



## AgriBusiness



*"Farming fertile minds ..... Growing fertile futures"*

### Risk Management in Agriculture

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## Contents

- Farm Business Management
- What is Risk
- Drivers of Business Success
- Risk and Uncertainty
- Sources of Risk in Agriculture
- The Risk Management Process
- Financial Success
- Strategy for Negative occurrences
- Conclusion

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## Farm Business Management

- Management is the allocation of scarce resources such as land, capital and labour in order to achieve certain objectives within an environment characterised by risk and uncertainty. This ultimately drives the two main factors in agriculture namely price and production risk.
- The table below indicates examples with which the farming entrepreneur is confronted.

Resources	Management Choices	Objectives
Land	Enterprise choices	Income levels
Capital	Crop choices	Income stability
- Equipment	Production methods	Personal objectives
- Buildings	Size of operations	Family objectives
- Operating capital	Production efficiency	Complexity of Management
Labour	Price determination	Risk exposure
Management expertise	Logistics	Return on capital
	Financing methods	

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## What is Risk

- **Risk is something that we are confronted with on a daily basis and which requires decision to be made.**  
**Think about the risks which each one of us had to take just to be here today**
  - Firstly each one of us had to leave his home and place of business to drive here
  - You may have had to negotiate bad and busy roads
- **All of these could have had a negative result, but each one here acted as a risk manager either consciously or unknowingly you weighed the risks, the possible consequences thereof and how you would have dealt with any of the eventualities should they have occurred.**

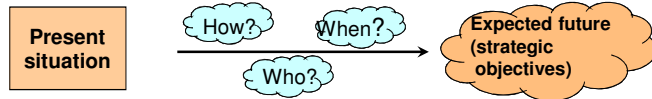
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## Drivers of Business Success

- Successful farmers see themselves firstly as a businessman and thereafter as an agricultural producer. Your business success must always be measured by means of specific objectives.
- There are two sets of objectives that each entrepreneur should set for himself.



- **Strategic objectives** which determines what you intend to achieve over the long term such as growth and expansion of the business venture / farming operation. This gives the business its purpose and direction.
- **Operational objectives** on the other hand focus on the business's operations and include production and financial results.

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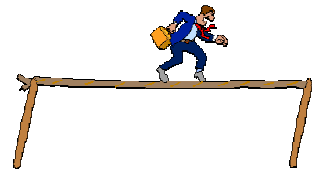


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## Risk and Uncertainty

- **Risk and uncertainty** in a business context have two specific but different meanings.
  - **Uncertainty** refers to incomplete information and knowledge such as when the future outcome of a decision is unknown (eg. The price of a product produced.)
  - **Risk** on the other hand is the probability that a certain event may occur (eg. The occurrence of drought, hail, floods, etc.)



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## Sources of Risk in Agriculture

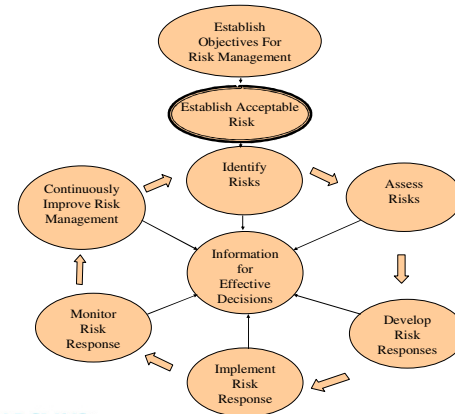
- Weather patterns are unpredictable and drive the yield of agricultural enterprises which in turn drives price levels. Mainly production risk.
- The open market bring large changes in agricultural commodities through erratic prices both for products produced as well as for production inputs required.
- Other drivers of risk include changes in the judicial environment, political changes, technology changes, etc.
- **Risk management that only include the assessment of the negative impacts will be incomplete as risk can also create opportunities that can be utilised.**

• “NO RISK NO REWARD PRINCIPLE”

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## The Risk Management Process



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## The Risk Management Process

- **Step 1** : Ask the question of which activities are managed and what are the objectives of the risk management process in the context of the activities.
- **Step 2** : Determine the level of risk that the business can afford in order to achieve its objectives.
- **Step 3** : Ask what can go wrong as well as which opportunities may present itself.
- **Step 4** : Here two questions are asked – Firstly what is the probability that an unwanted event may occur and secondly what is the potential impact thereof on the business.
- **Step 5** : Compile a risk management plan before an unwanted event takes place. Entrepreneurs must prepare themselves and have action plans in place of how to deal with unwanted events.
- **Step 6** : Implement risk action plans.
- **Step 7** : Monitor the success of the action plans and adapt if required.
- **Step 8** : Risk management must be seen as a dynamic process because risks change over time in order that new risks develop and other risks may even disappear.

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Types of Risks	Risk Consequence
<b>Natural</b> : Risk of damage by wind, storms, floods, drought, etc.	<ul style="list-style-type: none"> <li>o Property damage</li> <li>o Personal injuries</li> <li>o Business continuity interruption</li> <li>o Liability claims</li> </ul>
<b>Resource Risks</b> : Risk of diminishing resource capacity which influence production and profitability potential	<ul style="list-style-type: none"> <li>o Soil erosion</li> <li>o Salination</li> <li>o Bush encroachment</li> <li>o Loss of water quality and quantity</li> <li>o Continuous droughts</li> </ul>
<b>Production risks</b> : risks which influence production and profitability	<ul style="list-style-type: none"> <li>o Pests and diseases</li> <li>o Availability of labour</li> <li>o Availability of inputs</li> <li>o Climatic conditions</li> <li>o Mechanical breakage of equipment</li> <li>o Technological changes</li> </ul>
<b>Market risks</b> : risk of price and volume	<ul style="list-style-type: none"> <li>o Price fluctuations</li> <li>o Product quality</li> <li>o Market access</li> <li>o Exchange rate changes</li> <li>o Consumer preferences</li> <li>o Input cost increases</li> </ul>
<b>Financial risks</b> : risk that influence the financial performance of the business	<ul style="list-style-type: none"> <li>o Inadequate financial information</li> <li>o Inadequate cash flow</li> <li>o Interest rate fluctuations</li> <li>o Availability of credit facilities</li> <li>o Incorrect debt structure</li> </ul>



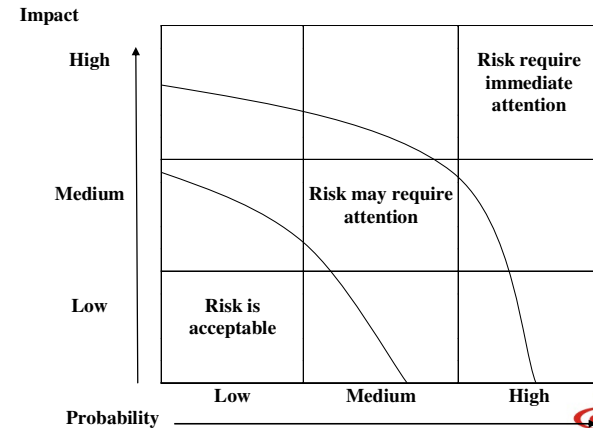
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Types of Risks	Risk Consequence
<b>Strategic risks :</b> risk that influence long term profitability	<ul style="list-style-type: none"> <li>o Lack of future planning</li> <li>o Changes in Government policy</li> <li>o Changes in economic market forces</li> <li>o Changing technology</li> <li>o Regulatory changes</li> </ul>
<b>Human resource risks :</b> risk that influence the capacity of the people involved in the business	<ul style="list-style-type: none"> <li>o Conflict due to succession planning</li> <li>o Limited Human resources</li> <li>o In effective management</li> <li>o Loss of key staff</li> <li>o Lack of motivation</li> </ul>
<b>Social risks :</b> risk that influence the business environment	<ul style="list-style-type: none"> <li>o Loss of market due to reputation</li> <li>o Loss of production due to poor relations with neighbours</li> <li>o Inability to grow business due to poor relationships</li> <li>o Loss of markets due to food safety</li> </ul>
<b>Business relationship risks :</b> risks that influence the business relationships negatively	<ul style="list-style-type: none"> <li>o Legal risks</li> <li>o Breaking supply chain which influence production program and production levels</li> <li>o Trade disputes which influence delivery to market outlets (local and export markets)</li> </ul>

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## Financial Success

- In order to achieve the strategic objectives each farming business must have clear financial objectives which contributes to the overall success of the business.
- The financial success of a farming venture as well as its capacity to absorb negative impacts and still survive are measured in the following four key financial ratios. These ratios can be compared to the gauges on a tractor such as fuel, temperature, oil level and tyre pressure.
- **Liquidity** is the capacity of a business to continuously honour its financial obligations without impacting on its normal operations. Liquidity measures the business's ability to generate cash within a determined timeframe and in sufficient quantities within an operating cycle. Cash is required within any business venture to service its financial obligations, to cover unforeseen expenses and to take advantage of possible business opportunities.
- **Solvability** measure the relationship between own capital and borrowed capital within the business or in short the debt ratio. The bigger the percentage own capital the bigger the capacity of the business to absorb financial shocks and its ability to carry losses.

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## Financial Success

- **Profitability** measure the amount of surplus funds that is left over after all operating expenditure is covered. Within any business including farming the objective is to generate profit for the entrepreneur. These profits are normally utilised for four main purposes.
  - As remuneration for the entrepreneur / owner
  - To service the capital portion of loans
  - For further capital investment
  - To provide for retirement
- **Debt servicing capacity** measure the capacity of the business to service its debt obligations from income generated within the business.

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Comparative Balance Sheet for two Farms (Rand)			
	Farm A (Rand)	Farm B (Rand)	
<b>Assets</b>			
Current assets	311,500	124,600	
Fixed assets			
Equipment	934,500	934,500	
Livestock	623,000	778,750	
Land	3,115,000	4,672,500	
<b>Total Assets</b>	<b>4,984,000</b>	<b>6,510,350</b>	
<b>Liabilities</b>			
Current liabilities	218,050	218,050	
Long term Liabilities	934,500	2,809,500	
<b>Total liabilities</b>	<b>1,152,550</b>	<b>3,021,550</b>	
<b>Net Asset Value</b>	<b>3,831,450</b>	<b>3,488,800</b>	
<b>1. Liquidity</b>	<b>Farm A (Rand)</b>	<b>Farm B (Rand)</b>	
<b>Asset proof Ratio</b>			
Current assets	311,500	124,600	
÷ Current liabilities	218,050	218,050	
=	<b>1.43</b>	<b>0.57</b>	
Industry Standard	1.5 tot 2.0	Good	
	1.1 tot 1.5	Average	
	< as 1.1	Poor	
<b>2. Solvability</b>	<b>Farm A (Rand)</b>	<b>Farm B (Rand)</b>	
<b>Own capital to Total assets</b>			
Net asset value	3,831,450	3,488,800	
÷ Total assets	4,984,000	6,510,350	
=	<b>0.77</b>	<b>0.54</b>	
Industry Standard	> as 0.7	Good	
	0.55 tot 0.7	Average	
	< as 0.55	Poor	

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Income Statement		Farm A (Rand)	Farm B (Rand)	1. Return on Capital (ROC)		Farm A (Rand)	Farm B (Rand)
Income				Net farm income		398,719	656,331
Crops		763,175	1,406,423	+ Interest paid		124,600	330,813
Livestock		404,950	717,696	- Value of entrepreneurs remuneration		-186,900	-311,500
Other		93,450	62,300	+ Total assets		4,984,000	6,510,350
Increase / (decrease) in stock		93,450	62,300	= Return on capital		0.07	0.10
<b>Total Income</b>		<b>1,355,025</b>	<b>2,248,719</b>	Industry Standard		> as 0.05	Good
<b>Expences</b>						0 tot 0.05	Average
Crops		409,623	623,000			< as 0	Poor
Livestock		285,023	451,675	<b>2. Debt servicing capacity</b>		<b>Farm A (Rand)</b>	<b>Farm B (Rand)</b>
Overhead expences		74,760	93,450	Net farm income		398,719	656,331
Interest on term loans		93,450	284,088	+ Depreciation		62,300	93,450
Interest on working capital		31,150	46,725	+ Interest on term loans		93,450	284,088
Depreciation		62,300	93,450	- Entrepreneurs remuneration		-186,900	-311,500
<b>Total Expences</b>		<b>956,306</b>	<b>1,592,388</b>	= Available for debt servicing		367,569	722,369
<b>Net Farm Income</b>		<b>398,719</b>	<b>656,331</b>	Current Capital and interest		233,625	710,220
				<b>Debt servicing capacity</b>		<b>1.57</b>	<b>1.02</b>
				Industry Standard		> as 1.5	Good
						1.1 tot 1.5	Average
						< as 1.1	Poor

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## Strategy for Negative impacts

- **Risk avoidance** – When confronted with unacceptable risks one can decide to avoid them completely eg. Not to plant a particular crop or to change to another enterprise.
- **Risk transfer** – In certain cases risk can not be avoided and it is therefore better to transfer the risk although at a cost. These type of actions decrease the business risk to acceptable levels eg. In agriculture crop insurance and fixed price contracts which covers both production and price risks.
- **Risk mitigation** – In certain cases risk can not be avoided and or transferred and in such cases the entrepreneur must mitigate the probability that such an event may occur eg. Diversification of enterprises and adaptable production practices.
- **Risk acceptance** – Although one does everything possible to identify risks and plan for them there are always events that take place that are outside of your control. These risks are normally accepted as part of the cost to do business. It is therefore important to create contingency reserves to be utilised to manage such events and to protect the success of the business continuity.

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## Conclusion

- For any business, including a farming business, to survive financially over time it is important to produce products profitably for the market without the threat that the long term existence being threatened by risks. Entrepreneurs must therefore identify risks, measure the potential impact thereof and manage them while the normal business activities of the acquisition of resources, production and marketing for the best possible profit within this framework takes place. These activities are the core of risk management.
- It is therefore of cardinal importance that the entrepreneur and farmer empowers himself with information and knowledge of his business environment and the economy.

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## Identify Opportunities



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## Make use of information and support !!!!!



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## And reap the benefits



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Thank you for the opportunity to share  
a few thoughts with you



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