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The Risk Matrix: Illustrating the Importance of Risk Management Strategies

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The Risk Matrix: Illustrating the Importance of Risk Management Strategies

Abstract
Risk management strategies can enable small business owners, including farmers, to survive and succeed in spite of unexpected events. The risk matrix is an effective educational tool to illustrate the importance of risk management strategies. It is easy to use, easy to explain, and effective at promoting audience participation during risk management programs.

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Introduction

Small business owners, including farmers, face substantial risks. One of the goals of Extension is to provide education on risk management strategies that enables small businesses to survive and succeed in spite of unexpected events. That said, one challenge in any risk management educational program is to motivate small business owners to invest the necessary time and effort to develop risk management strategies. For example, succession or estate planning is necessary to protect the family business, and the development of a succession plan can take years.

This article shares an effective tool, the risk matrix, to illustrate the importance of risk management strategies as part of contingency planning (Marshall & Alexander, 2006). The risk matrix is easy to use, easy to explain to workshop participants, and effective at promoting audience participation.

Using the Risk Matrix

When using the risk matrix, participants are asked to think of the risks their businesses face and list these events on Table 1. For each of these events, the participants are then asked to evaluate the probability and the consequence of the event on a scale of 1 to 10, where 1 is low and 10 is high. The consequence of the event can be thought of both in terms of severity and cost to the business. For example, in event 1, the owner is in a car accident that prevents him or her from fulfilling his or her normal duties for a period of 6 weeks. Participants in our workshops tend to rate the probability of a car accident at between 2 and 3, with the consequence of the owner being unable to fulfill his or her duties for 6 weeks rated at 8. Once the participants have rated the probability and consequence of event 1, the presenter can place event 1 on the risk matrix shown in Figure 1.

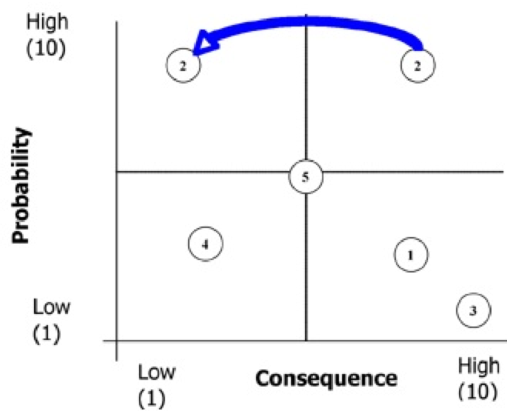
Table 1.
Handout for Risk Assessment: What Risks Does Your Enterprise Face?

Rate the probability and consequence (severity, cost) of each event on a 1-10 scale (1=Low, 10=High).

Event	Probability	Consequence
1. Owner in car accident, out 6 weeks	2-3	8
2. Owner, 80, passes away	8	8
3. Owner, 35, passes away	1	10
4. New employee quits	3	3
5. Employee injured on farm equipment	5	5

An event that works well to motivate succession planning is event 2: the owner passes away; he is 80 years old with no succession plan. The participants rate the probability very high at 8 and the consequence also very high at 10. Event 2 tends to generate a discussion about how an 80-year-old business owner should have already made a succession plan and reduced the consequence to the business to around 2.

Figure 1.
The Risk Matrix



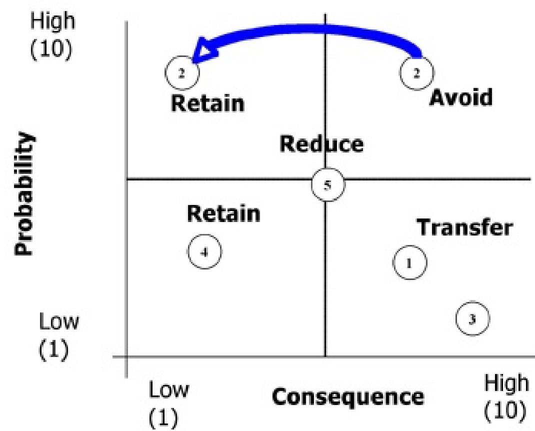
In order to explain how the risk matrix can guide the participants' choice of risk management strategy, it is useful to present several more examples.

- Event 3: a young owner of 35 passes away, and, while the participants rate the probability very low at 1, they believe the consequences for the business will be devastating at 10.
- Event 4: a new employee quits, which the participants rate as a low probability of 3 but also low consequence of 3 because the business had recently been functioning without the new employee.
- Event 5: an employee is injured on farm equipment, which is a common occurrence with consequences that vary greatly, so the participants rated both the probability and consequences at 5.

How the Risk Matrix Guides Choice of Risk Management Strategies

The risk matrix can then guide the participants' choice of risk management strategy. Depending on where the event lies on the matrix in Figure 2, there are four corresponding risk management strategies.

Figure 2.
The Risk Matrix Guides the Choice of Risk Management Strategy



Avoid Risk--The business takes action to avoid the risk. Typically this means the business chooses not to undertake an activity. For example, a farmer may decide not to grow lavender because the growing conditions are unsuitable and the probability of a crop failure is very high.

Reduce Risk--The business takes action to reduce either the probability or consequence of the risk. Typical examples include worker safety training and safety equipment, both of which are appropriate measures to address event 5. Event 2 falls into this category; the business owner could reduce the severe negative consequences to the business with a succession plan, as shown by the arrow.

Retain Risk--The business recognizes that unanticipated events will occur and will choose to retain those risks that are of low consequence to the business. Businesses face many small risks such as a new employee quitting or a bounced check, and the philosophical often call these events, "The cost of doing business." Business owners can invest time or money to protect the business *when* these events occur. In the case of event 2, the business owner can invest the time and money to develop a succession plan or will. Another common risk retention strategy is for the business to have a rainy day fund, saving money when the business is doing well to be able to weather bounced checks and the like.

Transfer Risk--The business transfers the risk to an insurance company. The insurance company will pay an indemnity when the event occurs. Typical insurance for farmers includes crop insurance or revenue insurance, while other types of insurance are liability insurance, disability insurance, life insurance, etc. In the case of event 1, the business will be better off if the owner has car insurance and disability insurance. In the case of event 3, the business may be able to continue if the owner's life insurance provides sufficient cash to allow the spouse or partners to learn how to fulfill the owner's duties.

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