir owner that the meat is not healthy for human consumption. As a result the animal will be condemned. Farmers fear to take or sell their animals to abattoirs because officials will condemn the carcasses which have measles and infection. There are number of carcasses that were condemned at Mr. Rakuba’s abattoirs in Silverkrans. Farmers were informed that in most abattoirs in Zeerust, the carcasses which were not in a healthy state were condemned. That is the reason why most farmers fear to sell cattle at the abattoirs.

**GRAZING CAMPS AND TRIBAL LAND**

Madikwe farmers are encountering shortages of grazing areas, especially during winter and drought periods. The camps where most farmers have located their cattle are controlled by the Tribal Authorities. Farmers have no rights to renovate or improve the structures which are within those camps. The serious problems which one notices at these camps are the practices of overgrazing and overstocking. The emerging farmers are authorized by the Tribal Authority to locate their cattle on the tribal land. The farmers who are already at the camps did not have the right to refuse or disallow animals belonging to emerging farmers. In Madikwe district, there is no veld management concept which is in place. In winter months, those camps will be without grasses. It is the time of year when most cattle are emaciated and debilitated. It is the time when
most animals are dying. Madikwe farmers are encountering the problem of veld burning. If the camps are burnt out, farmers are supposed to drive cattle to better places where the grass is still abundant. Farmers from Madikwe are not supplementing when the nutritive value of grasses has dropped. The officials from the Department of Agriculture have enlightened farmers about the importance of supplementary feeding, but all in vain. The idea of a rotational camp system is not in practice. In other words, cattle are in the same camps continuously. Officials from the Department of Agriculture are continuing to educate farmers about supplementary feeding although only few farmers are adopting the concept.

There is no camp resting at Madikwe. Farmers are advised to reduce the number of livestock during winter or drought, but most farmers refuse to reduce their livestock numbers.

**LABOUR**

Labour is playing a significant role in livestock production at Madikwe. Madikwe farmers are not taking the importance of labour seriously in livestock production. Farmers have a tendency to change herdsmen from time to time. Most herdsmen are working on a temporary basis. A farmer will expel or dismiss a farm worker for minor issues at the cattle posts after acquiring experience. Farmers are not aware of the latest legislature pertaining to farm workers. These workers are supposed to earn six hundred rand per month. The Madikwe farmers are not aware of this legislature. Farmers at Madikwe are not aware that the general farm workers are supposed to have a workers' union of their choice. If the Union calls herdsmen to a meeting, farmers are supposed to release workers for the meeting. Farmers at Madikwe have not signed a binding agreement concerning the wage of the general worker. These farm or cattle posts workers are working without any binding agreement. An agreement should be signed which binds the farmer to pay the worker. The agreement is an agreement that the worker will render services for the farmer. At Madikwe district there is no agreement signed between the farmer and herdsman.
DROUGHT

Farmers at Madikwe do not have any contingency plans for the drought. A drought is a period which is supposed to be planned for. The farmers can have the following plans if they realize that they are facing drought period. They can reduce the number of their cattle. The farmer can cull older animals and steers. The remaining animals should be in a healthy state of affairs e.g. cattle should be dipped, supplemented and be dewormed regularly. Madikwe farmers still believe the Government of the day will assist them during time of droughts. It is the responsibility of farmers to have plan in place for drought periods.

SUMMARY

According to the research which I conducted in Madikwe, the communal farmers of Madikwe are not practising sound farm management. Farmers are not regarding cattle farming as a business. These farmers are not applying the management functions such as planning, organizing, motivation, coordination and control. The other embarrassing and discouraging aspect is that Madikwe farmers are not keeping proper records for their farms. A farmer is not in a position to know whether he/she is progressing or retrogressing within the cattle industry. Farmers are not in a position to know whether they are maximizing profits or not. Farmers from Madikwe are not working hand in glove with officials from the Department of Agriculture for technical advices. The impact of poor management can be seen in the poor reproductive and productive abilities of their cattle in general.
CHAPTER SIX

DISCUSSIONS, IMPLICATIONS, CONCLUSIONS AND RECOMMENDATIONS

INTRODUCTION

The aim of the research was to investigate the impact of management on communal livestock farmers of Madikwe. Madikwe is a district with forty thousand cattle. The farmers of Madikwe depend on livestock rearing for their income. According to Boehlje and Eidman (1984) "farm management" is the science or the art of combining ideas, facilities and market worthy products. According to my research the communal farmers of Madikwe are not practising sound farm management. A farmer is the manager of the cattle post. He is suppose to be a jack of all trades. He is supposed to attend to the sick animals, burning veld, labour problems and financial issues. A farmer should be in a position to attend to all these issues provided he/she plans the activities of the farm well. A manager is suppose to know what is happening on the farm. The farmer of Madikwe should be able to set aims and objectives for the livestock industry. Maree and Casey (1993), stressed the importance of decision making as an element of management. The farm manager should be able to make rational decisions provided he keeps accurate and simple records on the farm. The records will be able to inform the farmer about animal data, climate, disease problems and the financial position of the farm. In Madikwe district farmers are not keeping such records.

DISCUSSIONS

If one compares the animal performance of the communal and the commercial farmers, there is a great difference between the two types of farming. The commercial farmers are keeping records. They are advanced to such an extent that they are using computers to store the information. The commercial farmer is able to retrieve information within a short space of time. In the case of communal farmers there are
problems. A farmer will have to battle before he/she can provide you with information pertaining to the calving percentage. The difference can be illustrated as follows:

<table>
<thead>
<tr>
<th>Communal farmers</th>
<th>Commercial farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) There are no records for cattle census And climate</td>
<td>There are records for cattle census and climate</td>
</tr>
<tr>
<td>(2) There are no managerial skills</td>
<td>Managerial skills are present</td>
</tr>
<tr>
<td>(2) Farming business not driven by the Markets</td>
<td>Farming business is driven by markets.</td>
</tr>
</tbody>
</table>

The above illustrations clearly shows us that the commercial farmers can maximize profit much better than communal farmers. The two types of farming are different because of the impact of management. The performance of animals under commercial farming will outclass the communal farming because of management. The breeds can be the same, but management makes the difference. The reproductive and productive efficiencies of the two types of farming will differ. It is high time for communal farmers to adopt commercialization of the livestock industry.

**BREEDING OBJECTIVES**

The farmer as the manager of the farm is supposed to set up objectives, according to Maree and Casey (1993), Van Zyl et al (1999), stressed that the objectives do guide the planning process and enable the farmer to establish his/her point of departure and destination. They further mentioned that some objectives are business oriented while others are non-financial needs. The objectives under livestock production can be tabulated as follows:

1. Breeding objectives and economic selection
2. The determination of biological traits
3. Identification of sources of income and expenditure mentioned by Van Ryssen (2003). Madikwe farmers are not setting objectives for their livestock industry.
BREEDING OBJECTIVES AND ECONOMIC SELECTION

According to Prof. Van Ryssen (2003), "when selection is applied to the improvement of the economic value of the animals, it is generally applied to several traits simultaneously." The objective is to achieve maximum genetic progress towards a stated economic goal. According to C Burgess (2003), the animal breeders are supposed to concentrate on scrotum circumference and calf tempo for reproduction traits of the estimated breeding value (EBV).

AIMS OF LIVESTOCK FARMING

The communal farmer of Madikwe should set up aims for the cattle business. Farmers should have reasons why they want to farm with cattle. What are they aiming at? What do they have in mind about livestock farming? Most business people are aiming at profit maximization, poverty alleviation, job creation and wealth maximization.

PROFIT MAXIMIZATION

According to van Zyl et al (1999), profitability is the percentage ratio between profit earned in a given period and capital used to realize that profit. The situation in Madikwe is that farmers have no aims for their farming enterprise. According to the research I conducted when I interviewed farmers pertaining to profits, most of them had no ideas at all. They are farming to increase the numbers of cattle instead of having few animals with aims and plans.

JOB CREATION

Farmers at Madikwe have hired herdsmen to take care of their livestock on temporary basis when the owners are absent. These farmers have created jobs for herdsmen. The herdsmen were unemployed before farmers employed them them for work. Madikwe farmers will be able to employ more herdsmen provided they improve their managerial
skills and production techniques. Madikwe is district with great potential for livestock production, especially cattle.

**REPRODUCTIVE EFFICIENCIES OF CATTLE**

The cows should be in a healthy condition in order to produce calves on a yearly basis. The same applies to the bull. The herd health management principles should be practiced in order for animals to be productive. The cows should be on a good plane of nutrition especially if they are pregnant. Farmers should be taught about controlled breeding e.g. a bull is not suppose to run around with cows. A bull that is set on cows from November to December, the cow will start to calve from September to October. This is a good period for calving because the grass conditions are improving due to rain. The animals, especially cows and bulls are suppose to be fertile and free from venereal diseases such as Brucellosis and Vibriosis. If cows are fertile, they will be able to conceive after they are bred. The economic traits that can be noticed from fertile cows are as follows: the cow will give birth to a healthy calf with a higher birth weight, the gestation period of the cow will be short and the cow will calve at ease. The reproductive capabilities of cows can be badly affected by venereal diseases, especially Brucellosis. If cows are affected by Brucellosis, they abort and give birth to calves that will soon die. It is for communal farmers of Madikwe to check their animals for unusual symptoms and then report them to the veterinary office at Madikwe. Bulls are suppose to be inspected by a vet before breeding commences. Bulls are suppose to be culled if they show any defects of the reproductive organs. According to Maree and Casey (1993), the scrotum size of a bull is suppose to be 33.39 cm. The reproductive capabilities of animals are the keys to the success of cattle farming. It is imperative for the communal farmers of Madikwe to inspect their animals from time to time to assess their performance. Farmers are urged to report sick animals to Vet. offices.
RESULTS OF THE RESEARCH

According to the research which I conducted at Madikwe, I have noticed the following results:

(1) Madikwe farmers are not practising sound farm management.
(2) Livestock production is on the hands or is managed by old people.
(3) The calving percentage is very low.
(4) The infrastructure is not sufficient on farms or cattle posts.

MANAGEMENT

I have realized that Madikwe farms are not practicing sound farm management. Farmers are supposed to regard themselves as managers of their own cattle posts. The managerial activities which are supposed to be performed by farmers are: record keeping, breed selection, disease control and supervision of general workers on the farm. All these activities are not performed by most farmers. There are only few farmers who are putting some effort in managing their cattle posts. If cattle farming is not properly managed, profits will not be generated.

CATTLE FARMING IS CONTROLLED BY OLD FARMERS

The able bodied people and those who are energetic have left farming in the hands of old people. The old men and women are now responsible for cattle enterprise at Madikwe. The young and energetic farmers have flocked to towns and cities for better wages. In most cases the old farmers are not able to cope with the challenges of Agriculture. Activities such as cattle handling, vaccination, treatment and dipping of cattle need a person who is energetic.
THE CALVING PERCENTAGE OF CATTLE

According to the research which I conducted at Madikwe, I have realized that the calving percentage of most farmers is low e.g. 5-20%. According to the latest research conducted at Irene research station, the average calving percentage in South Africa is 60%. The commercial farmers intend to target 70% as the calving percentage.

AVAILABILITY OF INFRASTRUCTURES

Farmers of Madikwe do not have sufficient infrastructure. Farmers cannot afford to farm with cattle if they don’t have enough infrastructure. The infrastructure which I am referring to are:- crush pens, catchment kraals, store house and loading zones. Farmers in Madikwe depend on one crush pen to cater for more than one cattle post. There are cattle which are suppose to travel long distances for activities such as vaccination, dipping, castration and deworming. Farmers are suppose to build these infrastructures next to their cattle posts.

DISEASE AND PARASITE CONTROL

According to this research, I have realized that Madikwe farmers are not vaccinating their cattle against diseases. Diseases such as Botulism, Blackquarter, Lumpy skin and Brucellosis are supposed to be vaccinated against. The tick-borne diseases such as Heartwater, Red water and Gallsickness ought to be vaccinated against and treated. Farmers are not dipping their cattle and that is the reason why tick borne diseases are problematic.

MARKETING

A market is a place where sellers and buyers meet. The word marketing refers to the transfer of products from a seller to a buyer with the intention of generating profits. According to Savory (1999), the profit oriented business frequently locate near the
markets they intend to serve as part of their competitive strategy, whereas non profit organizations choose locations relative to the needs of the users of their service. Farmers from Madikwe are far from the public auction of their animals. The roads that are used by farmers to Silkaalskop are in bad conditions and Silkaalskop is about 62 kilometres from Madikwe location.

Farmers at Madikwe are selling their cattle through speculators. These speculators are cheating them, because they are buying cattle at cheaper prices. Madikwe farmers sometimes sell their animals to people who have ceremonial functions such as wedding and funerals.

**NUTRITION**

Nutrition plays an important role in the growth and reproduction of animals. If a farmer is not providing enough feed to cattle, he stands a chance of encountering problems such as retarded growth and poor animal performance. Farmers from Madikwe are not feeding their animals properly. In the case of severe droughts most cattle will start to die. Those which survive, will be emaciated and debilitated. Farmers from Madikwe are not supplementing during summer and winter. In the case of deficiencies of calcium, the symptom such as “Milk fever” may be noticed. In the case of shortage of phosphorous the symptom of osteomalacia can be observed e.g. Mr. Molantwa from Vrede village in Madikwe district did report a case about sick animals. The two cows were having Milk Fever and were treated by the Vet. A young heifer was reported for osteomalacia.

**GRAZING CAMPS**

Madikwe area is divided into camps to ease the cattle farming practices. These camps are controlled and monitored by the Chief and his tribal councillors. The Chief and tribal councillors are the ones to give permission to the new entrants in cattle farming, to rear their animals in these camps. The farmers who have been in farming for number of
years, do not have the right to deny the new entrants the permission to rear livestock. The new entrants of cattle farming are obtaining the permission from the Chief and Tribal councillors to farm. The farmers who were farming on those camps before the new entrants are not consulted at all. Ultimately the problem of overstocking and overgrazing will be noticed. Farmers have no permission to improve or renovate the broken fences. In other words, there is no veld management practice in these camps. Farmers will end up burning the veld with the intention of promoting the re-growth of grass and get rid of moribund grasses. The Chief is the one to recommend for the improvement and renovation of the tribal camps and not farmers who occupy the camps.

**IMPLICATIONS**

The research which I conducted at Madikwe district can contribute to the following to communal farmers e.g.:-

1. Improvement of managerial skills of farmers.
2. The standard of living of farmers can be improved.
3. Profit maximization and wealth can be achieved.
4. Veld management can be noticed.
5. The economy of the province can be improved.

**MANAGERIAL SKILLS OF FARMERS CAN BE IMPROVED**

If Madikwe farmers comply with the recommendations that are outlined in the research, their managerial skills could be improved. Farmers are supposed to practice farm management such as record keeping and be responsible for the performance of animals, such as production and reproduction.
STANDARD OF LIVING

Farmers from Madikwe should regard cattle farming as a business. They should be able to regard themselves as business managers. They should be able to earn incomes from the businesses they are running. Their standard of living can be improved through higher incomes.

PROFIT AND WEALTH MAXIMIZATION

Any business which does not maximize profits should be closed. Farmers should not rely only on cattle farming for their profits. Farmers are urged to diversify. They can diversify by combining cattle farming and crop farming enterprises. If profits can be maximized, obviously wealth will also be maximized. The advantage of diversifying is that the risk will be equally distributed between crop and cattle farming. Farmers from Madikwe are currently encountering poor profits, but this can be rectified through improved management skills.

VELD MANAGEMENT

Farmers of Madikwe can still improve the grazing systems which are in place. The rotational camp systems and resting of veld should be practiced. If veld can be improved at Madikwe, problems such as overgrazing and overstocking would be minimized. Livestock improvement would be noticed through better veld management.

ECONOMY OF THE PROVINCE

If Madikwe farmers improve their farming techniques and management, they will be compelled to employ more herdsmen. The higher the employment rate, the better the economy of the Province, and this will decrease poverty.
CONCLUSIONS

Management can play an important role in livestock production for the communal farmers of Madikwe district. Farmers can change their life styles and this can only happen if farmers improve their farming techniques. The farming techniques which farmers can adopt are that the cattle industry can maximize profits and wealth through sound farming management. If managerial functions such as planning, organizing, motivating, coordination and control are not implemented, cattle farming will be a failure. These farming techniques can be acquired through training. The officials from the Department of Agriculture are able to capacitate farmers through extension services and educational campaigns. The reproductive and productive activities of animals can be assessed through accurate record systems. Farmers can change their lifestyles by firstly changing the attitude of their minds. There are a number of problems which are encountered by farmers, especially if they are administered by a tribal authority. The land right will impede the farming industry. It is imperative for cattle farmers to have managerial and production skills in order to succeed in the cattle farming industry.

RECOMMENDATIONS

I strongly recommend that more research should be done on this topic. The officials from the Department of Agriculture should educate communal farmers of Madikwe about the importance of management in cattle farming. Farmers as managers of their cattle industry should set up goals and objectives for the farming industry. A farmer who is able to plan, organize, motivate, coordinate and control is the one who can maximize profits. Animal performance such as productivity and reproductivity can be improved through sound farm management. All elements of production such as capital, land and labour are dependent on a knowledgeable and skillful entrepreneur, the farmer.

In South Africa there are problems of population explosion. The Madikwe communities need food which are rich in proteins. The communal farmers of Madikwe are suppose to respond to the challenge of feeding the growing nation. The Government of North
West and South Africa as a whole should help farmers to be effective and efficient with cattle industry.

RECORDS KEEPING

According to my findings, Madikwe farmers are not keeping any records. The records which are suppose to be kept by communal farmers of Madikwe are the following: e.g. financial records, asset records, cattle census animal performance records, mortality records and reproductive performance records. If farmers are not keeping records, it is difficult to assess the performance of animals. It was difficult for me when I was conducting research, to get accurate information from farmers.

The Government through the veterinary staff and the Extension officers are suppose to make farmers aware about the importance of record keeping. The officers from the Department of Agriculture are suppose to plan campaigns, pertaining to the awareness of record keeping. A programme is supposed to the drafted in which farmers are going to be informed of the importance of record keeping. Farmers should be aware that if they do not keep records, it will be difficult for them to assess the maximization of profits within cattle farming.

GOVERNMENT LOANS

Farmers are not aware of the availability of loans which can be obtained from the Land Bank. Farmers are able to get loans of twenty five thousand rand without collateral. The officials from the department of Agriculture are suppose to make farmers aware of loan. Madikwe communal farmers are urgently in need of loans to maintain their cattle farming practices. The twenty five thousand loan will be a boost for Madikwe farmers. Some farmers are aware of the availability of loan, but they are few. The Government should assist youth to become involved in cattle farming practice. According to the research results, farming is conducted mostly by elderly people. If the youth can be
actively be involved in farming, this will improve cattle farming in the district of Madikwe as a whole.

**DIVERSIFICATION**

The study has noticed that the Madikwe farmers are not diversifying. It is imperative for farmers to diversify, because they will able to spread risk between the two enterprises. Madikwe farmers can combine livestock production with crop production. The incumbent farmers will be able to get extra income for themselves from both crop and cattle production. The animals can be fed with crop residues during times of drought. It still remains the prerogative of the officials from the Department of Agriculture to inform and capacitate farmers about diversification. Farmers will be able to maximize profits if they can apply farm management functions well.

**OLD PEOPLE**

According to the research conducted at Madikwe, cattle farming is practiced by old people. The young and able people have flocked to towns and cities for better payments. The Government through the office of the Department of Agriculture should encourage more youth to farm. There are youth who have completed matric, diplomas and degrees. These youth are unemployed. The youth should be provided with loans and be actively involved in beef production. The youth will be able to improve the economic conditions at Madikwe and South Africa as a whole. The officials from the department of Agriculture should guide the youth with techniques of cattle farming and management. The youth should be informed that cattle farming is a long term investment and that they should be patient.
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ANNEXURE A
QUESTIONNAIRE

1. Age category of the farmer?
   - [ ] 18 – 20 years
   - [ ] 35 – 45 years
   - [ ] 45 – 55 years
   - [ ] 65 - Over

2. Marital status of the farmer?
   - [ ] Married
   - [ ] Single
   - [ ] Divorce

3. Gender
   - [ ] Male
   - [ ] Female

4. Livestock census of the farmer?
   - [ ] 5 – 10
   - [ ] 10 – 30
   - [ ] 30 – 100
   - [ ] 100 – 200
   - [ ] 200 and over
5. When did the farmer start to farm with the cattle industry?
   - [ ] 0 - 2 years
   - [ ] 2 - 10 years
   - [ ] 10 - 20 years
   - [ ] 2 - years and over

6. What is the calving percentage of the herd?
   - [ ] 5 - 20 Percent
   - [ ] 20 - 30 Percent
   - [ ] 30 - 50 Percent
   - [ ] 50 - 70 Percent

7. What types of records are kept by the farmers?
   - [ ] Livestock records
   - [ ] Asset register
   - [ ] Financial records
   - [ ] Machinery and equipment register
   - [ ] Mortality register
   - [ ] Labour register
8. That type of labour resources is used by the farmer:

- Herd man
- Family members
- Permanent basis
- Casual basis

9. Is the farmer having infrastructures?

- Stores house
- Crush pen
- Loading zone
- Tool house

10. What machineries are available to the farmers?

- Tractors
- Vehicles
- Other machineries

11. What type of breeds is the farmer having:

- Afrikaners
- Bonsmaras
- Mixed Breeds
12. Is the farmer diversifying in his/her farming activities of cattle

☐ Cattle farming only
☐ Cattle, sheep and goats farming
☐ Crops and cattle farming

13. What type of grazing system is the farmer employing?

☐ 1 camp system
☐ 2 camps system
☐ 4 camp system
☐ No grazing system

14. How much profit is generated by the farmer per year?

☐ R5 000 – R10 000 per year
☐ R15 000 – R20 000 per year
☐ R25 000 – R30 000 per year
☐ R50 000 – R100 000 per year
☐ R100 00 and over
☐ Don’t have any idea.

15. What factors are causing loss to the cattle farmer?

☐ Deaths/mortality
☐ Stock theft
☐ Diseases and parasites
16. What Government assistances is offered to the farmer
   - [ ] Technical advices from Government officials
   - [ ] Vaccination of cattle by Vet. officials
   - [ ] Private Vets.

17. How normally or regularly is the farmer visiting the cattle post.
   - [ ] Yes
   - [ ] No
   - [ ] I don't have any idea

18. How do you manage your livestock
   - [ ] Consul experts from the Department of Agriculture
   - [ ] Get advices from fellow farmers
   - [ ] I manage the livestock myself

19. How do a farmer market his/her auctions
   - [ ] Through public auctions
   - [ ] Through speculations
   - [ ] Sell cattle through ceremonies such as wedding, death and parties.
   - [ ] Its difficult to market cattle