

Risk Management Planning for Agricultural Businesses

Managing risk is a key part of running a successful farm or agricultural business. Left unchecked, risks can lead to financial losses, operational disruptions or legal trouble. In some cases, lack of risk management can force a business to close. This guide outlines common types of risk and offers practical strategies to manage them. A simple template is included on Page 5 to help you get started on a risk management plan tailored to your operation.

What is risk?

Risk is the possibility of encountering harm or loss from an action, decision or event. Risk is linked to uncertainty, such as whether the outcome of an event or situation will be positive or negative. Not all risk needs to be avoided. Sometimes a potential reward or outcome may justify assuming the risk. However, understanding and managing risk provides resilience to businesses.

Types of risk

You have to identify risks before you can manage them. Risks for agricultural businesses may be grouped into five general categories: production, marketing, financial, legal and human (Figure 1).

Production risk

Production risk primarily affects the quantity and quality of what is being produced. There is plenty of uncertainty in the natural growth processes of crops, livestock and other agricultural products. Pests and diseases can have crippling effects on plant and animal health. Weather-related risks — such as drought, flooding, hail, wind, temperature extremes and fire — can be major production risks for crop and livestock farms. Poor quality or availability of inputs can hinder



Figure 1. Types of risk.

production. Risks such as mechanical or equipment failure can be detrimental to production. Post-harvest risks can reduce the quality of products before they are sold, leading to marketing risks.

Marketing risk

Marketing risk primarily addresses the price at which products are bought or sold. Reducing price uncertainty lowers the risk associated with marketing. Price is a function of the supply and demand for a product.

Financial risk

Financial risk refers to factors that impact the financial health of the farm business. These are the [basic components of financial risk](#).¹

- The cost and availability of money borrowed to operate and grow the business
- The ability to meet cash flow needs and financial commitments in a timely manner
- The ability to endure short-term financial shocks
- The ability to maintain and grow equity in the business

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Legal risk

Legal risk relates to uncertainties surrounding agreements that a business has with individuals or institutions, including the government.² Legal risks can arise from the organizational structure of the farm business; the terms of contracts and agreements; potential liabilities; and government policies, programs, and regulations.

Human risk

Human risk involves the people within or interacting with your business. These risks include the health and safety of workers, owners and family in your business; employee management; transition planning; and relationships within the business.

Risk management

Risk management describes the process of identifying, assessing and addressing risks for your business. A risk management plan, with appropriate strategies, is most important for risks that could cause serious harm to your business.

Managing one area of risk can cause new risks to arise in other areas. For example, diversification can reduce production or marketing risk while increasing human risk. A good risk management plan accounts for the interrelatedness of various risks. Outsourcing production activities can reduce some risks (production) while increasing others (financial).

Time frames are essential in understanding risk. The template on Page 5 has a column for “timeline to complete.” Timing involves implementing a risk management strategy at the appropriate time and continuing to evaluate that risk over time. For example, a marketing plan may involve entering into a marketing agreement and regularly evaluating how the markets are affecting that decision. Another example would be necessary routine conversations with legal and financial advisors and with employees.

Risk management strategies

Four strategies agricultural businesses can use to develop a risk management plan are avoid, reduce, transfer and retain (Figure 2).

Avoid

An agricultural business may be able to avoid a risk. For example, an animal producer wishing to prevent animal diseases could avoid visiting other farms or coming into contact with animals from which diseases might be transferred. Another example of risk avoidance



Figure 2. Risk management strategies aim to either avoid, reduce, retain or transfer risk.

would be prohibiting outside visitors to a farm to avoid the risk of on-farm injury — a liability risk.

Reduce

A business can plan to reduce or lower risk. Crop producers manage weeds so that crops do not have to compete for water and other nutrients. Animal agriculture businesses use vaccinations and veterinary care to keep animals in good health and reduce the potential for disease.

Retain

Some businesses retain or accept risk as a strategy. Farmers may retain risk by speculating that market prices will move upward. There could be a significant cost or time required to use another strategy. For example, a farmer might decide against using futures contracts to sell grain due to the cost, time involved in working with a broker, and opportunity lost to gain from positive price movements in the future. Selling products at hay or produce auctions without price guarantees is another example of a business retaining risk.

Transfer

Transfer is when you shift risk to another party for a specified cost. Insurance is a common method for transferring risk. Crop/livestock insurance, property/liability insurance and outsourcing are all examples of how agricultural businesses may use this risk management strategy.

Table 1 illustrates how you can begin to formulate a risk management plan for your operation by identifying your risks in every risk category and selecting the appropriate strategy. The following sections provide further details on risk management strategies.

Strategies to manage production risk

Practical strategies for avoiding, reducing or transferring production risk are as follows:

- **Undertake production activities with knowledge or experience (avoid or reduce risk).** Better decision-making comes from education and experience. Have a good support team of experts to advise your operation. Gain experience from job shadowing,

Table 1. Types of risk and management strategies.

Risk category	Possible areas of risk	Management strategies
Production	Adverse weather events or conditions; pests and diseases; producer experience; management expertise	Diversify with more enterprises; adopt new or improved technologies; use best management practices; gain knowledge and experience in production activities; outsource production activities
Marketing	Prices received or paid; consumer demand; product supply; supply chain disruptions; global economics	Follow a marketing plan; use contracts; use futures, options, hedging; analyze your markets; diversify market channels; avoid unstable markets
Financial	Access to capital; increasing interest rates; debt structure; cash flow; financial shocks; unanticipated or emergency purchases; ownership of assets	Buy crop and livestock insurance; keep financial records and control costs; review and restructure debt and interest rates; assess capital investments carefully; evaluate lease vs. purchase; maintain liquidity; create annual budgets; monitor profitability and financial progress
Legal	Business organization; contracts; insurance coverage; liability exposure; environmental issues; regulations; government policy	Choose an appropriate organizational structure; review contracts and insurance policies; establish biosecurity practices; monitor environmental issues and policy
Human	Finding and retaining employees; manager health/illness/disability/death; employee benefits; business ownership transfer	Develop and follow human resources manual/policies; implement an emergency management/operating plan; have a business succession plan

Source: Adapted in part from Risk Management Planning Guide, Northwest Farm Credit Services (2011).

employment and/or apprenticeships with other successful agricultural businesses.

- **Diversify with more enterprises (*reduce risk*).** Increase the number of enterprises you have on your farm. You can produce multiple crops, livestock or products. This diversification may allow greater business stability from multiple production and financial sources.
- **Adopt new or improved technologies (*reduce risk*).** Use of modern technologies can increase efficiency; provide better data for decision-making; and equip you with tools to mitigate threats from weather, pests and resource scarcity. Examples include improved genetics or seeds, precision agriculture technologies, environmental monitoring, controlled environment agriculture (CEA), irrigation, robotics, and automated systems.
- **Use best management practices (*reduce risk*).** Best management practices — such as crop rotations, scouting, irrigation and livestock handling — and standard operating procedures can provide clear guidelines for managers and employees to improve productivity and manage production risk.
- **Outsource production activities (*transfer risk*).** You might use other input suppliers, such as for hay or grain, rather than producing inputs yourself.

Strategies to manage marketing risk

Practical strategies for avoiding, reducing or transferring marketing risk are as follows:

- **Avoid unstable markets (*avoid or reduce risk*).** Choose to not grow a crop or raise a livestock species with unpredictable market prices, low demand and/or low barriers to entry for other businesses.
- **Diversify market channels (*reduce risk*).** Use multiple market channels so you are not reliant on one specific channel. You can also explore alternative marketing strategies — for example, direct-to-consumer or wholesale — and value-added ventures when working in specialty or niche markets.
- **Analyze your markets (*reduce risk*).** Periodically research existing, new and emerging markets; examine pricing trends; and assess demand for your products. Maintain effective relationships with end buyers or markets to inform your business decisions.
- **Follow a marketing plan (*reduce risk*).** Write or update the marketing plan for your business before the season begins. Have contingency plans in place for when one or more markets are not available or have favorable prices offered.

- **Use contracts when available (*reduce risk*).** Seek marketing or sales contracts from market outlets or input suppliers.
- **Use futures, options, hedging (*reduce or transfer risk*).** In agricultural commodities, futures, options and hedging can be used to protect against price fluctuations for sales and purchases. Brokers execute these services for a fee or commission.
- **Diversify supply chains and purchases (*reduce risk*).** Trade, logistical or weather-related disruptions can lead to rising costs of agricultural inputs, such as forages, fertilizers and chemicals. Identify multiple suppliers with whom you maintain strong relationships. Understand the times or seasons to lock in input prices or add surplus inventory so your operation is not vulnerable.

Strategies to manage financial risk

Practical strategies for avoiding, reducing or transferring financial risk are as follows:

- **Avoid high financial leverage (*avoid risk*).** Use debt carefully. High levels of business debt present a financial risk and reduce your credit availability for unexpected challenges. Use debt when it leads to greater business profitability or overcomes a barrier to entry. Choose not to take out a loan until your farm has built more equity or has financial stability.
- **Assess capital investments carefully (*avoid risk*).** Avoid unnecessary capital purchases. Leasing land, facilities or equipment is an option to minimize capital investment costs in the short term and make funds available for other uses.
- **Keep financial records and control costs (*reduce risk*).** Have a sound accounting system to inform business decisions, financial monitoring and tax preparation. Understand your cost of production and break-even prices for each enterprise.
- **Monitor profitability and financial progress (*reduce risk*).** Generate and review end-of-year or quarterly financial statements, such as balance sheets and cash flow statements. Measure your financial progress over time, and benchmark numbers against others in the industry.
- **Create an annual budget with scenarios (*reduce risk*).** Annual budgeting and pro forma projections that prepare for the upcoming year will help set sales, expenses and profitability targets. Develop scenarios and outline actions for when you are not performing as expected.
- **Consider a longer-term loan debt structure (*reduce risk*).** Longer-term structure, spanning several years, on business loans can provide better

cash flow flexibility. Make extra payments toward the principal to reduce interest costs.

- **Maintain liquidity (*reduce risk*).** Maintain a healthy cash reserve or working capital balance for operating expenses, accounts receivables and emergencies. Establish a line of credit with a lender for short-term needs.
- **Use fixed interest rates (*reduce risk*).** Fixed interest rates can lower risk due to constant terms and payments over the loan life. Variable rates might initially have better terms but can fluctuate your loan payment with rate adjustments. Refinance loans if better terms become available.
- **Buy insurance and enroll in government programs (*transfer risk*).** Crop, livestock and private hail insurance can manage the financial impact of yield or revenue loss due to weather, markets, insects and disease. The U.S. Department of Agriculture (USDA) has federal disaster programs for crop or livestock losses that can support risk management. Farmers can connect with local insurance agents and USDA service centers to discuss policies and how they can manage financial risk.

Strategies to manage legal risk

Seek professional advice when needed to address legal risk. Practical strategies for avoiding, reducing or transferring legal risk are as follows:

- **Ensure regulatory compliance (*avoid risk*).** Understand and become knowledgeable on state and federal regulations and laws concerning your business and land. Conservation compliance, pesticide use, veterinarian treatments and manure application are examples of areas that may need monitoring.
- **Follow zoning and land-use restrictions (*avoid risk*).** County, township and/or city zoning laws could place restrictions or limitations on structures, land use or planned farming activities. Engage with local governing authorities when considering a major change or addition to your farm. Keep all permits and licenses up to date.
- **Use and review contracts (*reduce risk*).** Use written contracts for lease or sales agreements. Review every contract before signing or terminating it. Follow the terms carefully. Seek legal counsel or professional advice when needed to identify contract risks and potential challenges.
- **Keep good compliance or regulatory records (*reduce risk*).** Develop and maintain a record-keeping program for employees — payroll, time sheets, hiring documentation, worker safety, and so

Risk management plan template.

Type of risk	Management action strategy (avoid, reduce, retain, transfer)	Timeline to complete	Responsible party
Production			
Marketing			
Financial			
Legal			
Human			

forth; environmental compliance; permits; audits; and tax and legal documents.

- **Choose an appropriate organizational structure (transfer risk).** Legal structures such as LLC, S corporation or C corporation provide a way to protect personal assets from business liabilities resulting from litigation or bankruptcy.
- **Buy insurance for liabilities, property damage or food safety (transfer risk).** Insurance products such as liability insurance, property insurance, workers' compensation and product liability insurance can protect against potential losses or damages. Carefully assess what is endorsed, what is excluded, coverage levels and who is covered for various insurance policies.

Strategies to manage human risk

All businesses retain some human risk. MU Extension has practical resources to support farm businesses addressing [common farm labor management tasks](#).³ These are some practical strategies for reducing or transferring human risk:

- **Use clear policies and procedures (reduce risk).** Develop and implement a human resources manual, the official source for operational policies, practices, standards and details for your business. Strive to create a simple manual that explains information in an easy-to-understand format for employees.
- **Practice open communication (reduce risk).** Good communication and listening skills are important for managers. Dedicate a person from your farm to human resources. Hold farm operating meetings to discuss business operations and family business meetings to strategize and plan for the future.
- **Seek quality labor (reduce risk).** Find effective marketing channels for attracting candidates. Use good job descriptions, proper hiring practices and solid candidate evaluation when bringing new workers into your operation.
- **Invest in employee development (reduce risk).** Onboarding, training, coaching and mentoring create structure for new hires, improve skills and job performance, and foster long-term employee growth by providing clear expectations, personalized guidance and continuous development opportunities.

- **Invest in worker retention (reduce risk).** Discover what workers value so you can be competitive with other businesses. Consider compensation — including base pay, nonmonetary compensation, benefits and incentive pay — along with work-life balance.
- **Implement an operating plan (reduce risk).** Develop and maintain a short-term operating plan for your agricultural business. Decide roles and responsibilities for when an owner, manager or other key person is unable to perform duties.
- **Use worker health and safety protocols (reduce risk).** Create protocols for worker safety and health, hazard identification and prevention, and employee training in compliance with OSHA rules, regulations and agricultural industry standards.
- **Develop succession plans (reduce risk).** Have a farm or agricultural business succession plan in place for transferring management, ownership and/or business assets due to retirement or death.
- **Outsourcing (transfer risk).** Reduce your farm's labor force by outsourcing specific tasks or responsibilities, such as equipment repair, accounting, field work, seasonal labor and transportation.

Summary

Risk management is essential to agricultural business management and profitability. An agricultural business's resilience is enhanced by identifying major areas of risk and developing a risk management plan addressing relevant types of risk. Use the risk management template in this guide to get started.

Web addresses

1. agrisk.umn.edu/Library/Record/introduction_to_risk_management
2. edis.ifas.ufl.edu/publication/FY1485
3. extension.missouri.edu/programs/agricultural-business-and-policy-extension/farm-labor

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