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"Filling gaps and removing traps
for sustainable resource management"

Investigating Farmers' Knowledge about Climate Change in Iran

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Abstract

Climate change is a reality that poses severe threats to agriculture and rural livelihoods in developing countries. Mounting evidence has revealed that farmers can effectively manage negative impacts by adapting their farming practices to climate change. However, it is a common belief that more information and knowledge about climate change will lead to a better understanding of the phenomenon and adaptation options. Therefore, farmers need to refresh and continually update their knowledge about climate change to raise their potential capacity and output in the facing of climate change impacts. Therefore, the aim of this study was to investigate factors affecting knowledge of wheat growers about climate change and the associated impacts in Kermanshah County in western Iran. To achieve this goal a quantitative study (survey methodology) was used, applying a multi-stage random sampling technique and selecting 350 farmers. Data were collected through a questionnaire with confirmed internal reliability and validity. Descriptive analysis revealed that the age of the participants ranged from 25 to 84 with a mean value of 48.7 years (SD 12.47). The sample consisted of 13 female farmers (3.7 %) and 337 male farmers (96.3 %). The majority of the participants (26.6 %) had a high school equivalent degree. The mean farm size for rain fed and arable farmland farmers, respectively, was 7.5 and 2.6 hectares. The mean scores of self-efficacy, risk attitude and knowledge with respect to climate change were 2.05 out of 5 (SD 0.72), 3.57 out of 5 (SD 0.64) and 3.64 out of 5 (SD 0.77), respectively. Pearson's correlation test revealed a significant relationship between 'knowledge of climate change' and all other variables, including 'environmental attitude', 'trust', 'self-efficacy' and 'risk attitude'. Structural equation modelling revealed that environmental attitude ($\beta = 0.31$, $p < 0.001$), risk attitude ($\beta = 0.18$, $p < 0.002$) and trust ($\beta = 0.14$, $p < 0.013$) were significant predictors of farmers' knowledge about climate change. The present study provides a justification for programs that intend to encourage farmers' adaptation behaviour in view of climate change impacts.

Keywords: Agriculture, climate change, knowledge, structural equation modelling

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