Risk in Agriculture

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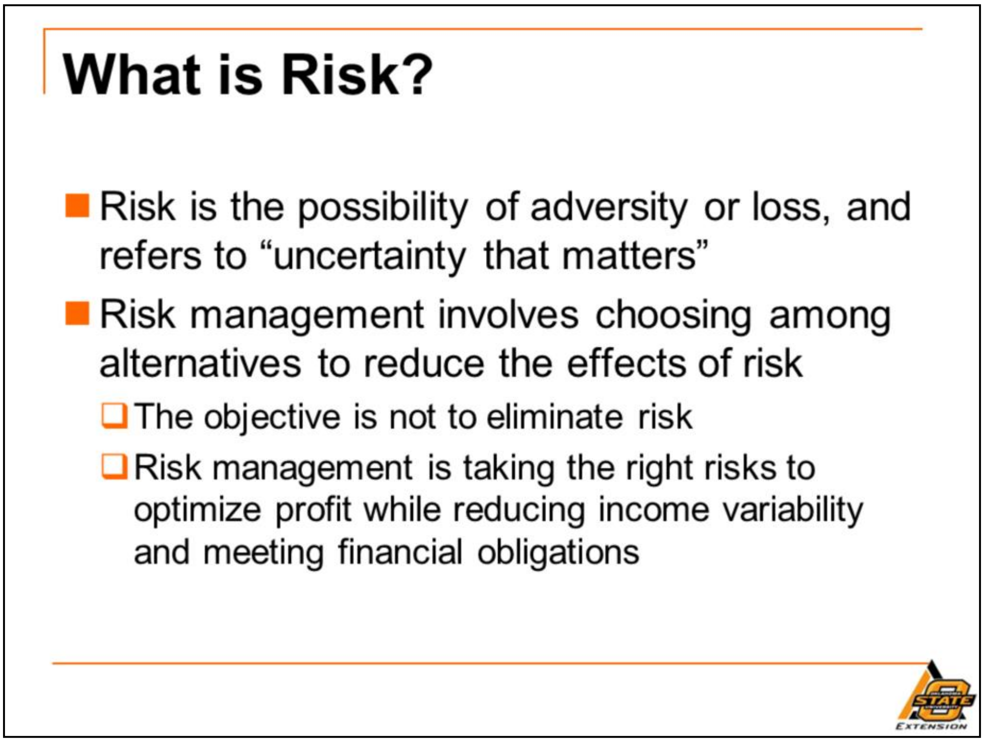
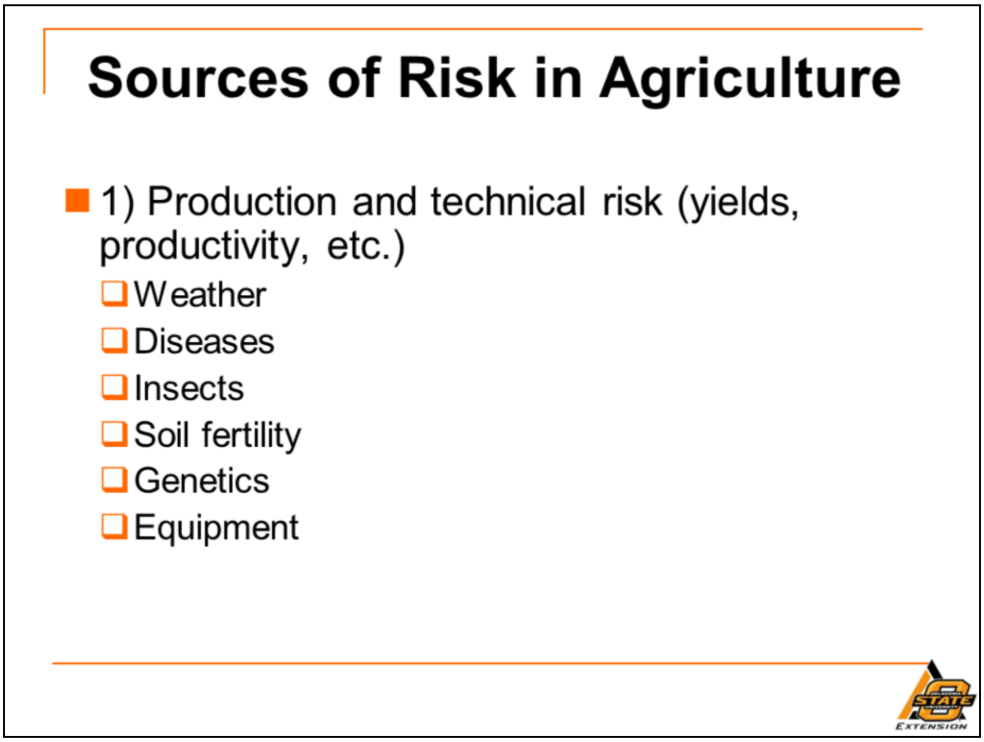
Welcome to the first video in the “Risk” segment of this set of farm management materials. This topic of risk deserves special attention because 1) we all know that agriculture is a risky business, and so risk play a large role in the financial well being of a farming operation, 2) risk is a very complicated and often misunderstood concept. This is true of everyone in general (the human mind is simply not wired very well to deal with this thing called risk), but it is particularly true in agriculture, as will be discussed in this session, and 3) there are a lot of tools and management practices that can be utilized on agricultural operations to help manage risk.



So what is risk? Risk is chance that something will go wrong, and if it does go wrong it will have an impact on our business. Since this is primarily a "financial management" educational series, we will primarily focus on things that could happen that will have a financial impact on your business, and most of us take that to imply a "negative" financial impact. For some strange reason we don't worry so much about those things that could happen that will have a positive impact on our businesses.

Management broadly defined is about making decisions, so risk management is about making decisions about alternatives or strategies that reduce the negative effects of a risky situation. Two very important points here: 1) contrary to some popular beliefs, the goal is not to eliminate risk. A simple fact of life is that profit is in general the reward for taking risk, so if a manager tries to eliminate all risk they are at the same time essentially wiping out any expectations of making a profit. That is not why most of us are in business. Therefore, the goal of risk management is to carefully evaluate what risks one needs to reduce or manage, and what risks one is willing to take on in order to "optimize" that risk-reward tradeoff in their specific situation. 2) good managers do not inherently always make the "right" decision in hindsight. Rather, good managers are those who enhance the probability or likelihood that a decision will be the right one, while at the same time developing contingency plans to reverse course quickly before too much damage is done when a decision turns out to be a mistake (looking back). This general statement regarding good managers is especially relevant when dealing with the management of various components of risk.



Risk in agriculture is a big, almost overwhelming topic. It is helpful to break down the various sources of risk into categories, or similar types of risk. There are seven general categories of risk that are utilized to describe risk, and risk management strategies, in agriculture. The first is easy for most producers to think about because anyone in agriculture, especially in a state like Oklahoma, is certainly familiar with production risk.

Anything that impacts yields for crop producers or production measures like weaning percentages for livestock producers fall in this category. Several specific sources that fall under the production risk category are pointed out here. Obviously, weather, (drought, freezes, severe weather events, etc.). Things like disease and insects can certainly impact production. Soil fertility on the crop production side, or genetics on the livestock (or crop) production side, can impact production. I realize these are things that are not completely outside the control of management, but remember the broad definition of risk, something bad can happen that impacts the business. So even if it is under the control of management, choices can be made (to either do something, or to consiously not do something) that can impact the bottom line, so a risk can be present. The last source that is on this particular list is equipment (here thinking about an equipment breakdown, or some other equipment related issue that prevents production from being accomplished in a timely and efficient manner), but I am quite sure that you can think of other specific sources of production risk that are not on this list.

Sources of Risk in Ag.

- 2) Marketing and Price Risk
  - Output prices
  - Input prices
  - Market access
- 3) Financial Risk
  - Liquidity
  - Leverage
  - Interest rate
  - Asset control

The second major category of sources of risk in agriculture is usually considered to be "marketing and price" risk. Obviously commodity producers face output price movements all the time that can negatively impact the bottom line. Another specific item that falls in this category is input prices. Fertilizer, fuel, feed, and other inputs are subject to wide swings in prices that can certainly impact farm financial outcomes. Finally, access to markets can pose risks in some instances. If I am a farmer who is producing a fairly specialized product and I only have one or two viable market outlet, I can be impacted if a particular buyer experiences financial hardship themselves (goes out of business), or if they decide that for whatever reason they do not want my product anymore. Producers who have contracted to a particular processor have experienced this type of risk in the past.

The third category is financial risk, which encompasses several sub issues. Cash flow, or liquidity risk often shows up as an early warning sign of financial difficulties. Short term periods of low prices, or a one year production glitch like a drought can often cause a liquidity problem, not enough cash in the checking account to pay short term bills. As is discussed in other sessions associated with this educational program, leverage position, level of debt can have a huge impact on overall financial performance, especially in tough years. As the old saying goes, when it works in your favor it is a great thing, but when things go wrong it can get ugly in a hurry when there is too much debt. Interest rate risk is another component of financial risk, and one that is on peoples minds at the time of this recording. Interest rates are starting to creep up, which of course impacts anyone with money borrowed on a variable rate, or anyone needing to borrow in the future. Finally, asset control falls under the financial risk category. Will I be able to gain or maintain access to the assets needed to run my operation (land, machinery, etc.)

Sources of Risk in Ag.

- 4) Institutional risk
  - Government policy
  - Tax policy
  - Environmental regulation
  - Zoning
- 5) Legal risk
  - Liability
  - Contract
  - Environmental damage
  - Tax and estate planning

The fourth general category of risk in agriculture is usually considered to be "institutional" risk. This involves such issues as uncertainty regarding government policy. Will they change the amount by which the government subsidizes crop insurance, or will there by a forage disaster payment following adverse conditions this year, for example? Uncertainly regarding changes in future tax policy certainly falls under this category as well. Any type of regulation, including environmental regulation, or zoning regulations that might impact the operation also fall under this category, and again, I am sure you can think of other specific items that could be listed under the "institutional" category.

Legal risk is the fifth general category. Obvious specific sources here include liability risk, breech of contract risk, and the risk that your farm will cause some environmental damage (real or perceived) that might trigger a legal settlement, or at least a costly legal battle. Another specific item that falls under this category is risk associated with devoting time, money, etc. to develop tax planning or long-term estate planning strategies, and then having the legal rules changed. Some times plans can be costly at best, or impossible at worst, to change once they have been put in place to work within the context of existing laws at the time.

Sources of Risk in Ag.

- 6) Personal risk
  - Illness
  - Injury
  - Death
  - Disability
  - Divorce
- 7) Human resource risk (Personnel)
  - Availability
  - Worker Safety
  - Legal risk from employee relations
  - Employee behavior

The last two general categories of risk have to do with people. Personal risk refers to issues with the primary stakeholder team, the owners, managers, and family members associated with the business. Serious illness, injury, death, disability, and divorce have all been cited as reasons for family business hardship or even failure. Just remember, that when a key management or ownership stakeholder is going through a significant personal crisis, that can quickly translate to a crisis for the business as well.

Finally Personnel or human resource risk is the last general category of risk in agriculture. This topic has been widely discussed for a very long time. Is there a pool of qualified help to get the job done if I need to hire someone. If I do have employees, am I exposing myself to risks associated with worker safety, or risks associated with relations and interactions with or among employees. What about employees who behave poorly, and either negatively impact production on the farm, or negatively impact the farm's reputation and relationships in the community. Yes, hiring employees brings with it a potential for a wide array of risk issues.

Important Point To Ponder

- **What Is The Leading Source Of Risk Over The Long-Term?**
  - What is most likely to "put you out of business?

So I ask the question. Of the seven categories just talked about, which ones are the leading sources of serious financial risk to a typically farming operation over time? In other words, which categories are most likely to "put you out of business"?

The answer, based on several long-term research studies that looked at factors that impact farm equity over time, might surprise you, and in fact the answer further confirms the simple fact that most of us, even very sharp business managers, have a very difficult time putting risks in perspective.

I am guessing that most people immediately start to think about production risk, and market risk as two of the most important. If I didn't already know the answer to the question those are two categories that I would certainly put at the top of the list. While those categories certainly cause some financial hardship, they are not at the top of the list in terms of issues that are most likely to cause long-term financial hardship.

Farmers Tend To:

- Over-estimate the importance of Production Risk, and Marketing Risk
- Under-estimate the importance of Financial Risk (cost management, debt structure, etc.) and Human Risk (Personal, and Personnel)

Surveys have in fact confirmed that agricultural producers in general tend to over estimate the overall importance of production risk and marketing risk. This is likely because we see it every day, and the impacts are very immediate. A late freeze wipes out the wheat crop, or a significant drop in price results in a revenue shortfall that we feel immediately, and it sticks in our mind.

On the other hand, it is harder for us to immediately see the damage that a high debt load will cause when combined with a low price or low production year. We simply see the interest payment as another bill that has to be paid, without thinking about whether the farm would have fared better with a different debt structure, or cost structure for that matter. We also tend to underestimate the likelihood of, or the potential magnitude of financial damage that can be done to the business as a result of human issues (Personal, or Personnel). Management strategies to prepare for possibilities in these categories are also more difficult to develop and implement.

Implication

- Farmers tend to spend too much valuable management time on production details, and especially on commodity marketing
- Both of these, have many elements that are beyond the managers control
- Farmers in general do not spend enough management time on financial management, and on people management
- Elements in both of these categories are well within the control of the manager

Because of the fact that in general we are not very good at "prioritizing" the categories of risk, as a general rule we as farmers tend to devote too much time to production risk management and commodity marketing. That is not to say that these are not important, they certainly are, but management time is a valuable resource, and spending it in one management area takes away it's ability to be spent in another area.

Many farm risk management experts have argued with some validity that as farm managers we should think about spending more time on areas over which time spent on management will have the most impact, or areas where the manager has the most control. Arguably, financial management, and people management are a couple of categories for which that is true.

Just some thoughts to keep in mind as one thinks about where they are going to allocate their valuable risk management time. In the next video we will introduce some specific risk management strategies.