Introduction to Risk Management

Understanding Risks in the Agricultural / Farming Industry

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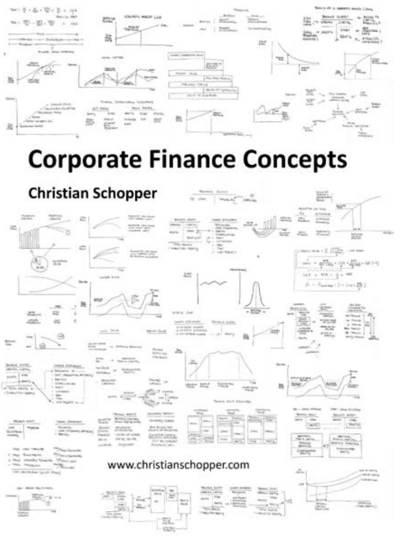

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Steps in Risk Management Planning

Identify Risks

PRODUCTION RISK

- Agricultural production implies an expected outcome or yield

MARKETING RISK

- Marketing is that part of a farm business that transforms production activities into financial success

FINANCIAL RISK

1) The cost and availability of capital;
2) The ability to meet cash flow needs in a timely manner;
3) The ability to maintain and grow equity;
4) The ability to absorb short-term financial shocks.

LEGAL RISK

1) Contractual arrangements;
2) Business organization;
3) Laws and regulations;
4) Tort liability; and,
5) Public policy and attitudes.

HUMAN RISK

1) Human health and well-being;
2) Family and business relationships;
3) Employee management; and,
4) Transition planning.

Next Steps

- Identify risks
- Measure risks
- Asess risk bearing capacity
- Evaluate risk tolerance or preferences
- Set risk management goals
- Identify effective risk management tools
- Select professional assistance
- Make a decision and implement the plan
- Evaluate the results

Managing Production Risk

Managing Production Risk

Growers have three choices in dealing successfully with production risks.

1. They can control or minimize risk through **management practices by doing a better job** of what they currently do

2. They can **reduce production variability** by making changes such as diversifying, integrating, applying new technology, etc

3. They can **transfer production** risk to someone else through contracting, purchasing insurance, etc

- For decades agricultural risk was synonymous with crop production risk
  - Reducing variability in expected yields has been a major focus of risk management

- Structural shifts mean that farmers are vulnerable not only to the vagaries of weather, but are also vulnerable to external economic forces that exacerbate traditional production risks

Strategies for Management

CONTROL OR MINIMIZE RISK

- There are numerous examples of how risk can be minimized or controlled through improved **management practices**
- Chemical and **fertilizer** use can help to control or reduce the variability in production
- **Irrigation** is very effective in minimizing the effects of low rainfall or drought
- Health and **nutrition programs** can reduce variability in livestock production

REDUCE VARIABILITY

- *DIVERSIFICATION*
- Diversification is an effective way of **reducing income variability**
- Effective diversification occurs when low income from one enterprise is offset by satisfactory or high incomes from other enterprises

- *FLEXIBILITY*
- Farmers commonly attempt to maintain **flexibility in the use of farm assets** and operating procedures as a production response to the variability

REDUCE VARIABILITY (cont´d)

- *INTEGRATION*
- **Vertical integration** includes all of the ways that output from one stage of production is transferred to another
  - For example, a nursery that provides landscaping services using their own nursery stock is vertically integrated

- *APPLY TECHNOLOGY*
- This includes the physical technology often referred to as precision agriculture
- Precision agriculture takes advantage of advances in computers and mechanical engineering to make better, more efficient, machines and equipment

Strategies for Management (cont´d)

<u>TRANSFER RISK TO SOMEONE ELSE</u>

- *CONTRACTING*
- A contract is usually defined as a written or oral agreement between two or more parties involving an enforceable commitment to do or refrain from doing something
- In agriculture, **contracts between farmers and agribusinesses** specify certain conditions associated with **producing** and/or **marketing** an agricultural product

- *INSURANCE*
- Insurance can be an effective mechanism of transferring large risks to someone else
- To be insurable, an adverse event must be important enough to cause economic hardship to the insured if it occurs
- The three types of insurance that all operators should carry are:
  - 1) Property and casualty insurance;
  - 2) Health, life, and disability insurance; and,
  - 3) Liability insurance

Managing Marketing Risk

Managing Marketing Risk

MARKETING PLANS

- A marketing plan sets specific actions to be taken and the steps needed to accomplish the business goals
  - 1) Understanding of the alternatives and the tools the business wishes to use;
  - 2) Analysis of the alternatives; and
  - 3) Discipline to follow through

MARKETING PRINCIPLES

- The ***Marketing Chain*** for agricultural products includes production of the raw good, assembly, processing, wholesaling, retailing, and consumption
- Each step enhances the desirability of the good to the consumer by producing value in form, place, time and possession
- ***Price Elasticity*** of a product is the sensitivity of the demand for the product to changes in price

Managing Marketing Risk (cont´d)

THE COMPONENTS OF MARKETING DECISIONS

- There are six basic decisions with each marketing action

1. When to price or sell
   - This decision requires determining the time when the price will be established
   - This could be at delivery or at another time.
2. Where to price or sell
   - Typically there are a number of alternatives, some through direct selling and some through contracting
3. What form, grade or quality to sell
   - Some commodities are more sensitive to quality factors than others while other commodities may not have established quality standards
4. How to price
   - This involves choosing among various alternative tools or mechanisms to set the price
5. What services to use
   - There may be specific services offered by agribusiness associates
6. When and how to deliver
   - This often is directly linked to how the price is set
   - Transportation and storage costs need to be considered in the marketing decision

Managing Marketing Risk (cont´d)

MARKETING DISCIPLINE

- Contingency plans, as part of the basic marketing plan

ADDITIONAL PERSONAL FACTORS

1. Assess your **risk tolerance**
   - The inability to control and predict market forces creates anxiety
   - A good understanding of the financial position of the business also removes some of the uncertainty of the possible impacts of marketing decisions
2. Upgrade your marketing skills
   - This should be an ongoing process
   - The structure of markets and the factors affecting them is constantly changing
   - There are also new skills to learn and update

Managing Marketing Risk (cont´d)

<u>INTEGRATED MANAGEMENT APPROACH</u>

- A marketing plan is much more feasible if it is part of a total business management plan
- It should be **coordinated with** the **production**, **financial**, **legal** and **human risk management** plans for the business
  - For example, marketing decisions often involve contractual arrangements which have legal implications

Managing Marketing Risk (cont´d)

MARKETING TOOLS

- *STORAGE (WITH NO PROTECTION)*
  - Storage is a way of avoiding seasonally low prices
- *CASH SALE*
  - When prices are favorable and at levels anticipated in the marketing plan, a direct cash sale is warranted
- *DEFERRED PAYMENT CONTRACTS*
  - Deferred payment contracts allow for the current pricing and delivery of the crop, but can delay the receipt of payment
- *FIXED PRICE CONTRACT FOR DEFERRED DELIVERY*
  - This contract allows producers to establish a price for later delivery
- *BASIS CONTRACT*
  - Basis is the difference between the local cash price and a futures contract price
  - Basis is typically more stable and predictable than either the underlying futures contract or the local cash price

Managing Marketing Risk (cont´d)

MARKETING TOOLS (cont´d)

- *DEFERRED OR DELAYED PRICE CONTRACT*
  - A deferred or delayed price contract transfers title of a crop to the buyer at delivery, but allows the seller to set the price later
- *MINIMUM PRICE CONTRACT*
  - A minimum price contract establishes a floor price for the duration of the contract
- *HEDGE-TO-ARRIVE (HTA) CONTRACT*
  - This contract has risk management properties similar to a short futures market position
  - It is the opposite of a basis contract.
- *SHORT FUTURES HEDGE*
  - Selling futures contracts to protect the value of grain or livestock in inventory or the value of expected production is a short futures hedge
- *PUT OPTION PURCHASE*
  - This tool is similar to a minimum price contract
  - It sets a floor on the crop or livestock price throughout the life of the contract

Managing Marketing Risk (cont´d)

MARKETING TOOLS (cont´d)

- *CONTRACTED PRODUCTION*
  - Many variations of this type of contractual arrangement exist
  - Historically, production contracts have been used for specialty crops, poultry and livestock
  - Purchasers have been willing to offer such contracts to fulfill the need for highly specific agricultural products
  - Recently, contracted production has been offered on an increasingly broader range of crops and livestock
  - Contract production reduces flexibility and the opportunity to capture upside price potential, but it assures a relatively reliable cash flow

- *MARKETING COOPERATIVES*
  - Forming and participating in marketing cooperatives provides members the opportunity to benefit from volume sales or purchases
  - Benefits may be in the form of enhanced prices received or reduced costs
  - There has been an increased interest in marketing cooperatives for both crops and livestock.

- *DIRECT SALES*
  - For some producers, selling directly to consumers is a way to enhance profitability.

Managing Financial Risk

Managing Financial Risk

FINANCIAL STATEMENTS

- BALANCE SHEET
- INCOME STATEMENT
- STATEMENT OF OWNER'S EQUITY
- CASH FLOW STATEMENT

ASSESSING AND MANAGING FINANCIAL RISKS USING FINANCIAL PERFORMANCE MEASURES

- LIQUIDITY
  - Liquidity is the ability of a business to meet financial obligations as they come due without disrupting the normal operations of the business including paying farm living expenses, taxes and debt payments
- SOLVENCY
  - Solvency is the ability of the business to pay all its debts if all assets were liquidated.
- PROFITABILITY
- REPAYMENT CAPACITY
  - Repayment capacity measures the ability of the business to repay term debts on time

Basic Components of Financial Risk

THE COST AND AVAILABILITY OF DEBT CAPITAL

- The financial analyses and ratios provide the tools to maintaining a sound financial foundation to ensure debt capital is available from lenders
- The cost poses another risk – **interest rate risk:** Interest rates are largely beyond the control of the manager
  - However, favorable interest rates compared to market rates at any point in time, often can be achieved based on excellent financial ratios and the use of other risk management tools such as crop insurance and a sound marketing plan

THE ABILITY TO MEET CASH FLOW NEEDS AND COMMITMENTS IN A TIMELY MANNER

- The current ratio and the working capital to gross income ratio are the key tools to assess the risks of cash flow commitments along with the cash flow budget

Basic Components of Financial Risk (cont´d)

THE ABILITY TO ABSORB SHORT TERM FINANCIAL SHOCKS

- The working capital provides the emergency fund to absorb short term shocks

THE ABILITY TO MAINTAIN AND GROW THE EQUITY IN THE BUSINESS

- A number of the tools contribute to keeping the long term performance of the business on track
- A key ratio to monitor is the Operating Profit Margin

Managing Legal Risk

Managing Legal Risk

CONTRACTUAL ARRANGEMENTS

- Contractual arrangements in agriculture take many forms
- A contract is any agreement (written or verbal) where the parties exchange mutual promises in return for some sort of consideration or benefit
- Contracts include financial arrangements, such as promissory notes and mortgages
- Leases and crop share arrangements are contracts
- Seed purchases with restrictions concerning saving seed or obligations to include refuge plantings are contracts
- Many state and federal farm programs are contractual in nature
- The production and sale of agricultural products is often accomplished and compensated for by contract for future performance and delivery

BUSINESS ORGANIZATION

- The form of business organization is one of the legal issues that affect the risk environment facing the farm business
- By default, or perhaps lack of attention, many farms or ranches are operated as sole proprietorships

Managing Legal Risk (cont´d)

LAWS AND REGULATIONS

- A wide range of laws and regulations apply to farmers and ranchers
- These may be legislated at the local, state, or federal level or may be instituted by agency or court action
  - Laws and regulations include tax reporting and payment obligations, environmental regulations, wage and hour and safety requirements, nondiscrimination statues, pesticide use regulations, food safety requirements, traffic and transportation laws, conservation easements, land use restrictions, and covenants

TORT LIABILITY

- Tort liability arises from the negligent or intentional infliction of damage to a person or to property
- This type of liability is commonly insured under a general liability insurance policy

Managing Legal Risk (cont´d)

PUBLIC POLICY AND ATTITUDES

- A significant source of risk that is external to the farm business is shifting attitudes or preferences of the consuming public
- This risk can be quickly internalized if it affects production practices or prices
- Public concerns over a wide range of issues from animal welfare to zoning, food safety, agriculture’s role in alternative energy, use of genetically modified products, and organic production are some of the issues that have affected producers

Managing Human Risk

Managing Human Risk

HUMAN HEALTH AND WELL BEING

- HEALTH AND SAFETY
  - Structure work assignments and schedules consistent with skill level and physical limitations.
  - Include safety precautions in all aspects of training.
  - Allow sufficient time for physical and mental rest
  - Utilize proper machine guarding and maintain equipment to manufacturers' recommendations

- NATURAL LIFE CHANGES
  - Natural life changes also provide uncertainty and risk to a farm business
  - Aging, illnesses and death are disruptive and costly, both emotionally and financially
  - When human resources are not productive, the farm suffers
  - Especially difficult are those situations where key institutional knowledge and decision making skills are lost

  - Provide training for back-up support within the farm business in areas such as record keeping, financial analysis, market planning, and production management
  - Develop "How To" manuals for every function on the farm
  - Develop formal contingency plans and management systems to:
    - Help everyone focus on the priorities established by the business
    - Allow the business to function in the event of an unexpected absence of a key person.
    - Give family members and employees

Managing Human Risk (cont´d)

<u>FAMILY AND BUSINESS RELATIONSHIPS</u>

- Establishing and maintaining healthy relationships can be challenging and life on a family farm can be hectic and at times seem out of control

- Practice open, honest, and effective communication
- Maintain a balance in life
- Nurture the human resources each business member works with and depends upon
- Respect others feelings and opinions
- Allow others to make decisions and enjoy the consequences
- Establish family rules and policies to guide family members in their personal business and family relationships
- Utilize conflict resolution processes to manage conflict
- Seek legal counsel regarding financial and tax implications before people exit the business due to death, illness, divorce, retirement, alternative employment opportunities, and estranged relationships

Managing Human Risk (cont´d)

<u>EMPLOYEE MANAGEMENT</u>

- Farm employee management involves securing and retaining quality farm labor
- The goal is to use labor effectively and efficiently so that the cost of labor can be justified and the risks of using labor mitigated

- Develop sound employee search and management procedures, offering appropriate fair and equitable compensation, reward systems, benefit packages, living conditions, and other employee considerations
  - Use job descriptions to describe in detail what is expected of an employee
  - Provide orientation and training opportunities
  - Establish performance goals and measurements
- Learn, stay current, and comply with farm labor, equal opportunity, migrant worker protections, and immigration laws
- Utilize available resources to better understand all facets of hiring, managing, and terminating a farm worker

Managing Human Risk (cont´d)

TRANSITION PLANNING

- Transitioning a farm business from one generation to the next provides unique issues and risks to consider and potential consequences
- It is important to think through the issues and consult with professional advisors before making decisions about when to make the transition and to whom.
- Transition and estate planning is the process of anticipating and arranging for the transfer of an estate

- Establish transition goals to guide decision making through the process
- Consider who else should be involved to make decisions about transition planning
- Consider both the process and outcome when determining what is fair and equitable for the distribution of property
- Prepare an estate plan
- Plan for any legal, tax, or other

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