Framework for Assessing Business Risk and Mitigations To Survive a Disaster or Catastrophe

Partners in Tax Education

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Overview

1. Planning for Mitigation and Recovery
2. Risk Management Strategies

Planning for Mitigation and Recovery

Planning for Mitigation and Recovery

Mitigation Planning:

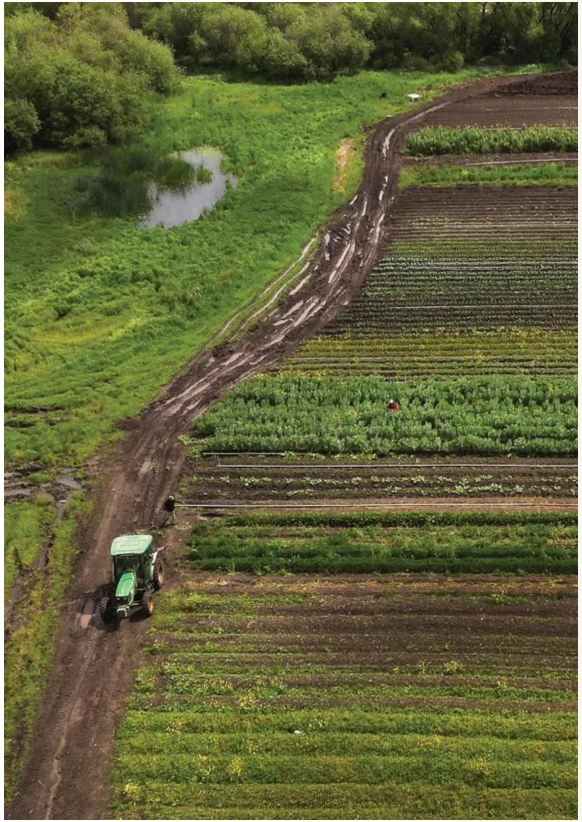
- Focuses on reducing the overall impact of a disaster before it occurs, including safety plans, evacuation procedures, and stop-loss strategies.

Recovery Planning:

- Focuses on restoring operations quickly after a disaster through advance preparation, including tools, skills, insurance, and documentation for loss assessment and recovery.

Safety Plans

- Flood routes
- Fire breaks
- Backup power especially for frozen inventory
- Site-specific risk assessments - examples
- Downed fences and loose livestock
- Loss of livestock water
- Loss of water to permanent crops



Evacuation Plans

- People
- Livestock
- Equipment, machinery, inventory

Immediate Stop-Loss Plans

- Livestock
- Permanent crops
- Fixed assets
- Moveable equipment

Tools Needed for Recovery

- Property insurance
- Detailed records of assets
    - Livestock
    - Equipment
    - Structures and Improvements
    - Permanent Plantings
    - Land Improvements
    - Growing Crops
- Access to credit
- Personal savings or off-farm income
- Information to manage cash flow

Skills Needed for Recovery

- **Cash flow planning skills**
- Tax management skills
- **Scenario planning skills**
  - Understanding how assets, labor, production, and marketing interact, and prioritizing essential assets and labor.
- Ability to access various relief programs
  - May include separate farm production income and expenses from other activities such as value-added production or agritourism.

Action Items

Things you have thought of:

- Safety plans
- Evacuation plans
- Insurance
  - Property
  - Liability
  - Crop / Livestock
    - If available, always sold separately from property and liability insurance

Offered "bundled" but they're two different things.

Action Items

Things you might not have thought of:

A standard double-entry bookkeeping system is an essential planning and recovery tool.

- **Start as soon as possible.** You will need several years of historic financial data in a useable form to support insurance claims and future decisions:
  - Asset lists
  - Costs of crops in fields
  - Sales detail by market, vendor and for sales on account slow- and fast-pay customers
- *Good news! A double entry bookkeeping system is also **a fundamental business management tool**.*

Action Items

Things you might not have thought of:

Analytical decision-support tools and skills are also essential to planning and recovery.

- Bookkeeping just gives you raw data in a useable format.
- True strategic management happens on a spreadsheet.
- You need supplemental analytical tools and skills to support:
    - **Cash flow planning**
    - **Strategic analysis of options/priorities**
    - **Decisions about credit and credit applications**
- *Good news! These are also **fundamental business management tools.***

Action Items

How to prioritize

1. Protect **critical assets,** identified as those most essential to your operation
2. Address greatest **vulnerabilities,** identified as most likely vectors for material losses
3. Are known to be **effective** and have a high probability of protecting your operation
4. **Benefit** your operation regardless of disaster.

Adapted from Laura Lengnick, Cultivating Resilience LLC

Action Items

How to prioritize

1. Identify **most critical assets** and secure them with physical protection and insurance
2. Identify largest **vulnerabilities**, places most likely to flood or burn, loss of power, loss of market and change physical vulnerability or identify alternative financial plans/scenarios.
3. Identify **effective** physical and financial/managerial strategies appropriate for your operation.
4. **Prioritize** things that **benefit** your operation regardless of disaster such as secure access to power, water, and financial management systems (bookkeeping plus well-developed analytical practices.)

Risk Assessment and Management Strategies

Defining, Evaluating, and Mitigating Risk

A risk assessment:

1. **Defines risks** by considering categories or types of events that would threaten the success of your business plan.
2. **Evaluates risk** by assessing both the ***likelihood and the severity*** of consequence from an adverse event.
3. **Considers risk mitigations** by matching risk assessments to appropriate risk management strategies.

Defining Risk

There are two common frameworks for thinking about risk in a farming, ranching or fishing business:

1. **The Five Ds:**
   a. Death
   b. Divorce
   c. Disaster
   d. Disability
   e. Disagreement

2. **Business Plan Assessment Framework:**
   a. Production
   b. Marketing
   c. Financial
   d. Legal and Regulatory
   e. Human

Defining Risk - 5 D Framework

Event	Adverse Outcome
Death of an owner	Heirs take cash or assets out of business creating excessive debt or insolvency.
Divorce of an owner	One spouse takes cash or assets out of business creating excessive debt or insolvency.
Disaster	**Loss of crop, market, or key property causes excessive debt or insolvency.**
Disability of an owner	Disabled owner needs to continue to take draws or salary and now also needs to pay someone to perform key duties leading to excessive debt or insolvency. No one knows how to do the owners job. Key information is lost, decisions are delayed or wrongly made affecting profitability and cash flow.
Disagreement	*Between owners*: Exiting owner takes cash or assets out of business creating excessive debt or insolvency. *With key buyer, supplier, landlord, or neighbor*: affects operations and profitability

Defining Disaster Risk - Business Plan Framework

Category	Possible consequence of Disaster	Outcomes
Production	Crop loss, loss of assets critical to production (livestock fencing)	Loss of revenue
Marketing	Inability to access markets (road closures), loss of assets critical to marketing (reefer truck)	Loss of revenue

Defining Disaster Risk - Business Plan Framework

Category	Possible consequence of Disaster	Outcomes
Financial	Mitigating disaster loss wipes out cash reserves, leads to excessive debt	Insolvency
Legal and Regulatory	New permitting requirements for re-building. Secondary losses due to damage caused by loose animals or flooded fields, septic, porta-potties, other environmental contamination	Significant expenses not associated with income producing activities could lead to insolvency
Human	Loss of life, injury, loss of workforce	Range from complete devastation to increase in cost and decrease in ability to operate

Assessing Risk

Assess risk in terms of both:

- Probability of Occurrence
- Severity of Consequence

Assessing Risk

Event	Severity	1	2	3	4	5
Likelihood	1	1	2	3	4	5
	2	2	4	6	8	10
	3	3	6	9	12	15
	4	4	8	12	16	20
	5	5	10	15	20	25

Key: 1-3 = low, 4-10 = Medium, 12-25 = High

Assessing Risk

Fire	Severity	1	2	3	4	5
Likelihood	1					
	2					
	3					3x5=15
	4					
	5					

Score: 15, High

Key: 1-3 = low, 4-10 = Medium, 12-25 = High

Assessing Risk

Drought	**Severity**	**1**	**2**	**3**	**4**	**5**
Likelihood	1					
	2					
	3			3x3=9		
	4					
	5					

Score: 9, Medium

Key: 1-3 = low, 4-10 = Medium, 12-25 = High

Assessing Risk

Market Loss	**Severity**	**1**	**2**	**3**	**4**	**5**
Likelihood	1					
	2		2x2=4			
	3					
	4					
	5					

Score: 4, Low
Key: 1-3 = low, 4-10 = Medium, 12-25 = High

Mitigating Risk

Event	Risk	Mitigations
Fire	High	**Physical:** 1. Clearing and hardening, safety and evacuation plans **Financial:** 1. Ensure adequate cash savings and access to credit 2. Buy adequate property and crop insurance **Administrative:** 1. Company keeps detailed records of assets and production and keeps records backed up offsite. 2. Company develops emergency plans and trains for evacuation.

Mitigating Risk

Event	Risk	Mitigations
Drought	Medium	**Physical:** Ponds, soil health, well maintenance, buried irrigation **Financial:** 1. Ensure adequate cash savings and access to credit sufficient to buy needed water (livestock, permanent crops) or forgo production (annuals) 2. Buy adequate crop insurance if available 3. Prepare scenarios /decision tools for selling animals or buying in feed and hauling water **Administrative:** 1. Keep detailed production records for crop insurance 2. Keep records of water use by crop/field/enterprise 3. Continued research into water use management options

Mitigating Risk

Event	Risk	Mitigation
Loss of Market	**Low**	None at this time.

Questions?

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Thank you!