Bridging the Gap: Knowledge of Nepalese Farmers About Agricultural Commercialization

Sudarshan Adhikari
Department of Agricultural Communication, Education, and Leadership
The Ohio State University
311 Agricultural Administration Building
2120 Fyffe Rd, Columbus, OH 43210
Adhikari.165@osu.edu
614-554-9645

Emily Buck
Department of Agricultural Communication, Education, and Leadership
The Ohio State University
200Y Agricultural Administration Building
2120 Fyffe Rd, Columbus, OH 43210
Buck.210@osu.edu
740-490-5236

Suraksha Baral
Department of Agricultural, Environmental, and Development Economics
The Ohio State University
331 Agricultural Administration Building
2120 Fyffe Rd, Columbus, OH 43210
Baral.20@osu.edu
706-461-2131

Introduction

The highest fraction of the population in Nepal is engaged in agriculture (MOALD, 2022). Although agriculture has always been their major occupation, it mostly remains at the subsistence level (GC & Hall, 2020). The static and subsistence nature of production has made it difficult to feed the increasing population. Keeping this in mind, government policies and strategies have emphasized the importance of agricultural commercialization and attempted to support commercial farming (Agriculture Development Strategy, 2015). However, no significant production patterns and system changes have been observed. Past research has attempted to study the status and barriers of agricultural commercialization in Nepal (GC & Hall, 2020; Joshi & Piya, 2021), but limited literature exists on the farmers' knowledge of agricultural commercialization. It is not possible to apply commercialization techniques and/or succeed in commercial farming without having proper knowledge about it. Also, the agricultural holding trend in Nepal shows an increasing number of comparatively older farmers (above 54 years) and a decreasing number of relatively young farmers (equal to or below 54 years) (National Sample Census of Agriculture, 2023). Hence, understanding the relationship between farmers' age and their commercialization knowledge may help policymakers set their age-group-specific priorities. This research adds to the existing body of literature by exploring the perceived knowledge of Nepalese farmers about commercial farming and explaining whether the age of the farmers influences their knowledge about commercial farming.

Theoretical Framework

This research was framed by using the innovation-decision model. The model describes how innovations get adopted in a five-staged process: knowledge, persuasion, decision, implementation, and confirmation (Rogers, 1995). This model has been widely used to frame research in agricultural education and extension (Blythe et al., 2017; Nelson & Thompson, 2005). As knowledge is our primary concern in this research, we focused on the first stage of the innovation-decision model. Knowledge, according to the model, is affected by the characteristics of the decision makers, including their sociodemographic characteristics (Rogers, 1995). We used a demographic variable of interest (i.e., age) to predict how it affects their knowledge of agricultural commercialization.

Methods

A quantitative survey instrument was validated by a panel of experts and employed to collect data for the research. We created the questionnaire consisting of questions related to demographic characteristics and farmers' perceived knowledge of agricultural commercialization. "Knowledge" consisted of eight 5-point Likert-type items, each item ranging in response from very low knowledge (1) to very high knowledge (5). The example knowledge items included "*Benefits that agricultural commercialization offers,"* and "*How to commercialize my farm*." We collected data in person from 160 farmers in the far western region of Nepal ($N = 160$), purposively selecting districts to better represent all geographical regions of Nepal. Cronbach's alpha estimate based on the pilot test satisfied the reliability requirements with its value more than .80 (Carmines & Zeller, 1979). We utilized descriptive statistics to describe knowledge and simple regression to predict the influence of age on knowledge. The data were analyzed using SPSS Version 29.

Findings

Among the respondents (N =160), the majority were male (n = 87, 54.38%) and Hindu (n = 142, 88.75%), with an average age of 43 years (M = 43.31, SD = 12.57) and average farming experience of 18 years (M = 18.14, SD = 12.39). The majority of the respondents had low knowledge of the benefits of agricultural commercialization (n = 79, 49.38%), ways to commercialize a farm (n = 102, 63.75%), market (n = 82, 51.25%), modern production practices (n = 82, 51.25%), risk management strategies (n = 125, 78.13%), legal policies (n = 138, 86.25%), modern technologies (n = 102, 63.75), and business planning related to commercial farming (n = 118, 73.75%) (Table 1).

Table 1

Farmers' Knowledge of Agricultural Commercialization (N = 160)

Knowledge Items	*f*				
	1	2	3	4	5
Benefits that agricultural commercialization offers.	26	53	53	18	10
How to commercialize my farm.	36	66	40	14	5
Importance of market in commercial agriculture.	25	57	42	25	11
Role of modern production practices to commercialize my farm.	30	52	43	29	6
Strategies to manage risks associated with commercial farming.	52	73	28	5	2
Legal policies associated with commercial agriculture.	85	53	16	6	0
Role of modern technologies to increase my production.	38	64	29	16	13
Business planning pertinent to commercial farming.	54	64	31	9	2

While predicting the influence of age on knowledge about commercial farming, a negative significant relationship was observed (β = -0.02, t = -3.568, $p < 0.05$) (Table 2). The regression model indicated that 7.50% of the variance in the dependent variable was explained by the independent variable ($R^2 = 0.075$, $F(1,158) = 12.73$, $p < 0.05$).

Table 2

Influence of Age on Knowledge of Agricultural Commercialization (N = 160)

Variable	*B*	*S. E.*	*Std. B*	*t*	*p*
Age	-0.02	0.005	-0.27	-3.568	< 0.05

Discussion and Conclusion

Most farmers in the far western region of Nepal had low knowledge of agricultural commercialization, which could contribute to their reluctance to adopt commercial farming practices. Younger farmers were shown to have more knowledge about commercialization than the older ones. This relationship provides important information for agricultural extension workers and program developers to target their commercialization-related interventions effectively. For instance, while application-based interventions may target young farmers, awareness-based interventions may target older farmers. With the help of our findings, the farmers can understand their knowledge level in different aspects of commercial farming and fill the knowledge gaps to practice agricultural commercialization. Hence, farmers, extension workers, and agricultural policy makers are expected to benefit primarily from the research findings. We recommend that future researchers incorporate higher sample sizes to ensure better representation.

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