RISK MANAGEMENT FOR FLORIDA CITRUS GROWERS

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Abstract. Eighty-four percent (84%) of Florida citrus growers, responding to a mail survey, agreed that the citrus business has greater risks today than 10 years ago. Risk is the possibility that an outcome or event will not meet expectations. Steps in risk management include: setting goals for the business, knowing personal risk tolerance, knowing the risk bearing capacity of the business, identifying sources of risk, and using appropriate risk management tools. Only 12% of growers reported having written goals for the business. Eighty-nine percent (89%) of citrus growers identified their personal risk tolerance as calculators. Risk bearing capacity of the business is directly related to the liquidity and solvency of the business. The stronger the business is financially, the better it is able to tolerate risk. Risks faced by citrus growers may be classified into five categories: production, price, financial, legal, and human resource risk. Risk management is applying management policies, procedures and practices in a systematic way to the tasks of identifying, analyzing, assessing, treating and monitoring risks.

Introduction

Risk is the possibility that an outcome or event will not meet expectations. In the citrus business, it is the possibility that yields will not be as high as expected or that prices will fall below expectations. It is the possibility of losing trees to insects, disease, or to weather calamities such as a freeze, hail, or wind. In addition, changes in technology, legal and social concerns, & human factors are sources of risk. On the positive side, risk involves the chance of gain as well as loss. Negative consequences are referred to as downside risk; positive consequences as upside risk (Patrick, 1992; Fleisher, 1990).

Eighty-four percent (84%) of Florida citrus growers responding to a mail survey, conducted in February and March 1999, agreed that the citrus business has greater risks today than 10 years ago. Citrus, like much of agriculture, is experiencing increasing competition from global markets. In addition, increasing government regulation and a more litigious society are other sources of risk. Introduction of insects and diseases creates additional risk. Many feel that global warming will lead to greater weather variation hence greater risk in the future. Most growers identified their greatest sources of risk to include unstable fruit prices (90%), loss of trees/reduced yield from insects and disease (85%), loss of fruit from adverse weather (84%), Increased cost of inputs such as fertilizer, pest control, machinery and labor (80%) and 78% said that foreign competition was important (1999 Citrus Risk Management Survey, unpublished (to be published in proceedings of Florida Soil and Crop Science Society Vol. 59 (2000))).

Only 19% of growers agreed that they could shift some of their risk to others. Profit is the reward for risk-taking. Anyone in agriculture must be prepared to take some risk. Risk management is applying management policies, procedures and practices in a systematic way to the tasks of identifying, analyzing, assessing, treating and monitoring risks (Hardaker et al., 1997). The key to success is to take the right risks (Nelson, 1989). Citrus growers may shift some of their risk to others, at a price. The price may include the premium on an insurance policy or the added cost of operating groves in different geographical areas. Steps in risk management include: 1) setting goals for the business, 2) knowing personal risk tolerance, 3) knowing the risk bearing capacity of the business, 4) identifying sources of risk, and 5) using appropriate risk management tools. Risk management tools fall into three categories: self protection (preventive maintenance, diversification, spreading sales), self-insurance (cash reserves, credit reserve capacity, knowledge of regulations), and purchased insurance (casualty insurance, crop insurance, liability insurance). The decision to use one or more risk management tools depends on each individual manager’s personal and business situation. It’s important to be aware of risks and consciously evaluate potential impacts of different risks on business success.

Setting Goals

Setting business goals, as well as personal and family goals, is critical for risk management decisions. Surprisingly, only 12% of citrus growers reported having written goals for their business. Setting goals requires time and thought. A number of goals may be identified, some short-term and other long-term. In addition, most people will have family, business and personal goals. Some goals will be in competition with other goals, while others may be complementary. Goal setting is a dynamic process. Once a goal is reached, new goals may become important. Goal priority may change over time. Also, a person may have unrealistic goals which, if not revised, may be a source of frustration and stress (Patrick, 1992). Examples of some goals might include: increasing the size of the business by purchasing or planting additional grove land, increasing net income by a certain percent by increasing production or reducing costs, or setting aside a sum of money for the kids’ education or for retirement. Goals should be written, reasonable, and measurable. They should be attainable in the manager’s lifetime and should be shared with others involved in the business and they should share their goals with the manager (Baquet et al., 1997).

Personal Risk Tolerance

Individuals vary greatly in their tolerance for risk. They may be classified into four categories: “risk avoiders,” “daredevils,” “adventurers,” and “calculators” (Patrick, 1992).

• “Avoiders” are the most cautious risk takers. They do, however, take some risks. They expect the worse to happen and don’t take the slightest risk that they can avoid. Unfortunately, they
lose by missing opportunities to profit. Farmers who are avoiders typically don’t prosper but just manage to survive.

- “Daredevils” are plungers who close their eyes to risk, ignore facts and go ahead. Daredevils usually don’t get involved in farming. They commonly fail because they refuse to take precautions.

- “Adventurers” are people who enjoy taking risks. Risks are challenging and exciting to them. Some Adventurers enjoy the excitement of taking risks, but keep the stakes at reasonable levels. Many growers may fall into this category with regard to their marketing activities. As long as financial survival is not threatened, they may enjoy the adventure of playing the market. Many speculators are included in this group.

- “Calculators” understand that they must take some chances to get ahead, but recognize that there is some risk in every situation. Before making a decision or taking action they collect information and figure the odds. They try to be realistic, recognize the risks and try to reduce risks to acceptable levels. Eighty-nine percent (89%) of citrus growers identified themselves in this category, at least in the majority of their decisions.

**Risk Bearing Capacity of the Business**

Risk bearing capacity is directly related to the solvency and liquidity of the business (Patrick, 1992). The stronger the financial position of the business the better the business is able to handle risk. Risk bearing capacity is also related to cash flow. Cash flow needs are obligations for cash costs, taxes, loan repayment, and family living expenses that must be met each year. The higher these obligations as a percent of cash flow, the less able the business is to assume risk. Other factors which impact the risk bearing capacity of the business include the: age of the owner/manager, form of business organization (corporation, partnership, or sole proprietorship), size and diversity of the business, location, and the amount of income from other sources.

**Sources of Risk**

Risk may be broken down into five categories: Production, Market, Financial, Legal, and Human Resource risk (Baquet et al., 1997). While this classification is convenient, there are many interrelationships among the various categories.

- Production risk is the potential loss in crop yield from a wide variety of sources including: freezes, hurricanes, tornados, hail, flood, drought, insects, diseases, genetics, and quality of inputs. Fire, and theft are also sources of production risk.

- Market risk deals with both purchased inputs and sale of farm products. It is the price fluctuations due to weather, foreign competition, government action, changing consumer preferences, and over or under production of farm commodities. Inflation in the general economy can drive up the cost of inputs without a corresponding increase in value of agricultural products.

- Financial risk includes the cost and availability of debt capital, the ability to meet cash flow needs in a timely manner, and the ability to maintain and grow equity. Financial risk can involve casualty losses, falling land prices, technological advances that make current investments obsolete, and the potential loss of the farm to pay estate taxes. The ultimate financial risk is the risk of bankruptcy.

- Legal risks commonly associated with agriculture fall into four categories: 1) appropriate business structure and tax and estate planning, 2) contractual arrangements, 3) tort liability, and 4) statutory compliance including environmental and labor issues.

- Human resource risk—Human resources are both a source of risk and an important part of the strategy for dealing with risk. The core of dealing with human resource risk and the potential for solving human resource problems is managing people. The inability to find enough qualified workers is becoming serious in the Florida citrus industry at the present time. In addition, human resource calamities such as divorce, chronic illness, and accidental death can hamper the most carefully made risk management decisions. Risk management should anticipate the likelihood of human resource calamities. Carelessness by the grower or farm workers in using machinery can also cause significant losses.

**Risk Management Tools**

A number of risk management tools are available. The decision to use one or more tools will be based on a number of factors including personal, business and family goals, manager’s risk tolerance, and the ability of the business to bear risk. Risk management tools are available for each risk category.

- Tools to help mitigate Production risk include diversification by growing more than one variety of fruit, utilizing more than one rootstock, having groves located in more than one geographical area, and by producing both fresh and processed fruit. Other tools include purchasing crop insurance for both fruit and trees. Irrigation is a risk management tool to reduce production losses due to drought and, in many cases, loss due to freeze damage. Eighty-one percent (81%) of growers reported growing more than one variety of fruit, 55% grew both fresh and processed fruit and 43% had groves in different geographical areas. In the area of crop insurance, 47% of growers reported purchasing insurance for fruit and 58% said that they would purchase insurance for trees if it were available at a reasonable cost.

- To deal with market risk develop budgets to determine break-even prices for fruit. The break-even price should serve as an important reference, even though it is usually not the desired price. Marketing tools include forward contracts, hedging, options and spreading sales over time. By purchasing (or contracting for) production inputs in advance one can often negotiate to reduce the cost. Survey results showed that 80% of growers used financial records to determine the break-even price for fruit while only 13% reported hedging and 16% used options as marketing tools. Forty-three percent (43%) had written marketing plans. Forward contracts were used by 36% of growers and only 17% reported forward pricing production inputs.

- A good set of financial records are needed to maintain financial control of the business. Records provide much of the information needed to understand critical financial risks. Essential financial statements include the balance sheet and statement of owner’s equity, income statements, and projected
and actual cash flows. These records give a history of the business and provide data needed to calculate financial performance measures. Other tools for financial risk are to maintain casualty insurance on property and to maintain a cash/credit reserve for unforeseen financial needs. Keep up to date with new technologies to minimize the possibility that new investments are prematurely obsolete. Farm records were kept and used as a guide for management decisions by 85% of growers but only 48% prepared cash flow statements. Casualty insurance was maintained by 79% and 76% of growers maintained a credit reserve.

• Legal risk—Examine the legal structure of the business to see if assets other than business assets are exposed to liability. Secure competent advice on tax planning to insure that tax laws are being followed and that only the required amount of taxes are being paid. Have an estate plan that passes business assets according to the wishes of the owner and doesn’t jeopardize the continuity of the business because of excessive or unplanned estate taxes. When entering into any contractual agreement, either oral or written, be concerned about what happens if a disagreement should arise. Maintain liability insurance which also covers pollution claims and environmental damage. Liability policies do not cover all risks. Know what risks are not covered and decide if it is important to close those insurance gaps. Maintain adequate compliance records for labor laws and use of pesticides and keep up to date on government regulations. Eighty-three percent (83%) of growers planned for the transfer of assets to the next generation. Liability insurance was maintained by 87% of growers, while 27% maintained liability policies to cover pollution risk. Seventy-four percent (74%) of growers were aware of and followed environmental record keeping requirements, however only 65% were aware that they are subject to criminal prosecution for violating labor laws.

• Human Resource risk management (personnel management aspect) can be viewed as a process. The process can best be described as seven functions: 1) job analysis and job descriptions, 2) hiring, 3) orientation and training, 4) employer/employee interaction, 5) performance appraisal, 6) compensation, and 7) discipline. Also, anticipate the likelihood of human resource calamities and develop a plan such as providing for backup management and having an estate plan. Carry adequate insurance including medical insurance, long-term health care insurance and life insurance. Only 53% of growers felt that injury or death of the decision maker was a major source of risk for their business. In addition, plans for backup management were made by 40% of growers and 67% maintained a health insurance program.

Developing a Risk Management Plan

Risk management is the systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, assessing, treating and monitoring risk (Hardaker, 1997). Risk management is a very personal thing. Individuals vary in their understanding of risk and their willingness to take risk. Two individuals’ perception of risk in a given situation may be identical but their different financial situations may dictate that each responds differently (Benson and Smith, 1993). There are seven steps in developing a risk management plan. 1) Determine the goals for the business as well as personal and family goals. 2) Know your personal risk tolerance. 3) Try to identify and list each risk and the probability that the event will occur. 4) Determine what will happen if the possible undesirable event should occur. 5) Know the risk bearing capacity of the business. 6) Determine the debt to equity ratio and develop a projected cash flow statement to see the cash needs through the year. 7) Identify and use risk management tools that are appropriate to your individual situation.

Literature Cited