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Determining risk sources and strategies among farmers of contrasting risk awareness: A case study for Cukurova region of Turkey

H. Akcaoz, B. Ozkan*

Department of Agricultural Economics, Faculty of Agriculture, University of Akdeniz, 07070 Antalya, Turkey

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Abstract

In this paper, the results of a survey conducted in the Cukurova region of Turkey are presented. The aim of this research is to identify groups of farmers who differ in their risk sources and risk management strategies. The respondents to the survey were divided into three risk attitude groups, risk averse, risk seeking and risk neutral. Factor analysis has been conducted on information obtained from 112 farmers in 2000. From the findings of the research, risk sources were labelled as environmental, price, catastrophe, input costs, production and technological, political, finance, personal, marketing, health and social security. The dimensions of risk strategies were named as diversification, off-farm income, marketing, planning, financing and security.

Keywords: Risk attitudes; Risk source and strategies; Agricultural production; Turkey

1. Introduction

Agriculture is often characterized as a uniquely high-risk and high-uncertainty sector of the economy. There are many sources of risk and uncertainty in agriculture,

*Corresponding author. Tel.: +90 242 310 2414; fax: +90 242 227 4564.
E-mail address: bozkan@akdeniz.edu.tr (B. Ozkan).

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forcing farmers to make decisions in a risky, ever changing environment. These risks and uncertainties are conventionally categorized into the management areas of production, marketing and finance (Boehlje and Eidman,1994). Some of the risk and uncertainty components are lack of rainfall, price changes, lack of labour for required time, machinery breakdowns in unexpected situations and changes in government policy and other similar factors. These factors are the main causes of income fluctuations in agriculture. Because of risk and uncertainty components, big fluctuations in yields and prices have occurred and this situation leads to important income differences from one year to another. The risk and uncertainty conditions are reflected in prices of goods purchased by farmers and amounts of production. These are therefore of crucial importance for a farmer's income. Risk management strategies are developed to provide some protection in situations in which the consequences of a decision are not known when the decision is made. The various risk management strategies have different effects on the farm business, but none of the responses can provide protection from all types of risk (Patrick, 1998).

Risk strategies are defined as the methods applied to remove or reduce partly the effects of factors creating risk in agriculture. To reduce effects of risk or survive in the poor conditions for farm activities, it is necessary to use risk strategies. The selection of good risk strategies depends on the farm operator, the financial situation and risk attitudes of the farmer. The risk strategies are classified in several ways in the literature (Kay and Edwards, 1994; Hardaker et al., 1997; Musser, 1998). Risk strategies dealing with variability are commonly grouped into production, marketing and financial responses. As the names imply, production and marketing responses deal directly with production and market types of risk. Production responses generally act to reduce risk by reducing the variability in production. Marketing responses may also reduce risk by narrowing the range of possible outcomes or may involve transferring price risks to other individuals or institutions. In contrast, financial responses generally emphasize the firm's capacity to bear risk and do not reduce the probability of an unfavourable event. Financial responses, such as insurance, may also transfer risks to others and provide the means with which the firm can withstand adverse consequences should they occur (Patrick, 1998). Some research works have been conducted on the risk exposure and risk coping strategies of farmers (Nelson, 1997; Martin and McLeay, 1998; Musser, 1998; Coble et al., 1999; Harwood et al., 1999; Keith, 1999; Babcock et al., 2000; Akcaöz, 2001). It might be stated that the research subject area is relatively developed in the developed countries.

Recent work similar to this research was conducted in the US, the Netherlands and South Africa (Ortmann et al., 1995; Patrick and Musser, 1997; Patrick and Musser, 1999; Meuwissen et al., 2001). Patrick and Musser (1997), using factor analysis and determining risk sources costs, family, livestock gross income, crop gross income, credit and policy in their studies. The dimensions of risk strategies were named marketing, production, security, off farm and financial factors in these papers. A number of socio-economic variables related to risk sources and strategies were discussed.