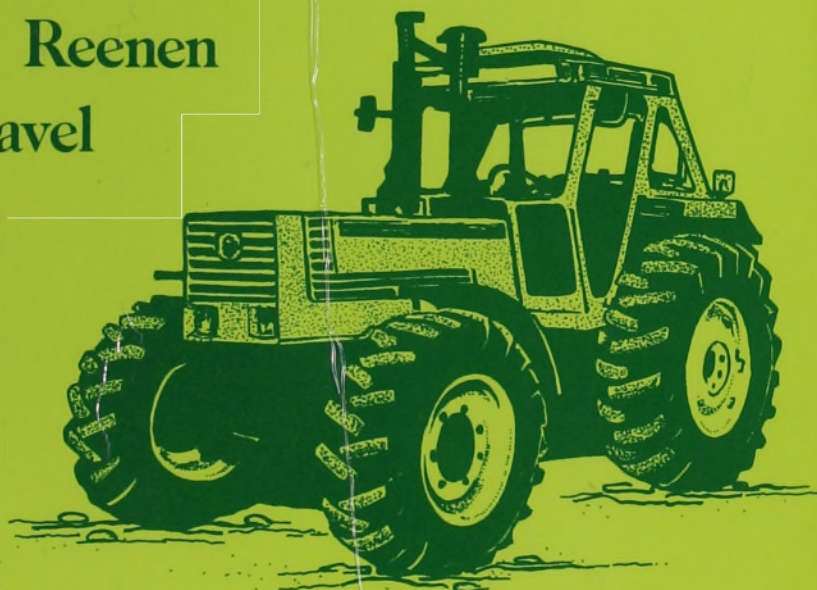


FARM MANAGEMENT

— a business approach

MJ van Reenen

JAH Davel



806

MANUALIA DIDACTICA 5
UNISA 1989

FARM MANAGEMENT



A BUSINESS APPROACH

M.J. VAN REENEN
J.A.H. DAVIE

UNIVERSITY OF SOUTHWEST AFRICA
PRETORIA

FARM MANAGEMENT

A BUSINESS APPROACH

M.J. VAN REENEN
J.A.H. DAVEL

UNIVERSITY OF SOUTH AFRICA
PRETORIA

© 1989 University of South Africa
All rights reserved

Second impression 1991

ISBN 0 86981 580 6

Set by The World Shop Publication Bureau cc
Hatfield

Printed by
Sigma Press, Koedoespoort

Published by the
University of South Africa
Muckleneuk, Pretoria

Contents

Foreword ix

Chapter 1 Introduction to farm management 1

- General management 5
- Farm management 8
- Success in management 23
- Summary 24

Chapter 2 Principles of production economics and cost concepts 25

- The production function 26
- Marginalism (the marginal principle) 27
- The law of diminishing returns 28
- The typical production function in agriculture 28
- How much to produce 31
- How to produce 32
- What to produce 36
- Cost concepts 40
- Summary 46

Chapter 3 Farm budgets: auxiliary and capital budgets 47

- Enterprise (branch) budgets 49
- Partial budgets 52
- Break-even budgets 55
- Capital budgets 58
- Summary 70

Chapter 4 Farm budgets: farming plan, total budget and financing budget 71

- The farming plan 73
- The main (total) budget 86
- The financing budget 88
- Summary 95

Chapter 5 Farm management information: general review and records 96

- The importance of a management information system 97
- The requirements and scope of a management information system 98

Steps in developing a management information system 99
Schematic representation of a comprehensive management information system 100
Farm records 100
Summary 117

Chapter 6 Farm management information: the financial statements 118

The balance sheet 119
The income and capital reconciliation statement 128
The flow-of-funds statement 142
Procedure for handling the financing cost (interest) component in instalment-sales and lease agreements 142
Numerical example of a farming enterprise's financial statements 146
Summary 152

Chapter 7 Farm management information: analysis and interpretation 153

Important aspects in analysis and interpretation 153
Summary of farm management information 154
Capital position analysis 155
Profitability analyses 158
Capital/Profitability analyses 160
Efficiency analyses 165
Branch analyses in a farming enterprise and the dangers of incorrect interpretation 167
A word of warning 170
Summary 171

Chapter 8 The financing of the farming enterprise 172

Special circumstances which influence the financing of farming enterprises 173
The capital needs 176
Forms of capital 181
Sources of loan capital 182
Sources of own capital 189
Associated capital 191
The financing policy 191
Reorganisation financing 201
Summary 202

Chapter 9 Land acquisition 204

Joint farming 205
Leasing land for farming purposes versus buying it 211
Purchasing land for farming purposes 212
Leasing land for farming purposes 225
Summary 232

Chapter 10 Labour management 233

Definition of farm labour management 235
Unique features of labour management on farms 236
Employment of farm labourers 236

Training	240
Motivation	241
Motivation of farm labourers	247
Remuneration of labour	252
Proper use of labour	258
Labour records	260
Summary	262

Chapter 11

Mechanisation management 263

The nature of mechanisation costs	264
Estimating mechanisation costs	266
The reasons why farmers mechanise	267
The replacement of labour by farm equipment	269
Purchasing of farm equipment as opposed to custom hiring	272
The buying of new as opposed to used farm equipment	274
The size of the farm equipment to be purchased	275
Increase of equipment efficiency	276
Financing of equipment purchases	279
Summary	286

Chapter 12

Risk and uncertainty in farming 287

Definition of risk and uncertainty	288
Sources of risk and uncertainty	288
Decision-making under risk and uncertainty	295
Farmers' attitudes towards risk and uncertainty	300
Management strategies and actions to counteract or reduce risks and uncertainties	302
Summary	307

Chapter 13

The computer and farm management 308

Misconceptions about the computer	309
A few reasons for the use of computers in farm management	312
How a computer works	313
Computer components	314
Computer categories for use in farm management	317
Computer uses in farm management	318
Ways to use the computer at farm level	320
Software	322
Steps in purchasing a computer (should the farmer buy a computer?)	325
Summary	333

Annexure

Interest tables 335

Index

353

Foreword

It is generally accepted that the modern business environment and circumstances make exceptional demands on the management skills of farmers and that only those who meet these exacting demands can hope to make a financial success of their farming enterprises.

Efficient business management demands insight and specialised knowledge. A substantial percentage of farmers in the RSA unfortunately lack adequate knowledge in this regard. In our opinion this lack can be attributed not so much to a lack of interest to acquire the necessary knowledge, but rather to the unavailability of sources from which the practising farmer can acquire it. This book is an attempt to provide such a source.

Since 1978 we have been closely involved in the presentation of farm management courses for practising farmers. Through personal contact with many farmers during this period, we gained valuable knowledge and experience of the major problems with which they have to cope in the sphere of business management. Although the book covers the business principles of farm management fairly comprehensively, the emphasis is on those areas that were identified as being the most important in practice. Unfortunately, the mere reading or studying of the book will not make you a better business manager. Only by applying the principles illustrated to your own situation, will you be able to enhance your own management skills and efficiency. The book only provides the foundation on which your edifice of more efficient management can be built.

The book is primarily a source of knowledge for the practising farmer. We are, however, convinced that it could also be fruitfully used by students of farm management and related disciplines, and also by agricultural extension personnel and others directly or indirectly concerned with farm management.

Our sincere thanks and appreciation go to all those who attended our courses in the past for their contributions — consciously or unconsciously — to the publication of this work. Without these contributions the idea for a book would probably never have originated.

1

Introduction to Farm Management

OBJECTIVES

- To give an introductory review of the following:
 - The importance of farm management and the place and role of the farmer in the farming enterprise
 - The role of farming in the South African economy
 - The changed management circumstances in agriculture and the evolutionary process of farm management in South Africa.
- To give an approach to and a description of general management.
- To analyse farm management in its facets of setting goals, management tasks and decision-making and explaining these.
- To identify and elucidate the requirements for being a successful farmer.

Why are some farmers more successful than others? Why do some enterprises expand and flourish while others stagnate and decline? Why do some farmers become affluent while those on neighbouring farms go bankrupt? Granted - luck and coincidence play a role, legacies and availability of capital change matters, but differences cannot be attributed to these alone. There must be something else, and this something else is *management*. In many instances management accounts for the difference between success and failure, between profit or loss and between prosperity and decline.

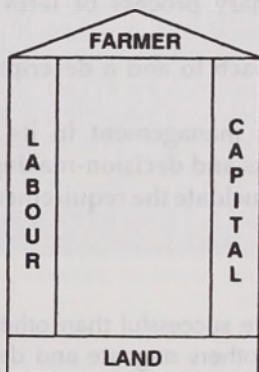
In our daily dealings, in the press and over the radio, we see and hear on virtually a daily basis how important farm management has become in South Africa.

Statements such as management is the core of the matter, management makes the difference, management is the nerve centre of a farm, are frequently heard. However, rarely is anyone prepared to explain exactly what is meant by management and what characteristics, skills and knowledge a farmer must have to manage his enterprise successfully.

This book will therefore endeavour to fill this gap by providing greater clarity on the above-mentioned aspects. It is unlikely that anyone will be able to manage properly if he does not know what management is, what a manager should do or what skills, knowledge and abilities a manager should have.

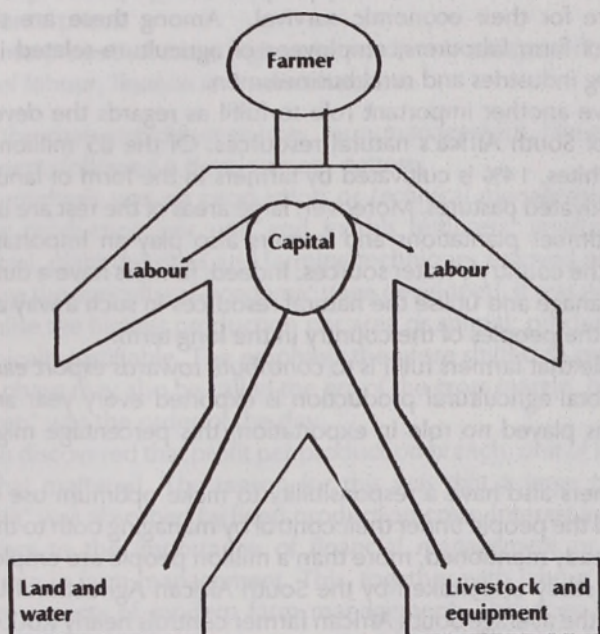
The manager/farmer is the pivot on which the enterprise hinges and in this respect there is no real difference between the management of a farming enterprise and that of an ordinary business enterprise. The manager has to make decisions, devise and implement plans, and exercise control over the resources at his disposal. A simple example (see fig.1.1) can be used to depict the farmer's position in the enterprise as the roof which holds together the walls and foundation of the farming structure and rounds off the whole.

Figure 1.1 The farming enterprise and the position of the farmer



From another angle the farmer can be regarded as the head of the farming body and his task is to direct, co-ordinate and utilise all the limbs and activities accordingly (see fig.1.2).

Figure 1.2 The farming enterprise and the role of the farmer



The role of farming in the national economy

Although South Africa has developed from a predominantly agricultural country to a predominantly industrial one, agriculture continues to play an important role in the national economy. Some of agriculture's functions are obvious, such as the production and supply of food, fibre, timber, tobacco and liquor, while others are less obvious, such as job creation, the development of natural resources and earner of foreign exchange.

As *food producers*, South African farmers have acquitted themselves well of their task. Under relatively unfavourable agricultural conditions, South Africa is today one of only a few countries in the world that is a net exporter of food. Farmers in fact acquitted themselves of their task so well that many of South Africa's problems can be attributed to over-production, rather than under-production of food.

As *employers* South African farmers provide work for about 1,2 million people, and in 1980 some 2,3 million people were actively working in agriculture, hunting,

forestry and the fishing industry. Although agriculture's importance as primary job creator declined over the years, many people — directly or indirectly — depend on agriculture for their economic survival. Among these are the numerous dependents of farm labourers, employees of agriculture-related industries and manufacturing industries and rural businessmen.

Farmers have another important role to fulfil as regards the *development and exploitation* of South Africa's natural resources. Of the 85 million hectare land owned by Whites, 14% is cultivated by farmers in the form of lands, permanent crops and cultivated pastures. Moreover, large areas of the rest are used as natural grazing and timber plantations and farmers also play an important role in the utilisation of the country's water sources. Indeed, farmers have a duty towards the country to manage and utilise the natural resources in such a way as to be to the benefit of all the peoples of the country in the long term.

A further role that farmers fulfil is to *contribute towards export earnings*. About 30% of the total agricultural production is exported every year and, if political considerations played no role in exportation, this percentage might even have been higher.

Finally, farmers also have a responsibility to make optimum use of the natural resources and the people under their control by managing both to the best of their ability. As already mentioned, more than a million people are employed on farms and a recent study undertaken by the South African Agricultural Union (SAAU) revealed that the average South African farmer controls nearly R600 000 worth of agricultural assets.¹ These facts make it imperative for the farmer to qualify himself to manage the resources, people and capital under his control efficiently — not only for his own benefit, but to the benefit of the country as a whole.

Changed farm management circumstances and the evolution of farm management

Farming is constantly subjected to changing circumstances and farmers continually have to adapt. The following are some of the most important changes that have taken place in agriculture to complicate management even further:

- Substitution by machinery, chemicals and technology of human and animal power.
- Purchased instead of self-produced farming inputs.
- Processing of agricultural products away from the farm.
- Changes in markets, transport systems, refrigeration, processing and storage facilities.
- Improved plant and animal material and improved farming techniques.
- Increase in knowledge, information and expertise.
- Speed of changes, and technological developments such as computers and

embryo transplants open new horizons for farming.

- Increased productivity, the decline in the number of farmers and larger farming enterprises.
- Bigger enterprises that make higher demands on management, especially in respect of labour, finance and administration.

To adapt to the changing circumstances, farm management, like ordinary business management, followed a development pattern.

Initially the emphasis was on production or *technical management*. This concerned higher production per unit and in this fertilisers, improved cultivars, chemical control, plant densities and farming techniques enjoyed priority.

From this stage the *agricultural-economic stage* developed. It was no longer good enough to realise the highest production per area or animal; production also had to be economically justifiable. The emphasis therefore shifted to production cost per unit. This phase may also be called the era of the gross margin, because "profit after direct costs" was the order of the day.

Farmers soon discovered that profit per production branch, unit of land or animal was not all that mattered. The reason for this was that a large portion of the so-called "profit" was absorbed by fixed production costs, interest and rental. This brought farmers to the importance of *financial management* or the financial management era in farm management. This, together with labour management, are prominent aspects of modern farm management. This does not, however, imply that other aspects of farm management such as technical and administrative management are unimportant. All it means is that farmers today, in addition to the other ordinary management aspects, must pay more attention to labour and financial management to make a success of their enterprises.

GENERAL MANAGEMENT

The above discussion brought the changed farm management situation clearly to the fore. The question now naturally arises: What is farm management? To answer this question, general management must first be discussed.

General management, briefly called management, cannot readily be described in part of a chapter or even a whole chapter. The reasons for this are the different approaches to and schools of thought on management and the wide range of literature available on the subject. Without going into the detail of all these variations, a single approach to management will be briefly discussed, and a description of management will then be given.

An approach to management

Management can be regarded as a science, an art or a profession.

According to Allen² a science is a coherent and systematic structure of knowledge that deals with facts and truths so that it exposes the functioning of general laws and principles. *A science can therefore be learnt.* According to the same author an art is a skill which is executed within the specific owner's individual personality. *A talent for art can therefore be developed.* By definition Allen sees a profession as a special type of work carried out in which use is made of classified knowledge, a common vocabulary and certain standards and codes as created by a recognised body. *A profession is therefore a specific occupation.*

Without going into the exceptions, we can say that management contains elements of a science, an art and a profession. Principles, theories and facts about this, such as planning methods, budgeting methods, control procedures and organisation models can be learnt. Other traits of management that are closely related to the art thereof, can be developed, and here we think of aspects such as decision-making, communication, negotiation, leadership qualities, human relations, self-image, own motivation, dynamism and perseverance. By applying the foregoing art and science components of management in the practical situation, farm management can develop into a profession, and we already find professional farming managers who are owner-farmers or hired managers. To summarise, management can therefore be regarded as a science, an art and a profession, as depicted in figure 1.3.

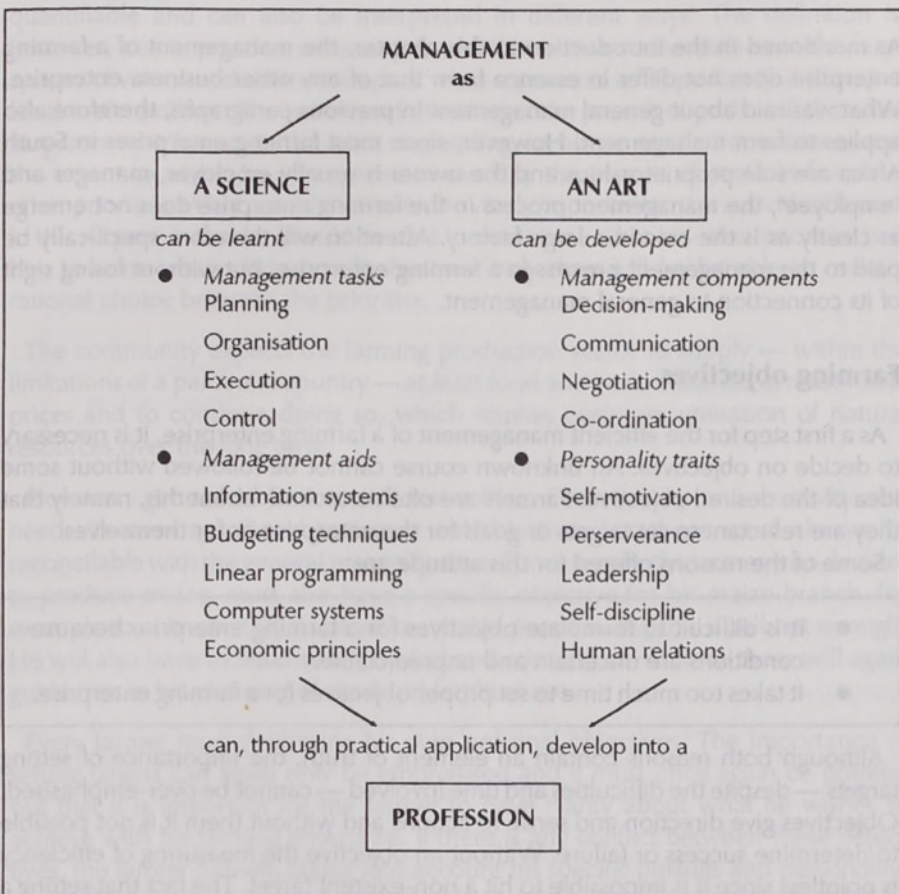
A description of management

How does one define management? It is a well-nigh impossible task — impossible because it cannot be outlined in a single definition and also because of the wide range of definitions already in existence. A few definitions of management can be summarised as follows:

- *Reynders:*³ "Giving guidance is a universal human activity. It is a task carried out by someone who is in charge of the activities of others and involves making decisions and taking steps to achieve specific goals." (Translated)
- *Van der Schroeff:*⁴ "[Management] is to give direction to a common action." (Translated)
- *Drucker:*⁵ "[Without management] resources of production remain sources and never become production."
- *Others:*
 - Management is decision-making and human relations.
 - Management is getting things done through (other) people.
 - People can say what they want to do, but when it comes to the actual *doing*, leadership and management are necessary.

It is obvious that no single definition can contain all the above ideas, which is why it is preferable to give an analytical description of management.

Figure 1.3 Management as a science, an art and a profession



Management involves rational decision-making and also the planning, organisation, execution and control of human and material resources to achieve the entrepreneurial objectives.

The three central thoughts emerging from the above description and to which further attention will be paid in the section on farm management, are —

- objectives
- management tasks
- decision-making.

FARM MANAGEMENT

As mentioned in the introduction to this chapter, the management of a farming enterprise does not differ in essence from that of any other business enterprise. What was said about general management in previous paragraphs, therefore also applies to farm management. However, since most farming enterprises in South Africa are sole proprietorships and the owner is usually employer, manager and "employee", the management process in the farming enterprise does not emerge as clearly as is the case in a large factory. Attention will therefore specifically be paid to the management process in a farming enterprise, but without losing sight of its connection to general management.

Farming objectives

As a first step for the efficient management of a farming enterprise, it is necessary to decide on objectives. An unknown course cannot be followed without some idea of the desired objective. Farmers are often criticised about this, namely that they are reluctant to set targets or goals for the enterprise or for themselves.

Some of the reasons offered for this attitude are:

- It is difficult to formulate objectives for a farming enterprise because conditions are uncertain and unpredictable.
- It takes too much time to set proper objectives for a farming enterprise.

Although both reasons contain an element of truth, the importance of setting targets — despite the difficulties and time involved — cannot be over-emphasised. Objectives give direction and sense to actions and without them it is not possible to determine success or failure. Without an objective the measuring of efficiency is pointless since it is impossible to hit a non-existent target. The fact that setting a target for a farming enterprise is difficult and time-consuming does not diminish its importance, but rather underlines the fact that it justifies special attention. Setting targets within the farming enterprise sometimes presents problems. The reason for this can be found in the fact that farming is the owner-farmer's career and also a way of life. His household is an inseparable part of, and integrated with his enterprise as a career. And although it is generally accepted that the main objective of a capitalistic enterprise is maximum profit over the long term, the farming enterprise may not have this as its main target because of the integration of a way of life and a profession. The *general objectives* of these owner-farmers could therefore be broadly outlined as pursuit of the highest possible profit on condition that this pursuit of profit should not be at the expense of a happy family and way of life.

The objective(s) formulated above are vague in the sense that they are not quantifiable and can also be interpreted in different ways. The definition is, however, true in practice, where it is found that no two individuals have the same system of values and their concept of what represents a *happy family and way of life* therefore differs. The extent and duration of the pursuit of profit will therefore vary from one farmer to the next, depending on his personal circumstances and the extent to which he is prepared to sacrifice the pursuit of profit in favour of other priorities. What would, however, be vitally important to the individual farmer in this respect, is that he should be able to determine what his other priorities cost him in terms of sacrificing profit, because only then will he be able to make a rational choice between the priorities.

The community expects the farming production sector to supply — within the limitations of a particular country — at least food and basic materials at reasonable prices and to continue doing so, which implies optimum utilisation of natural resources over the long term.

However, general objectives will not suffice. Each activity or subactivity also needs its own specific objective or subobjective, but these must always be reconcilable with the general main objective. For example, the farmer who decides to produce maize, must also have a specific objective for his maize branch, for example to cultivate 500 ha of yellow maize per year. But this is still not enough. He will also have to determine physical and cost objectives since these will again guide him in his planning of seed and fertiliser use.

Every farmer must determine his own personal objectives. The importance of setting targets can again only be emphasised and it must once again be pointed out that it is important for the farmer to have clarity about what he wishes to achieve with his farming enterprise. If there is any conflict between these objectives, the farmer himself, taking into account his specific pursuits and personality, must clearly outline his own priorities. In the planning of any further action or target he must make quite sure that this specific objective or action is reconcilable with his own priorities and fits in with the general objectives. Everything said about objectives so far can be summarised in a single concept:

The objective of the farming enterprise is the pursuit of maximum profit with the proviso that the natural resources (soil, water, grazing, etc.) are left in such a condition that they can still produce a high yield, and provided that the pursuit of profit is not at the expense of a happy family life.

Farm management tasks

Apart from the different approaches to management, it appears that all approaches basically distinguish the same management tasks. There may be differences in the number of tasks and the terminology used, but the nucleus and essence of all approaches are basically the same. An exposition of these general groupings of management tasks and the more common terminology are given in table 1.1:

Table 1.1 Groupings of the basic management tasks

Planning Organisation Co-ordination Command Control	Planning Organisation Implementation Control	} Planning Implementation Control
---	---	--

For the purposes of this book, the grouping in the centre column is preferred and management tasks and farm management tasks are regarded as synonymous. Although the four management tasks are discussed separately, their application in the enterprise are not necessarily in sequence. A farmer surely does not first complete all planning and then start organising, followed by execution of the task before commencing the control task. Some of the tasks are carried out simultaneously. Tasks also do not alternate in a fixed pattern. Logically, the first or initial planning of a certain activity will precede its organisation and control, but a reorganisation or replanning could emerge directly from control. Similarly, the farmer, while carrying out a specific activity, may already plan and organise another one. However, in logical order the management process can be explained according to the following three main activities:

- Devising and contemplating new ideas and plans.
- The development and implementation of ideas and plans.
- Supervision and control to ensure that the ideas and plans are carried out correctly.

With the above explanation as background, the four management tasks in the farming enterprise can now be elucidated.

Planning

WHAT IS PLANNING?

Planning must surely be the farmer's most critical task since it is the foundation on which all his farming activities are based. The importance of planning is evident from a description of planning as management task:

Planning is described as the determination of future activities that are necessary to achieve specific objectives.

Planning is therefore a scientific thought process that can be divided into the following two phases:

- Devising and contemplation of what the enterprise hopes to achieve in the near future; and
- The systematic determination of the way in which different activities can be carried out in an effective sequence and according to an exact chronological order. In other words — both the *speed* and the *sequence* in which tasks can be carried out.

Planning creates the framework within which the various factors of production (land, capital, labour, etc.) will be organised, allocated and controlled in future to achieve the farming objectives. It therefore has to do with effectiveness and endeavours to answer the question: What is the right thing to do? In this regard Peter Drucker⁶ made a very important distinction between efficiency and effectiveness:

- Efficiency is to do things correctly.
- Effectiveness is to do the right things.

A farmer could be very efficient to have 20-ha cultivated with a spade and a pick-axe, but he would be much more effective if he ploughed it with a tractor.

But the planning of the farming enterprise (farming planning) must not be confused with farm planning. Farm planning forms part of the planning of the farming enterprise and concerns the physical layout and division of the farm according to slopes, soil types, soil potentials and other environmental factors. Farming planning, on the other hand, is a comprehensive activity and consists of

a total plan for the farming enterprise as a whole and part-plans which concern certain aspects of the enterprise, such as the planning of specific branches of production or farming activities. We therefore may find a farming plan consisting of a crop production plan, a livestock production plan, a labour plan and a financing plan (see the section on the farming plan in Chapter 4).

WHY PLAN?

It is often alleged that a person cannot plan rationally in the farming situation and the reason given is that farming is subject to too much uncertainty and risk. Such risks and uncertainties arise from the specific production and marketing circumstances in agriculture (see also Chapter 12 which deals with risk and uncertainty in farming).

Production is subject to climatic conditions that are neither predictable nor controllable, while the marketing of agricultural products is subject to substantial supply and price fluctuations. Such risks and variables that are unique to agricultural production and marketing cannot be denied, and it must be clear even to the layman that they make planning extremely difficult for the farmer. This does not, however, diminish the importance of planning, and a pundit once rightly remarked:

"Even a wrong projection is better than no projection."

A progressive and successful farmer had this to say about farming planning:

"Without rain a farmer is lost, without good planning he is more certain of the fact."

The unpredictability of farming conditions could compel a farmer to amend or abandon his entire farming plan at short notice. If the farmer has not considered these possibilities, he is caught unawares with the concomitant adverse effects for himself and his enterprise. Scientific planning means that the farmer has to consider all aspects of his plan or plans step by step. Such a planning process has the advantage that the farmer will know in good time whether his plan is at all feasible and economically justifiable.

THE STEPS IN PLANNING

Just as farm management can be divided into four tasks, planning consists of eight steps or elements, namely:

- Forecasting
- Objectives
- Policy
- Programmes
- Schedules
- Procedures
- Rules
- Budgets

- *Forecasting is an attempt to predict the course of future events on the basis of existing data and on expectations.* The purpose is to provide a manager with information on which he can base his planning. A farmer, like any other manager, must constantly make decisions. If all data were always available and the future could be predicted accurately, any person would be able to arrive at a good decision and be a successful farmer or manager. Unfortunately, there is a world of difference between the practical situation and the ideal and many decisions on the future have to be taken with only limited knowledge at our disposal; this applies to any business manager and to any farmer. The only way in which these future uncertainties can be diminished, is to make rational projections and predictions based on available information.

Obtaining information is therefore of special importance to the farmer because he cannot plan without it. He must have information on production matters, rainfall statistics, climatic conditions, price trends, supply and demand situations and he must use this information to predict the future. Since so few things in the farming enterprise remain stable in the short or the long term, the farmer must obtain information on an ongoing basis and he must make marketing and production projections for his farming enterprise from one year to the next.

- *Objectives or targets are the end results towards which the farming enterprise strives.* These objectives serve as a guide for the enterprise and its various subsections or different branches of production. They are not only the final blueprint, but also the final point at which organisation, implementation and control are aimed. Apart from a comprehensive objective for the enterprise as a whole, for example maximum profit in the long term, specific aims are laid down for each subsection or activity in the enterprise, to achieve the overall objective.

- **Policy:** The concepts policy and objective are often confused. Policy is the general statement that gives guidance in decision-making. It therefore demarcates the boundaries within which a decision can be made so as to be in line with the objective(s) of the enterprise.

The objective of a farming enterprise could be to make the maximum profit over the long term, while the policy might be not to sell any inferior products, not to let labourers work more than ten hours daily and to specialise in only two production branches at a time. Therefore, any decision taken in connection with the farming enterprise or its objectives, must be in accordance with the policy of the farming enterprise in respect of these facets.

- **Programmes** denote the sequence of the activities necessary to implement the policy and achieve the objectives. A programme gives step-by-step indications of *what* must be done.
- **Schedules** are closely connected with programmes. While programmes indicate what has to be done, schedules state *when* it must be done. In other words they indicate the time (date, hour) on which each activity should take place.
- **Procedures** describe the method by which the task has to be carried out. The procedure therefore says *how* an activity should be done, while the programme says *what* must be done and the schedule *when* it must be done.
- **Rules** are often confused with policy or procedure, while they are, in fact, something completely different. A rule demands specific action in a particular situation. A rule may or may not be part of a procedure. A rule, such as "No smoking" is for example in no way related to a procedure. The procedures dealing with the handling of orders may, however, include the rule that all orders must be confirmed on the day of receipt. Rules must also be distinguished from policy. The purpose of policy is to guide thought processes in decision-making by demarcating the field to be assessed. In contrast, rules are absolute and make no provision for personal discernment in their application.
- **Budgets** are plans expressed in figures. They are usually expressed in financial figures such as rands and cents, but could also be expressed in physical units such as hectare, kilogram per hectare or litres per cow. From a management point of view a budget is one of the most important aids and it will therefore

be discussed in more detail in subsequent chapters.

Organisation

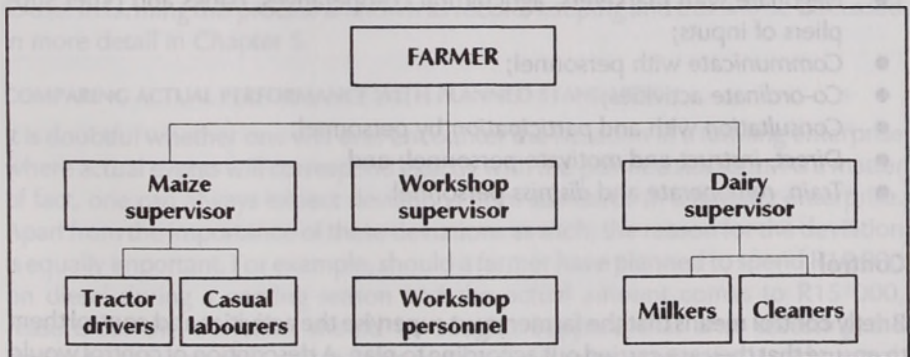
The second management task after planning is organisation. Once the plans and the budgets have been compiled, the farming enterprise must be organised in such a way that the plans can be implemented. The different tasks required for the plans to succeed must therefore be identified and those that go together must be combined in a *function*.

Organisation can therefore be described as determining the different tasks that have to be carried out, combining those tasks that go together in a function, and the creation of good relations between those who have to carry out the functions and tasks so that each one knows what he is responsible for and what his job in the enterprise is.

A big farm on which maize is produced and which also operates a dairy, may be organised as follows:

All those tasks that are related to the maize project are determined and combined in the function *Maize Section*. Those tasks concerned with maintenance and the repair of equipment are combined under the function *Workshop*, while the dairy tasks are grouped together under the function *Dairy*. At the head of each function — now known as sections — there must be a person who has the responsibility to supervise that section and who has the necessary authority to ensure that tasks within his section are carried out correctly. The farmer can then compile an organisation chart showing the posts and functions in his enterprise. An organisa-

Figure 1.4 Simple example of a farming organogram



tion chart (organogram) for this specific enterprise would be as in figure 1.4.

The benefits derived from organisation include the following:

- Each person is occupied in a specific task and can therefore specialise in his task or tasks.
- Each person knows his duties and responsibilities.
- Management and control are facilitated since the farmer now knows what each person should be doing, which means that he can keep each one responsible for his task or tasks.
- The farmer saves time; it is not necessary to make new divisions every day and he is not solely responsible to see that everything gets done: he is assisted by three supervisors.

Although the advantages of organising on the above scale are obvious, it is unfortunately true that at present it can still only be applied in the South African farming situation on a limited scale. The general reason for this is that it is difficult to find responsible personnel with the necessary knowledge, or that they are too expensive. A further reason is that many enterprises are not big enough to make full use of organisation and specialisation. Farmers could, however, obtain the benefits of the system by allocating Black farm personnel to various farming activities according to preference, interest and ability. (See Chapter 10 on labour management.)

Implementation

Once the plans have been finalised and the enterprise has been organised, implementation must be ensured. To do this, the farmer must carry out the following activities:

- *Obtain and place* personnel according to the tasks and functions that have to be carried out;
- *Negotiate* with marketers, agricultural co-operatives, banks and other suppliers of inputs;
- *Communicate* with personnel;
- *Co-ordinate* activities;
- *Consultation* with and *participation* by personnel;
- *Direct, instruct* and *motivate* personnel; and
- *Train, remunerate* and *dismiss* personnel.

Control

Briefly control means that the farmer must supervise the activities and control them to ensure that they are carried out according to plan. A description of control would

then amount to the following:

Control is the process by means of which the farmer sees to it that the actual activities correspond with the planned activities.

Put differently: control is the activity carried out to determine whether specific targets have been achieved.

Ideally, the control task involves the execution of the following four steps:

- The creation of standards;
- The measuring of actual performance;
- The comparing of actual performance with the planned standards; and
- Taking corrective steps.

CREATION OF STANDARDS

Standards are necessary for exercising successful control. If there are no realistic standards against which actual performance can be measured, it is not possible to exercise successful control. In this respect the budget and thorough farming records are invaluable. The budget serves as a standard and the actual events are documented via record-keeping.

Past records also serve as criteria and standards with which present performance can be compared.

MEASURING ACTUAL PERFORMANCE

It is as important to document actual events as it is to create standards. The events must be measured and recorded in a format that will make it easy for the farmer to use. In farming this process is known as record-keeping and this will be discussed in more detail in Chapter 5.

COMPARING ACTUAL PERFORMANCE WITH PLANNED STANDARDS

It is doubtful whether one will ever encounter the situation in a farming enterprise where actual events will correspond exactly with the planned situation. As a matter of fact, one can always expect deviations from standards in a farming enterprise. Apart from the importance of these deviations as such, the reason for the deviation is equally important. For example, should a farmer have planned to spend R10 000 on diesel during a coming season and the actual amount comes to R15 000, reasons for the deviation should be sought. Suppose that after assessing the deviation, the cause is found to be excessive diesel consumption for weed control.

CORRECTIVE STEPS

When it has been established that there are deviations between the plans (standard) and the actual result and the reasons have been established, corrective steps must be taken. Corrective steps amount to one or more of the following:

- Changing the standard because it is too high or too low;
- An increase in performance to adjust to the set standard; or
- No immediate action because the deviation is due to a one-off and/or uncontrollable factor.

According to these three steps, the farmer in the preceding diesel example has three possible options, namely:

- To continue his mechanical weed control and to increase his diesel budget to R15 000 per year;
- To investigate chemical weed control and to implement it if it is economically justifiable; or
- To do nothing at the present stage because abnormal rainfall was responsible for the present state of affairs.

It is therefore clear that control forms the end point of one management process, but also immediately gives rise to new planning, new organisation, new implementation and, last but not least, new control.

The decision-making process in the farming enterprise

We have already seen that rational decision-making is one of the basic elements of management. However, the question is: What is a rational decision and how is it made? *Rational decision-making* is a scientific process aimed at *achieving an objective* and consists of the following steps:

- The identification and definition of problems or opportunities.
- The collection, organisation and analysis of relevant facts, information and opinions.
- The development and specification of alternative actions.
- The choice of a satisfactory solution (making the decision).
- The implementation of the decision.
- Taking responsibility for the decision and its results.
- Observation and evaluation of the result of the decision.

Steps in decision-making

It should already be clear that the preceding steps overlap and influence one another. The gathering of information concerning one problem could lead to the discovery of another problem, and the implementation of one decision could impose restrictions on other opportunities. For easier comprehension, the steps will be discussed separately.

IDENTIFICATION AND DEFINITION OF PROBLEMS AND OPPORTUNITIES

Virtually every day a farmer has to deal with problems and opportunities in his enterprise. In a certain sense every problem is also an opportunity, and each new opportunity is also a problem. Both call for identification — some simpler than others — and both call for actions — some easier than others.

Problems and opportunities can be identified in different ways. There is much speculation about why some farmers are quicker to see opportunities and problems around them. Findings on this indicate that the farmer's knowledge, experience and thought processes have a lot to do with it. The more comprehensive his knowledge, greater his experience of farming and the more alert he is, the easier he will find it to identify a new problem or opportunity.

Once the problem or opportunity has been identified and defined, one is half-way towards formulating the solution. In this respect not only farmers, but people in general err because they are only too ready to suggest a solution — often long before they have established what the real problem is. Prejudiced or poor problem identification usually leads to a waste of time and money and rarely offers a permanent solution. It is therefore advisable to spend time, energy and money to identify a problem rather than only identifying a symptom of the problem. A correct solution based on a wrong problem will do as little to solve the problem as the wrong solution for the real problem.

In this regard it is also important to distinguish between "big" and "small" problems. Unnecessary trouble is often taken with problems that do not really have a major influence on the enterprise's objectives. For this reason the farmer must ask himself the following questions when identifying the problem:

- Is it a problem?
- Is it the real problem, or only a symptom of the problem?
- Is it a significant problem in so far as it concerns the efficiency and objectives of my farming enterprise?

GATHERING, ORGANISATION AND ANALYSIS OF INFORMATION

Once the problem has been identified, the next logical step must be taken, namely to collect data, get opinions, acquire information and make observations. All

relevant data concerning the problem under discussion must be obtained. In this instance a distinction is made between data and information. Data are regarded as unclassified facts and figures that have little value as such, while information refers to data that have been rationally calculated, processed and compiled, making it possible to obtain useful results and logical conclusions from it. Although the process of gathering information seems to be a simple one, this is not always the case. The reasons for this are that some problems do not lend themselves to actualities. Moreover, gathering information takes time and it usually also costs money to obtain adequate information. Thirdly, it demands insight from the farmer to determine whether the information is indeed adequate for making a decision. In the latter instance there are few aids at the disposal of the farmer since each situation must be judged according to merit. Good insight, sound thinking and sober discretion are probably the only aids available to the farmer.

Data and information for farming purposes can be obtained from various sources. Unfortunately, in most cases the value of the farmer's own farm as a source of information is usually underestimated rather than assessed according to value. More is said about this in Chapter 5.

DEVELOPMENT AND SPECIFICATION OF ALTERNATIVE ACTIONS

Once the relevant information has been gathered, the farmer can start developing alternative solutions and actions for the problem or opportunity. In some cases the solutions may already emerge during the information-gathering phase, while in other cases alternatives first have to be analysed before an option can be exercised.

It is important to think impartially and to approach the problem or opportunity objectively. In other words, the farmer must not limit himself to certain standard practices. He must give his thought processes free rein; even if initially the idea seems impractical or even unacceptable, he must not reject it forthwith. Many farmers have come forth with brilliant solutions because they were not daunted by the seemingly impossible. Another valuable hint is to discuss alternative actions with others and to seek the opinions of fellow farmers and other experts. However, avoid those with a negative attitude who seek a reason for failure in every suggestion.

MAKING THE DECISION

Taking a decision means making a conscious choice between two or more possible actions. This implies that a decision must be arrived at. In most cases this is the most difficult step in the decision-making process, because choosing the best action is not always easy, nor is the choice obvious. Moreover, most decisions are aimed at the future and therefore contain an element of risk. Also, no farmer or manager likes to make a wrong decision.

Although it must be granted that decision-making is not always easy or simple, a

farmer is constantly confronted with endless decisions. Anyone who shrinks from making a decision will therefore find it difficult to make a success of farming. All decision-makers — be they farmers or managers — do not only make good decisions, they also make mistakes. But farmers who are prepared to make decisions will, over the long term, have more success than those who regularly delay or avoid making decisions.

IMPLEMENTATION OF THE DECISION

In most cases choosing the best alternative will not have the desired results if the choice is not implemented. Decision-making in the farming context also implies the implementation of the decision, because without implementation the taking of a decision is only a creative thinking process. Implementation means that the choice is put into operation and in the case of most farming decisions, it amounts to the mobilisation of human and material resources.

ACCEPTING RESPONSIBILITY

The sixth step in the decision-making process involves the acceptance of responsibility for the decision. The farmer knows that his family's and employees' salvation often depends on his decision-making ability. This puts a lot of responsibility on him to make the right decisions and to learn from his past mistakes. This is even more valid in the farming situation since the farmer stands alone in his responsibility and cannot blame an executive committee, a general manager or board of directors.

OBSERVATION AND EVALUATION OF THE DECISION

Observation and evaluation are the final step in decision-making and means that the decision must be analysed both during its implementation and after the action has been completed. Farmers are often so busy making decisions and implementing them that they pay scant attention to this important final step. If this is not done, valuable opportunities are lost to make timely adjustments or to learn from the successes and errors of the past.

The field of decision-making in the farming enterprise

A wide range of divergent decisions must be taken in the enterprise. The following exposition serves to illustrate this.

- When *going into farming or expanding the existing farming unit*, decisions on the following must be taken:
 - Must the land be purchased or leased or should one join an established farmer?
 - Should the entrepreneur decide to purchase the land, what is a realistic price for the property?

- Should the entrepreneur decide to lease, what type of lease agreement is preferable and how much should be spent on rent?
- How big must the land be?
- As regards the *financing of the enterprise*, the following problems arise:
 - What is the nature and size of the enterprise's capital needs?
 - What financing policy should be followed; in other words, how must the different forms of capital be combined so that, taking the specific circumstances into account, they conform with the needs?
- Regarding *decisions on land utilisation*, answers to the following questions are important:
 - What is the farm suitable for?
 - What must the lay-out be like?
 - Which branches of production must be included in the enterprise?
 - What must be the extent of each branch?
- In *crop production* solutions must be found for the following problems:
 - Which crop production plan is to be implemented?
 - Should a rotational system form part of the crop production plan?
 - Which fertilisation practices must be followed?
 - Should irrigation be applied?
 - Which methods of pest and insect control must be followed?
- In *livestock production* the following problems arise:
 - Which livestock branches and activities must be included in the enterprise?
 - Which feeding practices are to be followed, and must feed be produced or purchased?
 - Which breeding methods, methods of grazing pasture and disease prevention or treatment must be followed?
- The management of *labour and mechanical equipment* calls for attention to the following:
 - To what extent should the enterprise be mechanised; in other words, to what extent must manual labour be replaced by mechanical equipment?
 - Should mechanical equipment be purchased or leased?
 - Should new or used equipment be acquired?
 - What size must equipment be?
 - How big must the permanent labour force be?
 - How many seasonal labourers are required, and how and where can they be obtained?
 - How will the labour force be selected and trained, and what will the labourers' service conditions be?

- The *purchase of production supplies* calls for decisions on the following:
 - What types or trademarks, and how much must be bought?
 - Where, when and on what conditions must the supplies be bought?
- The *marketing of produce* leads to the following questions:
 - Where, when and through which channels should marketing be done?
 - In what form and on which conditions should marketing be done?
- *Bookkeeping and the use of a budget system* mean that attention must be paid to the following aspects:
 - What labour, physical and financial records are required for tax, management and other purposes, and how should these records be kept?
 - What types of budgets should be compiled, what information is needed to do this, and where and how can the information be obtained?
 - Should record-keeping be done by hand or by means of a computer?
 - Which has more advantages: one's own computer system or a computer bureau service?

The above problems are by no means a complete reflection of all the decisions with which a farmer has to cope virtually daily. They do, however, give an idea of the extent and variety of management decisions that have to be taken in the farming enterprise.

SUCCESS IN MANAGEMENT

The ability to identify a problem or an opportunity, evaluate it, take a logical decision about it and to implement the decision, are general traits of successful entrepreneurs, farmers and businessmen. Apart from these characteristics, the following general traits of successful managers/farmers can also be distinguished:

Successful managers and successful farmers —

- *are motivated and have ambition.* They want to achieve success and are prepared to spend long hours on their enterprises, make decisions and adjustments, and certainly do not wait for "an overall perfect plan" before they take action.
- *are purpose-motivated.* They set objectives for themselves and their enterprises and pursue these.
- *develop their strong points.* Not everyone has the same talents and abilities. Successful farmers identify their strong points and concentrate on these. They prefer to make slow, but definitive progress, rather than skipping from one unknown project to the next.
- *emphasise increased productivity.* They are constantly on the look-out for opportunities to improve their enterprises, broaden their knowledge and learn new skills.
- *concentrate on key areas in their enterprises.* This is done without neglecting

less important matters.

- *take calculated risks.* They know that few actions or decisions in the enterprise are free from risk and are therefore prepared to take well-considered risks.
- *stay in contact with persons and institutions that can influence the success of their enterprise.* This implies contact with input suppliers, banks, agricultural cooperatives, control boards, state departments, universities, etc.

Apart from the above personality traits, successful farmers must also have the following:

- Adequate capital
- Practical experience
- Technical and production know-how
- Management and business knowledge.

To summarise, it is evident that a farmer must have *knowledge* and know how to *apply* it — he must *know* and *know how*.

SUMMARY

The preceding discussion on general and farm management is by no means a full explanation of the problems with which the manager of a farming enterprise has to cope. It only serves as an example of the complexity and divergence of farm management and a few of the qualities which a successful farmer must have.

This book will endeavour to provide principles, guide-lines and aids which the farmer can apply to his decision-making and in the management of his enterprise.

END NOTES

- 1 South African Agricultural Union, *Die finansiële posisie van boere in die Republiek van Suid-Afrika*, 1983, Desember 1984, p. 34, read together with the number of farmers of 67 681, p.13
- 2 Allen, L.A., *The management profession*, New York: McGraw-Hill, 1964, pp. 86-88
- 3 Reynders, H.J.J., *Die taak van die bedryfsleier*, 3rd ed., Pretoria: Van Schaik, 1975, p. 45
- 4 Van der Schroeff, H.J., *Kosten en kostprijns*, in Reynders, *ibid.*
- 5 Drucker, P.F., *The practice of management*, Harper, 1954, p. 3
- 6 Drucker, P.F., *Management: tasks, responsibilities and practices*, New York: Harper & Row, 1974, p. 45
- 7 Osburn, D.D. & Schneeberger, K.C., *Modern agricultural management: a systems approach to farming*, 2nd ed., Virginia: Reston Publishing, 1983, pp. 14-16.