Safety-First: A RightRisk$_{TM}$ Lesson Guide

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With safety first you choose the best investment available that assures a minimum level of income.

There are many different sources of risk, which can affect income and ultimately the survival of an agricultural operation. Management decisions about what to produce, how to handle potential problems, and when to take action can all have outcomes that turn out to be less than what was hoped for because of the occurrence of uncontrollable events. Because many things are out of the manager's control when he or she makes a decision, the manager needs to decide if the business can accept a bad outcome if one of these uncontrollable events occur. This is the essence of risk management.

The manager must assess what could happen if a certain action were taken. The manager must ask him or herself, how likely is a bad outcome if that action is taken, and can the business accept or survive that bad outcome? If the manager decides the business cannot afford the bad outcome, then action must be taken to reduce the potential damage to the business.

Safety-First Decision Rule

For example, you may not be able to consider an investment that could possibly lose a significant amount of money if things go wrong.

The concept of "safety-first" is a rule used to help managers choose the best strategy when faced with the risk of a bad outcome. The "safety-first" decision rule is based on the idea that there is some minimum level the operation must make each year to ensure its survival (Kay and Edwards, 1994). For example, let's say the operation in the "King Family Ranch" RightRisk$_{TM}$ scenario has been informed by their banker that if they miss their loan payment of $5,000, the bank will foreclose. In this case, the safety-first decision rule dictates that a manager of the King Family Ranch would want to make sure he/she manages the operation so there is the highest chance of being able to make that $5,000 payment each year.

Practicing Safety-First

RightRisk$_{TM}$ provides you an opportunity to try different management strategies to see if they are an improvement over what was done last time. It is this ability to practice several strategies that we are going to take advantage of in learning about "safety-first." You are going to practice making management decisions that you think will have the highest chance of allowing the King Family Ranch to make its $5,000 loan payment as compared to doing nothing about potentially bad outcomes that could keep the ranch from meeting its' loan obligations.

Step 1: Log on to RightRisk.org.
Step 2: Click on RightRisk game.
Step 3: Choose King Family Ranch simulation scenario
Step 4: Play the game 5 times and choose to take no actions to manage risk. Just keep clicking next. While you are doing this think about ways to reduce the chance for bad outcomes to keep the King Family Ranch from meeting its $5,000 loan payment. For example, one strategy might be to forward price your calves rather than accept cash market risk. Are there other or better strategies you would consider? After quarter 4 and quarter 8 record the bank balance in the table below. How many times did you have a balance that was less than $5,000? Place that total in bottom row of the “No Risk Management” Column.

Quarter for which ending bank balance is recorded.	No Risk Management	With Your Risk Management Strategy
Game 1, qtr. 4 - balance		
Game 1, qtr. 8 - balance		
Game 2, qtr. 4 - balance		
Game 2, qtr. 8 - balance		
Game 3, qtr. 4 - balance		
Game 3, qtr. 8 - balance		
Game 4, qtr. 4 - balance		
Game 4, qtr. 8 - balance		
Game 5, qtr. 4 - balance		
Game 5, qtr. 8 - balance		
Total times less than $5,000		

What types of things are you going to do to reduce the total number of times you had a balance less than $5,000?

Once you have determined what strategies you are going to try. Play the game 5 more times using the risk management strategies you decided on. Use the same set of strategies all 5 times and record the ending balance for each appropriate quarter with your risk management strategy being used.

Step 5: Play the game 5 times and choose to take risk management actions you chose. Do these same strategies throughout the 5 times you play the scenario. After quarter 4 and quarter 8 record the bank balance in the table above. How many times did you have a balance that was less than $5,000? Place that total in bottom row of the “With Your Risk Management” Column.

Did you reduce the number of times the King Family Ranch couldn’t meet its $5,000 loan payment? If so, you are moving in the right direction toward a “Safety-First” strategy that will keep the King Family Ranch in business. If you are not happy with your results try some different strategies to improve the probability of the King Family Ranch staying in business.

Safety-First lesson

The important thing to remember from this lesson is ***the “safety-first” decision rule provides a benchmark for you as a manager to plan for in your risk management plan***. As a manager, ***if you choose to use safety-first you must decide what level of income you need as an absolute minimum to keep your***

operation in business. Once you decide that. You must assess what potential outcomes can keep you from meeting that goal and choose a strategy to reduce the damage from those outcomes and increase the chance you will be able to meet that minimum level of income you need to stay in business. While no strategy is perfect, planning a risk management strategy will likely be more successful than no risk management strategy at all.

References

Kay, R. D., and W. M. Edwards. 1994. *Farm Management*. 3rd ed. McGraw-Hill, Inc.: New York.