

## Managing Risk

# THE BIG FIVE TYPES OF AGRICULTURAL RISK

### **Jerry White**

Department of Applied  
Economics and Management  
Cornell University

As you think about managing risk to stabilize farm income, there are five basic sources of agricultural risk that you should consider: production risks; marketing risks; financial risks; legal risks; and human resource management risks. For each of these sources there are different tools and strategies you can use to manage risks.

### **Production risks**

Major source of production risk are weather, including drought, freezes, excessive rainfall at harvest; and pests, including insect and disease damage.

Tools and strategies:

- Enterprise diversification. Grow more crops; grow more varieties; get off-farm employment for the owner or spouse to diversify income sources.
- Crop insurance can stabilize income when used with a sound marketing program.
- Adjusted Gross Revenue Insurance (AGR) protects against both yield and price risk by insuring revenue based on the average revenue over the past five years, as determined from Schedule F.
- Multiple-Peril Crop Insurance (MPCI) protects against yield shortfall by providing coverage against most natural disasters.
- Catastrophic Risk Protection (CAT) is the lowest level of MPCI.
- The combination of AGR and MPCI. Benefits and premiums are coordinated in such a way that you don't pay double premiums, but you don't receive double coverage, either.
- Subsidized premiums and cost share. With these products, growers **in pilot areas** pay only about 25 percent of the actuarial costs of the policy.

- Technology to protect against weather events, including irrigation, tile drainage, frost protection.
- Site selection. Consider renting acreage that is less susceptible to freezes, or for new plantings, buy superior sites close to the home base.

For more information on crop insurance, [click here](#).

## **Marketing risks**

Sources of marketing risk include: price risk due to increases in supply, or changed demand; loss of market access due to the relocation or closing of a processing plant; loss of marketing power due to small size of farm sellers relative to buyers, etc.

Tools and Strategies:

- Developing a marketing plan and/or a business plan.
- Form or join a marketing cooperative. This may enhance or at least stabilize prices, guarantee a market, and even out cash flow through deferred payments. There is a cost for deferred payments – interest, but most risk management strategies have costs
- Direct Marketing. Your receipts are likely to vary less than if you sell to processors or fresh market wholesalers.

For more information on marketing risk, [click here](#).

## **Financial risks**

Sources of financial risk include: production risks and price risks from above; inflation, especially cost increases on key inputs; and changes in interest and exchange rates.

Tools and Strategies:

- Monitor and try to control key financial ratios and expenses. Compare your numbers to industry averages or benchmarks in order to identify which ratios or expenses are most out of line.
- Trend analysis. Monitor key variables such as receipts, expenses, net income, key expense items and net worth over time on a spreadsheet to see if they're moving in the direction you want them to go.
- Increase solvency. Decrease your debt-to-asset ratio by paying down debt in a "good year".
- Maintain liquidity. Keep your "current ratio", or current assets/current liabilities, at 2.0 or above.

- Control family expenditures. There is an interaction between family and business obligations in most farm businesses. Deferring some household expenditures when income is low is one means of surviving.
- Find off-farm employment for a spouse or other family member, preferably in a business that is not directly related to agriculture. If the job has benefits such as health insurance, group life insurance, and a retirement program, so much the better!
- Use non-farm investments such as IRA's or mutual funds to diversify your asset portfolio.
- Make use of emergency assistance. USDA still provides emergency assistance and loans or loan guarantees through FSA for farms in areas affected by natural disasters, and for individual situations where equity is extremely low.

For more information on financial management, [click here](#).

## **Legal and environmental risks**

Sources of legal risk include tort liability, that is, being subject to a civil suit. This is especially of concern to direct marketers. Legal risk is also related to environmental liability, and to business structure.

Tools and strategies:

- Carry sufficient farm or business liability insurance. In most situations, general farm liability policies will be sufficient, but for direct marketers and agritourism farms, in particular, the issues are more complex. For U-pick fruit farms that have customers climbing ladders, the issues are particularly acute. The best advice is to be forthcoming with your insurance agent about all direct marketing activities, so that you can be assured of adequate coverage. Fencing off hazards from the public, good maintenance of road vehicles, and other conscious efforts to reduce potential damages will help to limit tort liability. In addition, whenever you purchase or rent a big-ticket item such as a tractor, you should inform your agent to add these so they are covered by your policy.
- Invest in developing good neighbor relations. Ensure that neighbors understand the farm operation. Encourage them to come to you with any concerns. Take measures to address their concerns.
- Use good agricultural practices to limit environmental risk. Use soil testing and pest scouting to make sure that inputs are only applied when, and to the extent, needed. Increasingly, growers need to document their pest and fertilizer applications. Careful storage and disposal of toxic materials is also a must. Minimize spray drift.
- Don't assume that a sole proprietorship is the best business organization. If you haven't done anything, your organization is a sole proprietorship.

Other alternatives should be considered, such as partnerships, limited partnerships, limited liability companies, and corporations. Some of these forms of organizations serve to protect owners from liabilities, as well as to enable the transfer of the estate to heirs, and minimize taxes.

For more information on legal risks, [click here](#).

### **Human resource management risks:**

Sources of human resource risk include the three D's -- divorce, death, or disability of an essential owner, manager, or employee. It also includes risks related to poor communications and people-management practices.

Tools and strategies:

- Develop excellent Human Resource management practices, for family as well as outside employees.
- Formalized planning and management can improve business performance as well as safety performance and reduce legal risk arising from employee relationships
- Life insurance and estate planning for key owners can help insure business continuity.

For more information human resource management risks, [click here](#).

For general risk management information, [click here](#).