Farmers’ Level of Technical Knowledge: Implication for Sustainable Agriculture

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Introduction
The 1980s witnessed growing concern about the environmental and health risks associated with modern agriculture. Several studies showed that farmer’s heavy usage of chemical inputs were due to farmer’s lack of proper understanding and adequate knowledge. Sustainable agricultural practices, in addition to being vital in providing safe food for consumer, it would also conserve and protect the quality of natural resources for producing agricultural products. Researchers have pointed out that farmers’ literacy and their agricultural and technical knowledge level are the main obstacle facing sustainable agriculture and rural development.

Propose and Methodology of the Study
The main objective of this study was to assess the farmers’ technical knowledge and determine its relationship to farmers’ professional characteristics. The population of this study consisted of all corn growers in Fars province (located in the southern region of Iran). Using a completely randomized sampling technique, 159 of the farmers were identified as a sample of the study. A questionnaire was developed to gather data regarding farmers’ demographic and professional characteristics, and measure the dependent variables of the study. Farmers' technical knowledge was determined by examining their general knowledge status concerning agronomic management including land preparation, corn cultivation and maintenance, harvesting, storage and processing of corn. Farmers' access to information sources were determined by providing the farmers with list of information sources that farmers could possibly be furnished with needed information regarding corn farming. The farmers' responses to accessibility of each of the information sources ranging from "not at all" equal to zero, to a "very much" equal to 5. The sum of the 12 items on the information sources determined the farmers' access to information sources. Content validity was established by a panel of experts. A pilot study was conducted to establish reliability of the instrument for the population of interest.
Major Points and Lessons Learned

The result indicated that the majority of the farmers’ technical knowledge was in “average” level, and a low association (r=0.27) between the farmers' access to information sources and their level of technical knowledge was established. As the farmers' access to information increased their level of technical knowledge increased at a "low" rate. Given a low association and statistically significant relationship between these two variables, it is important to point out that accessible information to farmers must be written at their level of knowledge and understanding in order to be effective. Only then it could impact the farmers’ professional understanding and knowledge base. If accessible information to farmers had the mentioned condition, we should have observed a stronger relationship between these two variables. By contrast, farmers’ level of participation in extension educational programs had strong association (r=0.62) with their level of technical knowledge. Multivariate Linear Regression result indicated that farmers’ level of formal education, their level of participation in extension educational programs, and their access to information source explained 38% (R² =0.38) of the variance in farmers’ technical knowledge level. This implied that there are other variable that could affect farmers’ technical knowledge level that were not found in this study.