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Organic Farming: A Study on Managing Risk

Mandeep Kaur[1], Dr. PK Dhiman[2], Dr. Sanjeev Bansal[3]

[1]Research Scholar Dept. of Management, Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur, Punjab
[2,3]Professor Management & Humanities Dept. Sant Longowal Institute of Engineering and Technology, Longowal, Sangrur, Punjab

ABSTRACT:
Viewing organic production as a comprehensive system that encompasses breeding, growing plants, and animals, processing their products, and marketing them, the paper explores the significance of managing risks in the organic farming sector's growth and management at various levels. The paper addresses the importance of comprehending the various origins and types of risks and understanding the intricacies of actions and reactions involved in risk management. The study provides a condensed overview of the pitfalls associated with organic products, the interplay between threat and profitability, and the way involved in managing risks within organic farming.

Keywords: organic farming, risk management, risk classification.

INTRODUCTION

Farming is a tough job. Farmers face a lot of uncertainty and have to make choices that impact their farms. Some of the things that affect these decisions are unpredictable, like weather changes, fluctuating crop prices, and the availability of labor and machinery. This uncertainty can make it hard for farmers to make a profit.

In recent years, farming has become even riskier, especially for small-scale farmers. Just growing food for your family isn't enough anymore. Farmers need to be more like businesspeople. They need to learn how to handle risks and challenges. Skilled farmers and businesspeople usually take risks when there's a chance to make more money. But they need to be careful in managing these risky situations. Good risk management means preparing for potential problems and finding ways to reduce their impact, not just reacting after something bad happens.

Extension workers, who help farmers, can play a role in improving their risk management skills. They can help farmers understand their problems and make smarter decisions about their farms. When farmers handle risks better, they can find better opportunities for farming successfully and making more money.

We will use the terms "risk" and "uncertainty" interchangeably throughout this essay.

Farmers decide which crops to grow, how much to plant, and when to plant them at the start of an agricultural season. These options can appear simple, yet each one has a wide range of possible consequences. Although there will only be one true consequence in the end, the outcome at the time these decisions are made is unknown and unclear.

Sources of Risk

Risk in farming can come from various sources, and we can categorize it into five main areas:

1. **Production and Technical Risk:**

a. Farming outcomes are affected by nature – weather conditions, pests, and diseases.
b. Farmers can't predict the exact amount of rain, possible hailstorms, or pest outbreaks when they sow crops or tend to livestock.
c. There's uncertainty around whether machinery or equipment might break down during crucial times, and whether new farming technology will perform as expected.
d. The success of planting seeds and raising animals isn't guaranteed.

2. **Marketing Risk - Prices and Costs**:

a. Farmers have little control over product prices.
b. Prices are influenced by factors like the amount of product available, consumer demand, economic conditions, and production costs.
c. Input costs and yield can vary, impacting the overall cost of production.
d. Price fluctuations can be unpredictable, affecting the market price when farmers are already committed to their crops or livestock.

3. **Financial Risk:**

a. This risk arises when farmers borrow money for their operations.
b. Future interest rates, the lender's promise to provide money when it's needed, and the farmer's capacity to make money to pay back the loan are all subject to uncertainty.
c. Small-scale farmers may find it difficult to pay back their debts due to high interest rates.
d. In extreme circumstances, lower-than-anticipated prices and low production may compel the sale of the farm.

4. **Institutional Risk:**

a. Unexpected changes in the services offered by formal and informal organizations that support agriculture—including banks, cooperatives, marketing networks, input suppliers, and government extension services—are referred to as institutional risk.
b. Government initiatives that have an impact on the farming industry, such as price support and subsidies, can increase this risk.

5. **Human and Personal Risk:**

a. Human risk is linked to illness, death, and personal family situations.
b. Accidents, illness, or death in the family can disrupt farm operations.
c. Labor migration from rural areas, political instability, and social unrest can lead to labor shortages on the farm.

Risk Management

Making decisions is management's primary duty. Each planting season, farmers must make important choices on the crops to plant as well as the proper seeding rates and fertilizer applications. But for several months or even years in the case of perennial crops and livestock, the outcomes of these choices, such as crop yields and pricing, remain unpredictable. Farmers can only occasionally be completely certain of the results of their selections, usually when the choice is simple and has only one clear result. For instance, farmers who choose short-term loans know exactly what will happen: the bank will charge them interest at a certain rate.

However, because there are several potential outcomes, the outcomes of a decision are typically uncertain. Farmers frequently find that their decisions don't produce ideal outcomes because of changes that take place between the time the decision is made and when the ultimate consequence is obvious. Additionally, these results may be influenced by other people's choices and uncontrollable future events.

Farmers require thorough information on crop yields, input and product prices, and technical data in order to make informed decisions. It might be difficult to make decisions because one can never be completely sure of how things will end.

Typically, farmers have a rudimentary idea of how their crops will behave in a variety of weather situations, such as dry, average, or wet circumstances. Others rely on their memories of previous weather patterns, while some may have records of the annual rainfall patterns close to their farm. Before making planting decisions, farmers frequently consider the possible repercussions.

The risk level may occasionally be so low that it is not given much thought. This is particularly true when there is a long history of a steady connection between particular decisions and their results.

Most farmers have a basic idea of how their crops will behave in a variety of weather scenarios, including dry, ordinary, and wet circumstances. While some rely on their memories of previous weather patterns, others keep official records of the annual rainfall in their region. Before choosing their planting strategy for the season, some farmers may have a gut feeling about the chances of a dry or wet year. Before making decisions, farmers frequently think about the possible results of planting and developing their crops.

Consider rainfed crops as an example. If there is sufficient rainfall, farmers who rely on rain for their crops should anticipate good yields. There is some ambiguity on whether it will rain, how much it will rain, and whether it will rain at the appropriate time. Due to weather hazards, some farmers are uncertain about crop yields. They can anticipate strong returns and a respectable profit if they plant their crops and get an average quantity of rainfall.

On the other hand, insufficient rainfall may result in poor harvests and little or no profit. Crop yields and production levels are directly impacted by the pattern and volume of rainfall. High rainfall can produce good crops but also spreads out production among all farmers, which could lead to price decreases. The degree of profit is impacted by both production and pricing changes acting together.

Farming risks can range in complexity. Some are simple, such as keeping a steady relationship with hired labor, where there is little chance of a labor shortage. Adopting new agricultural technologies, such as new livestock or seed kinds, might introduce a variety of risks, which could result in profits or losses. Farmers should fully comprehend the type and scope of these dangers prior to deploying new technology.

Essentially, the degree of risk involved determines how simple a decision will be to make. ones with lower risks are easier to make, but ones with larger and more complex hazards are more difficult. It's crucial to understand that choosing not to select or make a specific selection is also a choice with implications. Farmers must therefore understand risk and how it affects the farming industry in order to better control the issues affecting their houses, farms, and livelihoods.

The International Organization for Standardization (ISO) has established a set of standards pertaining to risk management, which includes the following:

1. **ISO 31000:2009 - "Risk management – Principles and guidelines"**
2. **ISO/TR 31004:2013 - "Risk management – Guidance for the implementation of ISO 31000"**
3. **ISO Guide 73:2009 - "Risk management - Vocabulary"**
4. **IEC 31010:2009 - "Risk management -- Risk assessment techniques"**

These standards collectively provide comprehensive guidance and principles for effective risk management practices.

The table below highlights the interaction and complexity of risk management and treatment in the organic sector. The sequence of "assess-protect-confirm," which is frequently used interchangeably with "plan-do-check," is the main topic of this table. Additionally emphasized are the importance of rigorous planning, ongoing feedback, and efficient risk communication

<table>
<tr><td colspan="4">Assess –Protect- Confirm (Plan-Do-Check)</td></tr>
<tr><td rowspan="4">Organic Sector</td><td>Risk Assessment</td><td>Risk Strategies</td><td rowspan="4">Preparedness& Resilience</td><td rowspan="4">1. Avoid risk
2. Accept Risk
3. Remove source
4. Change Likelihood
5. Change results
6. Share Risk</td></tr>
<tr><td>Risk identification</td><td>Risk planning</td></tr>
<tr><td>Risk analysis</td><td>Risk treatment</td></tr>
<tr><td>Risk evaluation</td><td>Revision, monitoring, and evaluation</td></tr>
<tr><td colspan="3">Risk Communication, Risk Attitude and Perceptions</td></tr>
</table>

Table 1

Decision-Making and Risk Management in Farming

In the world of agriculture, farmers deal with the challenge of making decisions today while safeguarding themselves against uncertain tomorrows. To mitigate potential adverse outcomes, they employ risk management strategies. These strategies entail a structured sequence of steps that farmers should adhere to. They commence by identifying potential sources of risk, understanding the potential consequences, selecting from various available strategies, evaluating the repercussions of each potential outcome, and weighing the trade-offs between the cost of risk and potential gains. Figure illustrates the systematic process that farmers should follow when managing risk.

Farmers exhibit varying degrees of risk tolerance and estimation. Their decision-making is influenced by a multitude of factors, and some farmers are more open to risk than others. Often, these attitudes are shaped by personal emotions rather than objective information, which may lead to less rational decision-making.

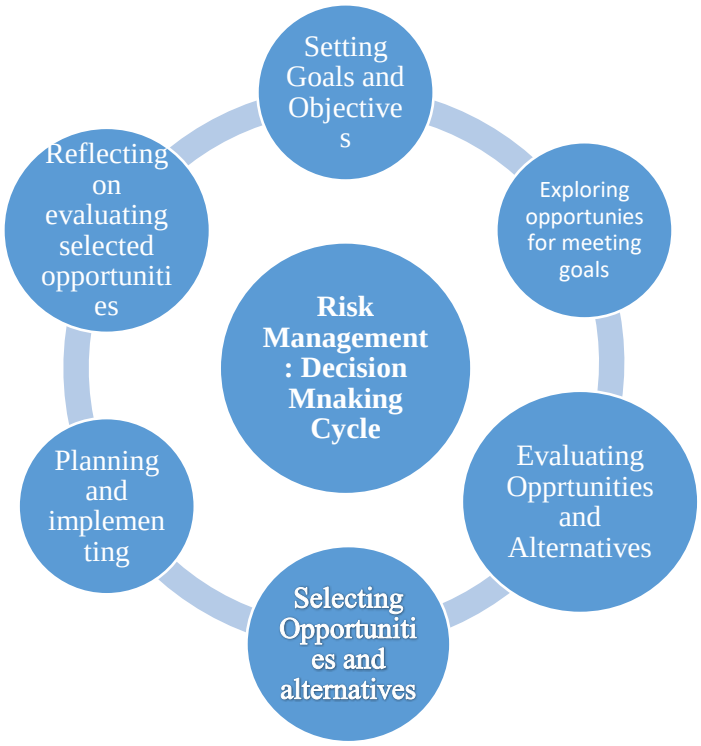

Fig 1

Farm-Level Risk Management Strategies

Strategies for Managing Risks: Risk management strategies can be categorized into three key areas: Production, Marketing, and Financial considerations. These strategies aim to minimize exposure to risk and mitigate its impact.

Risk-Sharing Strategies and Tools	**Control Risk Exposure**
Risk-sharing contracts • Share-tenancy • Production contracts • Marketing contracts • Insurance • Financial leverage • External equity financing	• Diversify Crop Production • Diversify On-Farm Activities • Employ Resistant Varieties • Implement Hygiene and Sanitary Measures • Reduce Production Costs • Explore Off-Farm Investment Opportunities • Pursue Off-Farm Employment • Foster Networking Initiatives

Literature Review

Contrarily, conventional farmers showed greater levels of worry about the costs of purchased goods and animal welfare regulations. Interestingly, the management responses of both organic and conventional farmers were more similar to their initial risk perceptions. They recognized financial measures such as liquidity, production costs, disease prevention, and insurance as important tools for mitigating risk. While

individual perceptions varied among farmers, several socio-economic variables were found to be associated with risk and risk management.

Institutional risks are significant, which emphasizes the need for policymakers to be cautious when considering modifications to existing regulations. Instead, they ought to look towards smart policy efforts that will eventually boost farmers' confidence. Researchers also need to focus more on the dynamics of institutional risks in agriculture.

The study "Comparing Risk Perceptions and Risk Management in Organic and Conventional Dairy Farming" by O. FLATEN, G. LIEN, M. KOESLING, P.S. VALLE, and M. EBBESVIK examines the risks faced by organic farmers, how these risks were managed, and the support they needed for risk management. One important danger noted by the farmers was the potential for genetically modified organisms to contaminate organic crops, especially among those engaged in the production of grain, soybeans, and cotton. Participants in these focus groups raised worries about the adequateness of coverage, highlighting the need for insurance plans to reflect the higher prices paid for organic crops. These participants were frequently aware of and had access to crop insurance.

The analysis of the study “Comparing Risk Perceptions and Risk Management in Organic and Conventional Dairy Farming” by O. FLATEN , G. LIEN , M. KOESLING , P.S. VALLE , M. EBBESVIK investigate the risks faced by organic farmers, how these risks were managed, and the support they required for risk management. One significant risk identified by the farmers, especially among those involved in grain, soybean, and cotton production, was the potential contamination of organic crops by genetically modified organisms. In particular, participants in these focus groups, who were often aware of and had access to crop insurance, expressed concerns about the adequacy of coverage, emphasizing the need for insurance policies to reflect the higher prices received for organic crops. In contrast, the majority of growers of fruits and vegetables in the focus groups knew little about crop insurance. Smaller fruit and vegetable farm operators have reservations regarding crop insurance's applicability to their particular type of farming even after receiving basic information about it.

The findings of the study "Risk and Risk Management In Organic Agriculture: View of Organic Farmers" reveal that one of the major dangers cited by the farmers, particularly those engaged in the production of grain, soybeans, and cotton, was the potential for genetically modified organisms to contaminate organic crops. These focus groups' participants, many of whom were knowledgeable about and had purchased crop insurance, expressed worries about the suitability of the coverage provided. The need for insurance plans to reflect the higher prices paid for organic crops was emphasized.

Conclusion

Managing risks in organic production is a complex endeavor that involves assessing and mitigating various types of risks, with a strong emphasis on planning and clear communication. Organic risk management should be approached from two distinct perspectives: one that aligns with general agricultural risk management principles and another that takes into account the distinctive qualities of organic farming techniques and more general sustainability objectives.

Through risk management strategies and plans at various organizational levels, the full spectrum of risks—including vulnerability, identification, probability, analysis, prevention, recovery, feedback, assessment, and monitoring—is handled. These strategies impact the management systems of diverse organizations. Consequently, organic risk management is seamlessly integrated into both national and international organic standards and industry-specific strategies and plans.

Nonetheless, the heart of organic risk management lies in how stakeholders at lower levels handle these risks. There is a widespread assumption that dangers are greater in organic production, yet this belief isn't necessarily supported by science, math, or economics. Such a perception may potentially discourage engagement in the organic sector and dampen motivation. Hence, there is an urgent need for comprehensive quantitative research on organic risks and their management.

REFERENCES

1. Greene Catherine, Colorado Kremen "Risk and risk management in organic agriculture: Views of organic farmers" December 2004.
2. FLATEN O, LIEN G, KOESLING M, VALLE PS, EBBESVIK M "Comparing Risk Perceptions and Risk Management in Organic and Conventional Dairy Farming: Empirical Results" 2006
3. Khan David "Farm Management Extension Guide, Managing Risk in Farming" 2008
4. James C. Hanson, Robert Dismukes, William Chambers "Risk and Risk Management In Organic Agriculture: View of Organic Farmers" June 2004
5. VENELIN TERZIEV, EKATERINA ARABSKA, VESELA RADOVIC EDUCONS "RISK MANAGEMENT IN ORGANIC FARMING" April 2015.