

Chapter 1

**Risk, risk management
and information requirements**

MAIN POINTS IN CHAPTER 1

The risks of farming

Farmers make decisions every day that affect farming operations. Many of the factors that affect the decisions they make cannot be predicted with complete accuracy; this is risk. Farming has become increasingly risky as farmers become more commercial. Farmers need to understand risk and have risk management skills to better anticipate problems and reduce consequences.

Sources of risk

Risk affects production such as changes in the weather and the incidence of pests and diseases. Equipment breakdown can be a risk as can market price fluctuations. Borrowing money can also be risky with sudden changes in interest rates. Risk also occurs as a result of changes in government policies. Such risks often have a major impact on farm income. Finally, there are risks related to the health and wellbeing of the farmer and his family and the supply of labour for the farm.

Risk management

Decision-making is the principal activity of management. All decisions have outcomes or consequences. However, in most situations the

Risk management, continued

outcome of a decision cannot be predicted. The more complex the risk, the more difficult it becomes for farmers to make an informed decision. For effective decisions to be taken, farmers need information on many aspects of the farming business. Farmers have to find ways of dealing with risk and protecting themselves from the uncertainties of the future.

Farmers' attitudes toward risk

*Farmers differ in the degree to which they accept risk. Some farmers are willing to accept more risk than others. Attitudes to risk are often related to the financial ability of the farmer to accept a small gain or loss. Farmers' attitudes may be classified as: **risk-averse** those who try to avoid taking risks; **risk-takers** those who are open to more risky business options; and **risk-neutral** farmers who lie between the risk-averse and risk-taking position.*

Information for decision making

Good risk management decisions depend on accurate information which requires reliable data. Good information can help a farmer make rational risk management decisions. The sources of information available include farm records, off-farm statistics, information from input dealers, traders, extension workers and other farmers and market price data.



INTRODUCTION

***Extension workers
can help farmers
to improve their
risk management
skills ...***

***... help them to
recognize and
understand their
problems ...***

***... and assist them
in making better
farm management
decisions.***

Farming is risky. Farmers live with risk and make decisions every day that affect their farming operations. Many of the factors that affect the decisions that farmers make cannot be predicted with 100 percent accuracy: weather conditions change; prices at the time of harvest could drop; hired labour may not be available at peak times; machinery and equipment could break down when most needed; draught animals might die; and government policy can change overnight. All of these changes are examples of the risks that farmers face in managing their farm as a business. All of these risks affect their farm profitability.

While farmers have always faced risk, farming has over the years, as a result of market liberalization and globalization, become increasingly risky. Smallholder farmers have become especially vulnerable. A casual approach to farming, even if it is for household food consumption, is no longer viable. Farmers need to acquire more professional skills, not only in basic production but also in farm business management. Among these are risk management skills.

Skillful farmers and other business people generally do not become involved in risky situations unless there is a chance of making money. Higher profits are usually linked with higher risks. These risky but potentially profitable situations need to be managed as carefully as possible. Good risk management involves anticipating potential problems and planning to reduce their detrimental effects. Simply reacting to unfavourable events after they occur is not good risk management.

In order to succeed, farmers need to generate more profit and become competitive. They must have a good understanding of the farming environment and be skilled at managing risk. By dealing with risk more effectively, better farming opportunities arise.

Extension workers can help farmers improve their risk management skills. They can help farmers recognize and understand their problems and assist them in making better farm management decisions.

At the start of a season, farmers decide to grow different crops. They decide what to plant, how much to plant and when to plant. These decisions may appear simple, but for each decision there are many possible consequences. There will be only one outcome; only one result. But at the time the decision is made, the outcome is uncertain.

When the chance or probability of an outcome is known in advance this is called risk. When the chance of an outcome is not known in advance this is called uncertainty.

Note: For the purpose of this guide we will assume that risk and uncertainty refer to the same thing.

SOURCE OF RISK

The most common sources of risk in farming can be divided into five areas:

- production • marketing • financial •
- institutional • human •

Production and technical risk

Crop and livestock performance depend on biological processes that are affected by the weather, and by pests and diseases. Low rainfall or drought may lead to low yields. Hail or heavy rains could damage or even wipe out crops. Outbreaks of pests or diseases could also cause major yield losses in crops and livestock.

Risks include low rainfall, drought, hail or heavy rains, pests and disease, breakdown or unavailability of equipment and spare parts

When farmers plant seeds and fertilize their land they do not know for certain how much rain will fall, or whether there will be a hail storm. They do not know if there will be a problem with pests or diseases. But still they must decide whether they are going to plant their crops or raise their livestock. The resources they spend to plough, plant and fertilize their crops or to care for their livestock may not be recovered. This is why there is risk. Farmers produce without complete certainty about what will happen to their production.

Another source of production risk is equipment. A farmer's tractor may break down during the production season resulting in an inability to harvest in time, thus affecting yields. *Similarly, if the farmer uses shared or hired traction or other equipment, will it be available when needed? If the farmer is using a new technology, will it perform as expected? Will it actually reduce costs and/or increase yields? If seeds do not germinate and day-old chicks die what will be the impact on production and farm family income?* The farmer can never be completely certain.

Marketing risk – prices and costs

Changes in prices are beyond the control of any individual farmer. The price of farm products is affected by the supply of a product, demand for the product, and the cost of production.*

- **Supply of a product** is affected by a combination of production decisions made by farmers as a group and by the weather and other factors that influence yields.
- **Demand for a product** is affected by consumer preference, consumers' level of income, the strength of the general economy, and the supply and price of competing products.
- **Cost of production** of a unit of product depends on both input costs and yield. This makes it highly variable. Although input costs tend to be less variable than output prices, when combined with yield variations the cost of production becomes a serious source of risk.

Factors affecting risk include supply, demand and cost of production

Sometimes price movements follow seasonal or cyclical trends that can be predicted. Many times, however, supply or demand will change unexpectedly and, in turn, affect the market price. When farmers plant crops or commit resources to raising livestock, they do not know for certain what prices they will obtain for their products. In situations of low rainfall, production of crops is often reduced and, as a result, prices rise.

Financial risk

Financial risk occurs when money is borrowed to finance the farm business. This risk can be caused by uncertainty about future interest rates, a lender's willingness and ability to continue to provide funds when needed, and the ability of the farmer to generate the income necessary for loan repayment. Smallholder farmers who borrow money at high interest rates may have particular difficulty making debt repayments. Lower than expected prices, combined with low yields, can make debt repayment difficult and even lead to the sale of the farm.

* See also Economics for MARKET-ORIENTED FARMING (Farm management extension guide 1).

Institutional risk is caused by unpredictable changes in the provision of services

Institutional risk

Institutional risk refers to unpredictable changes in the provision of services from institutions that support farming. Such institutions can be both formal and informal and include banks, cooperatives, marketing organizations, input dealers and government extension services. Part of institutional risk is the uncertainty of government policy affecting farming, such as price support and subsidies. The risks farmers face are often a result of decisions taken by policy-makers and managers. Subsidies, food quality regulations for export crops, rules for animal waste disposal and the level of price or income support payments are examples of decisions taken by government that can have a major impact on the farm business.

Human and personal risk includes illness, accidents, migration and political and social unrest

Human and personal risk

Human risk refers to the risks to the farm business caused by illness or death and the personal situation of the farm family. Accidents, illness and death can disrupt farm performance. In many countries labour migration away from rural areas is a common occurrence. Migration can cause labour shortages for the farm. Political and social unrest can also limit labour availability. The spread of HIV/AIDS has had a serious impact on labour availability and productivity in some areas. When farmers plant their crop or commit resources to raise livestock they cannot be certain whether they will have enough labour to manage the farm enterprises.

Interrelation of risks

Production, marketing, financial, institutional and human risks exist on most farms. They are frequently interrelated. The ability to repay debts depends on levels of production and the prices received for produce sold. Financing of production depends on the ability to borrow capital and the ability of the lender to supply capital in time. The different types of risk often need to be considered together.

Risk and variability

Regardless of the source of risk, the degree of riskiness of an action depends, in part, on the ability to predict what will happen in the future.

*Risk occurs because
of unexpected changes*

If farmers are able to understand and predict the patterns and trends throughout the year, the changes that occur may not be so risky.

Example

A vegetable farmer in Zambia studied the changes in vegetable prices over several years. She observed that the prices follow a pattern of being high before the harvest, dropping at harvest time and rising again towards the end of the season. With this information, she could plan when to plant and harvest her vegetable crops. As a result she was able to have vegetables ready to sell when prices were good.

However, changes that cannot be predicted and are more sudden are likely to be more severe in their impact on the farm.

Example

A group of fruit farmers in Thailand growing under rain-fed conditions and relying on the export market found that fruit prices varied greatly. This made it hard for them to predict future prices. As a result there was always the risk of having their fruit ready for sale when prices were low.

The relative importance of the different sources of risk depends on the nature and circumstances of the individual farmer and the farm household. This includes the resource base of the farm, its physical location, the enterprise combinations chosen, the specific production processes practiced by the farm family and the attitude of the farmer towards risk.

Farmers producing under rain-fed conditions may see drought as the greatest risk. Farmers producing high-value produce may find price fluctuations to be their greatest risk. Whatever the risk, farmers need to take it into account when making decisions about what to plant, when to plant, where to plant, how to plant, how much to plant, and the resources to allocate. These are the main management decisions that farmers make.

The time between when a decision is made and when the outcome or consequence of that decision is experienced also affects risk. The farmer often needs to integrate what are called “short-term tactical decisions” with “longer-term strategic decisions”. Time also influences the usefulness of information used in decision-making. The ability of the farmer to respond to events is also affected by time. These aspects of time make assessing risk more complex.



RISK MANAGEMENT

Decision-making is the principal activity of management. Early in the cropping season farmers must make decisions about what crops to plant, and what seeding rates and fertilizer levels to use. The yield and prices obtained will not be known with certainty for several months, or even several years in the case of perennial crops and livestock.

In only a few cases are farmers certain of the outcome of their decisions. This usually occurs when the decision is easy and there is only a single outcome. For example, if farmers decide to take short-term loans, they know what will occur; banks will charge them interest at a specific rate. In this case, farmers know exactly the consequences of their decisions.

In most situations, however, the outcome of a decision cannot be predicted, as there is more than a single possible outcome. Farmers often find that their decisions turn out to be less than perfect because of changes that take place between the time the decision is made and the time the outcome of that decision is finalized. It may be that the outcomes themselves depend on the decisions of others and on future events that lie beyond the control of the farmer.

For effective decisions to be taken, farmers must have all the necessary information regarding input prices, output prices and yields, as well as other technical data.

Making good decisions is the hardest part of farming ...

... one can never be absolutely certain how things will turn out.

An example of rainfed crops

Farmers who produce rainfed crops are likely to have good yields if the rainfall is adequate. But it is not certain whether it will rain, how much rain will fall or whether that rain will fall at the right time. These farmers are uncertain of the crop yield because of the risks of weather. If farmers plant their crop and an average amount of rainfall occurs, yields could be high and the crop could generate a satisfactory profit for the farmer.

* * *

But if rainfall is not adequate, farmers may suffer low yields and low or non-existent profit. The pattern and amount of rainfall directly affect yields and the level of production of these crops. High rainfall results in good yields but runs the risk of increasing production among all farmers, resulting in price decreases. The combined effect of changes in production and price impact on the level of profit that can be earned.

The risks associated with rainfed farming are usually more complex than those encountered under irrigation.

Farmers often have a basic understanding of how their crops will perform under dry, average and wet conditions. Some may have a formal record of the annual rainfall in the vicinity of their farm, while others may just remember the pattern over the years. Some farmers may have a feeling about the likelihood of a dry or wet year occurring before they decide on a cropping pattern for the season. Often, farmers think about the possible consequences of a decision to plant and grow their crops and then they decide what to do.

Sometimes the risk may be so small that one does not give it any consideration. This is particularly the case when there is a long history of a consistent relationship

between the decisions taken and the outcome. For example, if a farmer has a long, successful working relationship with his or her hired labour force and the situation has not changed significantly, there will be little risk of labour not being available when needed.

Sometimes the risk may be very great and the farmer will need to give it careful consideration. For example, being the first farmer to adopt a new seed or livestock variety may create a wide range of risks, each of which could potentially bring about losses or gains. Before deciding to apply the new technology the farmer should take time to investigate and understand the nature of the risks and the degree of risk involved.

***Before applying
a new technology
farmers should
fully understand
the risk***

Where there is little or no risk, decisions are generally easier to make. The greater and more complex the risk, the more difficult it becomes to make an informed decision. It is helpful to consider the fact that farmers do not only make active decisions to do something. Refusing to choose or to make a particular decision is, in itself, a decision that has outcomes and consequences. So it is important that the farmer understands risk and how it affects his farming business. This puts the farmer in greater command of the factors that influence the household, farming and livelihood systems.

Decision-making process

Farmers, like others, generally have at least a basic set of goals and objectives in life. Some may have thought these through very carefully. Others may have only a vague or general idea of what they want to achieve. Either way, every farmer grows crops or raises livestock for a reason. It may be for household food consumption. It may be for profit. It may be because the farmer has no alternative source of income. Or it may be for any combination of these or other reasons.

Decisions about the farm are made in the context of the farmer's goals and objectives. They guide and influence the decisions the farmer makes. Because decisions are made to achieve goals and objectives, it is helpful for farmers to understand the essential elements

Figure 1
**Risk management:
 the decision-making
 cycle**



of decision-making. The basic decision-making process is shown in Figure 1. The goals are set; farmers look at the different ways to achieve the goals; they evaluate the different alternatives; select the best alternative; plan for implementation; and review and evaluate the consequences of the action. This is often called the decision-making cycle.

Decision-making and risk

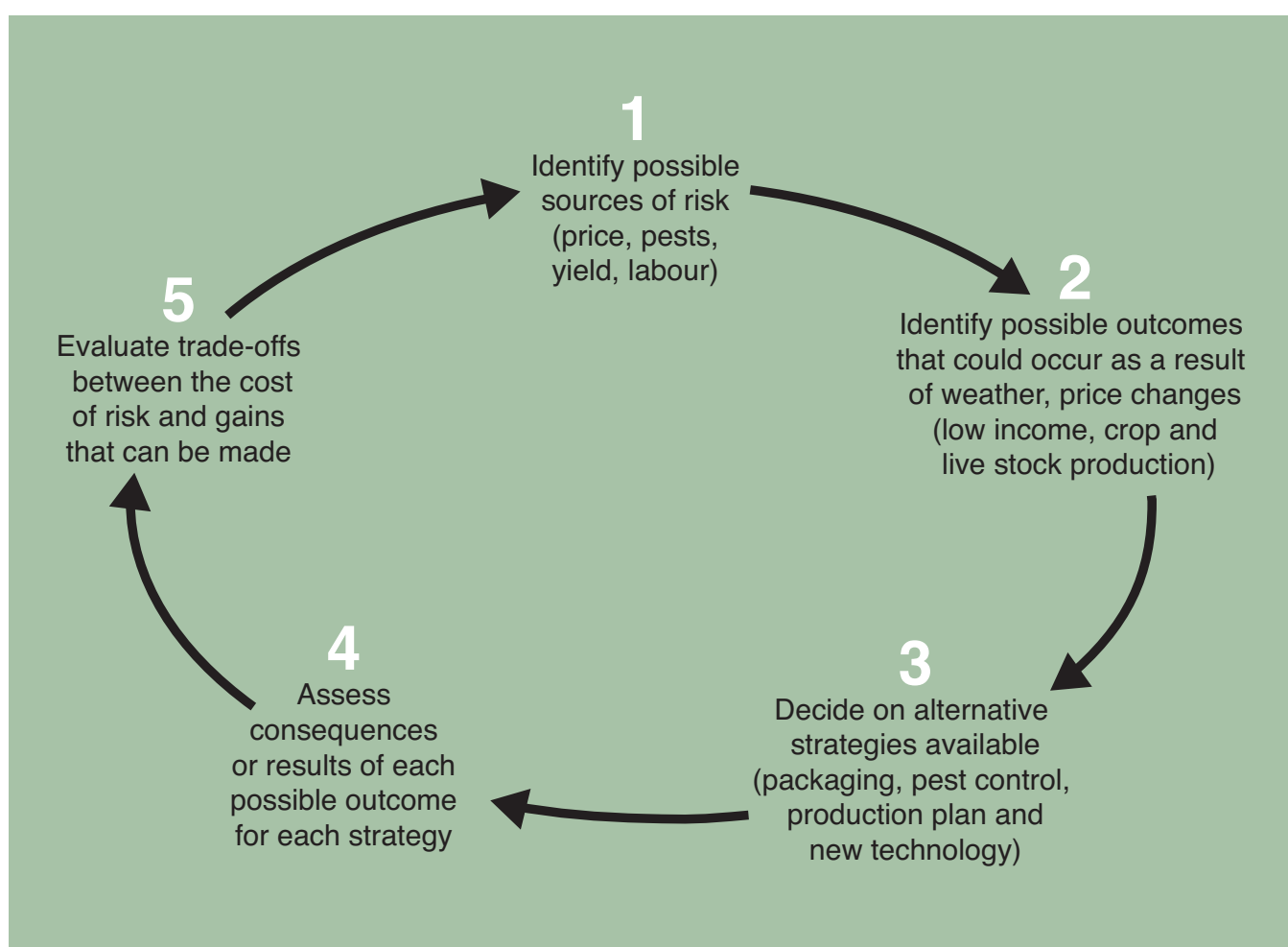
Farmers have to find ways of dealing with risk and protecting themselves from decisions taken today without knowing what may happen tomorrow. Risk management strategies are used to reduce the chance of a "bad" outcome occurring. Farmers who try to manage risk should follow another sequence of steps. They need to identify the possible sources of risk; realize the possible outcomes; decide on alternative strategies available; assess the consequences of each possible outcome; and

*Consequences
 of the decisions
 made by farmers
 are generally not
 known until
 much later ...*

evaluate the trade-offs between the cost of the risk and the gains that can be made. Figure 2 shows the sequence of steps to be followed by farmers in managing risk.

Farmers differ in the degree to which they accept and estimate risk. They base decisions on a number of factors. Some farmers are willing to accept more risk than others. Often farmers' attitudes regarding risk are based on their personal feelings rather than information presented to them to help them make more rational decisions.

... and the outcomes may be better or worse than expected



Attitudes concerning risk are also associated with the financial ability of the farmer to accept a small gain or loss. It is unlikely that a large-scale commercial farmer would be badly affected or forced out of business from a small loss of \$300 in one year, a relatively insignificant loss for the farmer. But it is unlikely that a small-scale farmer with a low income would be able to sustain such a loss. Consequently the farmer would be less willing to risk such a loss.

Figure 2
Steps to be followed by farmers in managing risk

The risk-averse farmers try to avoid taking risks

Farmers' attitudes toward risk

Farmers may be divided into three types: risk-neutral; risk-takers and risk-averse. The risk-averse farmers try to avoid taking risks. They tend to be more cautious individuals with preferences for less risky sources of income. In general, they will sacrifice some amount of income to reduce the chance of low income and losses. A risk averter does not refuse to accept any risk at all. However, the risk-averse farmer would seek to be compensated for the risk taken by receiving a higher return than would normally be obtained if there were no risk.

The risk-takers prefer to take a chance to make more profit

Risk-takers are people who are open to more risky business options. Unlike the risk-averse, risk-takers choose the alternative that gives some chance of a higher outcome, even though they may have to accept a lower outcome. When faced with the choice, risk-taking farmers tend to prefer to take the chance to make gains rather than protecting themselves from potential losses. Even so, risk-taking farmers are still influenced by the return they could receive. Risk-neutral lies between the risk-averse and risk-taking positions.

It is useful for the farmers and those who provide support services to know their attitudes towards risk. In this way, they are more conscious of the motivation behind the risk management decisions made. While most farmers tend to be risk averse, attitude concerning risk is not fixed. Many factors influence it. Thus in one situation a farmer may be risk averse, and in another situation the same farmer may be a risk-taker.

The following are some of the factors that may influence a farmer's attitude towards risk

- *Farmers who operate under subsistence conditions tend to be the most risk-averse.* The provision of food for their dependants is an overriding priority for many of them. Activities with a monetary reward are frequently sacrificed in favour of meeting the objective of producing their own food.

- *Market-oriented farmers who are not willing or able to withstand the possible financial losses associated with a risk also tend to be more risk-averse.* This is often true for smallholder farmers. In effect the relationship between the input costs and the value of output from the farm influences the farmer's attitude toward risk.
- *Family commitments and responsibilities can also play a role in attitudes toward risk.* A person without family commitments may be more willing to take risks. Similarly, older people are likely to take less risks.
- *Past experience may also influence a farmer's decisions.* The effects of particularly good or bad years in the past influence decisions to be made today. Again, this may be related to age; a younger person may not yet have had many experiences on which to base decisions.

An example of decision-making in risk management

A farmer needs to decide how to cope with a possible infestation of pests. *Should he spray early as an "insurance" against the infestation occurring? Or should he wait for indications of infestation before deciding when to spray?* When market prices are low and the cost of pesticides is high, the net benefit from using pesticides in years when there is high pest infestation will be lower. In this case the farmer will be reluctant to buy expensive inputs.

Risk-taking choices

Risk management refers to actions farmers take to increase the chances of success of the farm business. Farmers can do this by influencing events in the future and by limiting the negative effect of those events. Many farmers try to do both. A good risk management strategy will try to act on both events and their consequences.

The main aspects of risk management are:

1. Anticipating that an unfavourable event may occur and acting (where possible) to reduce the chances of it happening;
2. Taking actions that will reduce the adverse consequences should the unfavourable event occur.

Farmers are often willing to accept higher risks to obtain higher incomes

An important aspect of risk management is that all responses to risk involve a cost. This cost is expressed by the amount of resources tied up in order for the farmer to manage his risks more effectively. In some cases the cost is easy to identify, in other cases the cost is less obvious.

Examples of risk management costs

A farmer may keep a stock of spare parts for the farm machinery to minimize risks of breakdowns. The spare parts are tied-up resources. The cost is the value of the spare parts.

Insurance is a common way to manage risk. In this case the cost is obvious and easily identified: the insurance premium.

A farmer may decide to grow a drought-resistant crop instead of one that is more drought prone. But the market price of the drought-resistant crop may be lower than the market price of the drought-prone crop. The cost to the farmer is the possible higher price that is given up by growing the drought-resistant crop.

A farmer may decide to use a more complex production system. In this case, the cost is in the form of additional time required in management.

Whatever its form, the cost of a response to risk will also influence a farmer's choice of strategies to manage risk.

An example of reducing adverse consequences

A cassava farmer in West Africa has heard on the radio that there is blight in his area. *What should be done about the risk that his crop might be attacked by the blight?*

- First he needs to know how likely it is that his farm will be affected.
- He knows that one way to avoid the potential problem is to harvest his crop early. But to do this means he will have a smaller crop that will possibly attract a lower price. There is a risk in taking this action.
- He does not like taking risks. He is risk averse.
- The cost of this action is the potential loss of income. But failure to do it may lead to a total crop failure. So a lower income may be better than the risk of no income.

He decides to harvest his crop early. This way he knows he will have some income, which is better to him than the possibility of no income at all.

When risk is viewed as the chance either of gains or losses, the decision changes from seeking to remove all risk to trying to find the balance between the potential income that the farmer is willing to accept and the amount the farmer is willing to pay to reduce the risk.

That balance depends on:

- the riskiness of the action itself;
- the farmer's attitude towards risk;
- the resources tied up;
- the gains that must be given up to cover the risk.

The decision is complex and related to the farmer's ability to take risk. In order to assess the cost of risk and the effect on potential income, the farmer will need to have at least a basic understanding of farm economics.

An example of avoiding potential problems

At the beginning of every season a farmer worries that his old tractor could break down. To reduce the likelihood of this happening he may:

- overhaul the tractor before he starts using it;
- keep some spare parts for the tractor ready;
- service the tractor regularly in an attempt to avoid the risk completely.

While these actions may not prevent a breakdown, the farmer reduces the chances of one happening.

Farmers' risk-taking abilities are determined by their financial obligations. Some key indicators of risk-taking ability are:

Gross margin. Gross margin is the difference between the income of an enterprise or farm and the variable costs. The higher the gross margin, the more income the farmer can generate and the greater the risk-taking ability.

Cash flow or cash cushion. All farmers need cash to meet family living expenses, loan repayments and other expenses requiring cash payment. The farm is expected to generate an income to cover expenses. Cash flow is the expected sales minus expenses. The smaller the cash flow, the lower the cash reserve and the risk-taking ability of the farmer. In the event of a shock occurring, such as a sudden increase in costs, or an outbreak of disease leading to a high mortality of livestock, or drought and a failed crop, the farmers with a "cash cushion" are better able to absorb these risks.

An example of cash flow

Assume there are three farmers each operating 20-ha farms with the same type of machinery. All three farmers have outstanding debt from a purchase of improved seed and fertilizer. Farmer 3 borrowed \$100 to cover the cost of hired labour when the farmer was in hospital. A comparison of the three respective financial situations is outlined below.

	Farmer 1	Farmer 2	Farmer 3
Gross income	\$220	\$180	\$210
Variable costs	80	60	80
Gross Margin	140	120	130
<i>Inflow</i>			
Loan	—	—	100
Income	220	180	210
Total inflow	220	180	310
<i>Outflow</i>			
Debt repayment	10	10	80
Rent	—	100	100
Expenses	80	60	80
Total outflow	90	170	260
Net cash flow	130	10	50

Here we see that Farmer 1 has the highest gross margin and the largest cash flow. Farmer 1 can assume more risk than either Farmers 2 or 3 and has higher risk-taking ability.

A quick demonstration of this can be seen if the gross income is reduced by \$60. In this situation, Farmer 1 would still have a positive cash flow, but Farmers 2 and 3 would have negative cash flows. This again shows that Farmer 1 is able to absorb greater risk.

Risk is a way of describing the chance a farmer takes when making decisions

Risk can often encourage positive change

Risk can lead to gains or losses

The greater the risk, the greater the potential for loss or gain

KEY POINTS

Understanding risk will help extension workers to advise farmers on how to assess risk and to choose risk management strategies. The following are some key points to consider.

* * *

Some farmers believe that they should try to eliminate all risk. Farmers who are afraid of taking risks will try to limit the possibility of losses, even if it means reducing the likelihood of gains. They want to increase income while avoiding risk. However, increasing income almost always requires taking some risks.

* * *

Risk is not necessarily good or bad for the individual farmer. It simply describes the chance the farmer would take by following a particular production plan. In a way, understanding risk helps the farmer understand the negative and positive outcomes of decisions taken.

* * *

Farmers who enjoy taking risks are frequently the first to adopt a new practice. This promotes technological change.

* * *

The risks associated with farming create opportunities for both gains and losses. Generally, the greater the risk, the greater the potential for loss or gain. Knowing this, farmers can then decide to what degree they want to take a chance.

* * *

The existence of risk does involve a cost to the farmer.



INFORMATION FOR DECISION-MAKING

Good risk management decisions depend on accurate information, which, in turn, requires reliable data. Good information is one of the most useful assets a farmer can have to help make rational risk management decisions. There are many sources of information available. The most appropriate place to look for information depends on the type of risk the farmer has to manage.

Farm records

All farmers who are able to do so should keep records of their farm business. Farmers who are unable to do this should consider getting assistance. Farm records are the best source of historical production data. These can be supplemented and complemented by off-farm information, especially market and weather information. However, off-farm information is not very useful by itself. Farm records are needed to make well-informed management decisions.

Farm records provide a record of past decisions made by farmers regarding their farm performance. These records include data and information about crop yields, livestock production, cost and income. Farm records give an indication of the assets used on the farm. They also give an indication of the capacity of the farmer to produce and sell farm products. If these records are kept accurately, they will show the variations in the level of production and the prices experienced by farmers over time.

Farm records help farmers to examine their past decisions and the results of those decisions. With these records farmers are able to reflect on their decisions and assess their risk preferences. The information collected on past trends should help them to take better farm management decisions.

Farm records include data on production, yields, use of fertilizers and chemicals, seeds, labour

Farm records also provide a picture of the risks that farmers have faced in the past. They give an indication of the risk management decisions taken and the consequences of those decisions. Such information can help identify any changes that should be made in the future regarding risk management.

Answers to many questions related to risk can be found in farm records:

- *What is the likelihood of dry years or drought? What is the effect of drought on yields? How variable have yields been between years?*
- *Which crops have performed best? What has been the performance of the livestock kept?*
- *What has been the effect of crop rotations? Could a change in rotation produce more desirable results?*
- *What cultural practices, tillage systems and timing of field operations have been used? With what result? Would a change produce more desirable results?*
- *What percentage of produce is sold at harvest? Are crops sold early to repay debts?*
- *How effective is the marketing strategy? What has been the impact of price changes on farm profitability?*

While farm records provide useful information about what has happened in the past, they provide very little information about what will happen in the future. To obtain this information farmers must look at additional sources collected by other organizations or people that might allow them to better understand past trends and predict future trends. However, there is no information that allows farmers to predict with complete certainty what will occur in the future.

Off-farm Information

Off-farm information is, just as it sounds, information that is obtained from sources other than the farm. Such information is vital for good farm management decisions.

A farmer can find information from many sources including:

- other farmers
- agricultural suppliers
- traders
- extension services
- private/commodity advisory services
- agricultural statistics publications and broadcasts (e.g. radio)
- farming magazines and newsletters

It is your job as extension workers to advise farmers where they can best find the information they need.

Most countries produce and publish historical information (statistics) about yields and prices of various crops. This information is often useful for farmers to compare with information collected from their own farm records. Farmers should be assisted by extension workers in accessing this information. Such a comparison can help farmers see the effectiveness of their farm management decisions, by determining how their farms compare with other farms in the vicinity. However, they must compare like with like. There is no point in comparing the performance of their farm with that of farms in different agro-climatic areas*.

Farmers should think about the kind of information they require and then find appropriate and reliable sources for that information. They may require simple supply and demand information and market prices or more complex comparisons or projections as to future market trends. In some countries, highly sophisticated, Internet services may be available with up-to-the-minute prices or complex marketing information. Farmers in many countries are increasingly accessing price information through the use of mobile phones.

Farmers should compare published statistics with their own records

Published information comprises averages of yields, product price and input costs

* See also FARM BUSINESS ANALYSIS using benchmarking (Farm management extension guide 3).

Extension services are a valuable source of information



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Farmer receiving extension service leaflets on the care of olive trees – Jordan

Agricultural suppliers are constantly in touch with farmers and are well informed



© FAO/21639/J.Spauli

Farmers in-and-out of agriculture stores pass on information – South Africa

Farmers with similar enterprises can be of great help to one another



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Farmers learning procedures at a fish farm exchange ideas – Botswana

Farmers may have to pay for information. In such cases they should treat that information like an input on their farm and apply the principles of marginal cost and return. Farmers should not pay more for information than the value that the information adds to their profits.

***Information
is an input***

Finally, farmers should also reflect on the quality of the information they can obtain. Some sources of information may be more accurate or reliable than others. If farmers find that the information does not lead to better decisions with desirable results, they should reconsider their information needs and sources.

Other Information

Farmers may also require more than just market and production data. They may need information to help them select new technologies, understand legal and contractual issues, and better sustain the farm environment.

Such information might include:

- tax legislation
- import/export regulations
- environmental legislation
- resource conservation
- food safety
- water quality
- animal health
- farm programmes and policies.

All of these areas could affect decisions made by the farmer and influence risk. Again, it is the role of the extension worker to identify the sources of this information and convey them to their farmers.