**Abstract**

Providing pest control solutions that are less harmful to the farmers and the environment, while maintaining effectiveness on pests is a major goal in modern crop protection. A survey of randomly selected cotton farmers from two districts of Punjab in Pakistan was conducted to study common crop protection practices and related behaviors of farmers in an attempt to identify factors preventing the adoption of alternatives to chemical pest control in the area. Almost all farmers reported using pesticides extensively as the only way of controlling pests and often by mixing two or more different pesticide products. Most farmers felt that spraying with chemicals is not only highly effective, but it is also the only viable option available at the moment. Thus, despite significant health concerns, they felt forced to use pesticides. Almost half (49%) of the farmers, irrespective of age, showed a tendency toward pesticide overuse by spraying higher quantities of pesticides than those required. To model farmers’ behavior toward environmentally sound alternatives of pest control, a binary probit regression model was used expressing behavior as a function of age, education, farm size, income, risk perception levels, adverse health effects by pesticides, and training. Education and training were the main determinants of environmentally sound behavior in pest control, in the sense that high levels of education and training appeared to discourage pesticide use in the study area. In contrast, experience of health problems was not associated with behaviors toward pesticide reduction or adoption of alternative pest control practices. Additionally, governmental policies, such as the outdated extension system and the easy availability of pesticides under a non-existing or poor regulation system, which encourage farmers to utilize pesticides, should be considered as extra major barriers in the adoption of alternative pest control practices.