



Research Article

Agricultural Information Need of Smallholder Farmers in Chitwan District, Nepal

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Keywords: Agricultural information; Smallholder farmers; Agrovets shops; Input market

Abstract

Agricultural information is very essential for smallholder farmers to increase farm production and productivity. However, there is no proper access to accurate and adequate agricultural information to smallholder farmers. This paper attempts to identify the existing agricultural information source and the agricultural information need of the smallholder farmers along with usefulness of the provided agricultural information. Household level data were obtained from four wards of Bharatpur metropolitan of Chitwan district during 2019. The result showed agrovets shops as most common source of agricultural information for smallholder farmers. The most needed agricultural information was about input market and prices followed by disease and pest control. Moderately useful agricultural information was provided to smallholder farmers. Findings of this research suggest that context specific agricultural information should be provided through the existing channels to the smallholder farmers.

Introduction

Modern agriculture is becoming more knowledge intensive. Access to accurate and adequate information is very essential for increasing agriculture production and productivity (Madhavan, 2017). Generally, agricultural information refers to all published and unpublished knowledge on agriculture practices (Aina, 1990). Farmers need to be informed about improved agricultural practices to help them increase their productivity and income (Okwu *et al.*, 2007). Information on good farming practices, diseases and pest control, soil conservation, application of fertilizers, post-harvest measures and marketing techniques

is needed (Yusuf *et al.*, 2013). Different sources and channels are used for the flow of that information in Nepal like extension workers, agrovets shops, progressive farmers, government organizations and social media (Poudel, 2015). Moreover, smallholder farmers play a significant role in the agriculture production in Nepal as they constitute more than 50% of Nepalese farmers (CBS, 2011). But they are still devoid of basic agriculture information and improved technologies (GC and Hall, 2020). In the case of marginal and small agricultural land holders, adoption of new technologies to increase farm productivity requires context-

specific agriculture information (Samaddar, 2006). Thus, context specific agricultural information for smallholder farmers is utmost important for sustainable agricultural development.

This paper aims to identify the existing agricultural information source and agricultural information need of smallholder farmers. Along with this, usefulness of the provided agricultural information was assessed to improve the access of relevant information to smallholder farmers in the study area.

Methodology

To meet the objectives, four wards were purposively selected from the Bharatpur metropolitan. The selected wards were Patihani, Fulbari, Chanauli and Rampur. Smallholder farmers are categorized as cultivating less than 0.5 ha (14.8 kattha) per household (CBS, 2011). From these four wards, 120 smallholder farmers were selected by using simple random sampling. The sample size was calculated by using formula given by Israel (1992). Information was collected using Focus Group Discussion (FGD), Key Informant Interview (KII) and face to face interview with household head. Index value was calculated with formula used by Shrestha (2018).

Results and Discussion

General Information of The Respondents in The Study Area

Table 1 shows the responses received from the respondents on various socio-economic aspects. The respondents were more female (52.50%) followed by male (47.50%). Education status of respondents showed 26.66% had more than intermediate level of education, 9.17% were only able to read and write whereas 4.17% were still illiterate. Similarly, the highest percentage of age group belonged to economically active (79.17%) followed by dependent age group (20.83%). The maximum number of respondents (29.17%) had experience of 31-40 years in farming. The highest percentage of respondents claimed up to 11-14 Kattha land (52.50%) followed by minimum of 1-5 Kattha (9.17%). About 65.83% of the respondents had income from agriculture only whereas 34.17% reported both agricultural and off farm sources.

Existing Source of Agricultural Information in The Study Area

Sources used by respondents for acquiring agricultural information are shown in Table 2. The information sources included agrovet shops, extension workers, organizations, fellow farmers, and ICTs. Among them, agrovet shops was ranked most common source of information for respondents in study area. Similar result was obtained by Vaggi and Kamble (2017) who reported agrovet shops and pesticides dealers as most used information source by farmers. Agrovet shops are more operated in accessible areas (Terai and mid hills) for input supplies and technical recommendation

for farmers (Thapa, 2010). Similarly, the second most used source was fellow farmers followed by various organizations of farmers. Similar result was reported by Mwantimwa (2020); Benard *et al.* (2014); Bachhav (2012). Likewise, extension workers and ICTs were least used source. This may be due to only 15% extension service coverage and insufficient number of extension worker in the country (MoAD, 2016) resulting fewer contacts with extension workers. Similarly, due to the recent introduction of ICTs in extension services in Nepal (Paudel *et al.*, 2018), farmers are still facing difficulties in technical terms of ICTs (Munyua, 2007), thus negatively affecting information gathering process and usage.

Table 1: General information of the respondents in the study area

Variables	Frequency	Percentage
Gender		
Male	57	47.50
Female	63	52.50
Education		
Illiterate	5	4.17
Only read and write	11	9.17
Intermediate and less	72	60.00
More than intermediate	32	26.66
Age group		
Economically active (15-59 years)	95	79.17
Dependent	25	20.83
Farming experience (in years)		
1-10	17	14.17
11-20	24	20.00
21-30	31	25.83
31-40	35	29.17
>40	13	10.83
Land owned (in Kattha)		
1-5	11	9.17
6-10	46	38.33
11-14	63	52.50
Source of income		
Agriculture	79	65.83
Agriculture + off farm	41	34.17

Source: Field survey (2019)

Table 2: Sources of agricultural information in the study area

Source	Index value	Rank
Fellow farmers	0.61	II
Organizations	0.55	III
Agrovet shops	0.76	I
Extension Workers	0.30	IV
ICTs	0.28	V

Source: Field survey (2019)

Agricultural Information Need of The Respondents in The Study Area

The agricultural information needs of the respondents were identified and presented in Table (3). The most needed agricultural information was about input market and prices followed by disease and pest control. The result is similar with findings of Babu *et al.* (2012) who reported the information on input as important need to farmers. Also, Samarakoon and Shamil (2010) revealed information on agricultural inputs and outputs prices, seeds and fertilizers needed by smallholder farmers. Similarly, information on credit facilities was ranked third which showed very few respondents concern over the information on agriculture credit/loan. Information on management practices like mulching and water management was ranked less important.

Usefulness of Provided Agricultural Information to The Respondents in The Study Area

Table 4 shows the usefulness of agricultural information provided to the respondents. High level of usefulness to agricultural information was reported by minority of the respondents. Majority of the respondents reported medium level of usefulness on all other agricultural information except information associated with output market and prices and farm machinery.

Table 3: Agricultural information need of the respondents in the study area

Information	Index value	Rank
Input market and prices	0.87	I
Seed	0.59	VII
Soil management	0.75	IV
Water management	0.20	XIV
Mulching	0.18	XV
Weed control	0.47	IX
Farm machinery	0.49	VIII
Fertilizer application	0.41	XI
Disease and pest control	0.86	II
Cropping pattern	0.43	X
Postharvest technology	0.65	VI
Output market and prices	0.69	V
Credit facilities	0.80	III
Farmers organization	0.24	XIII
Livestock production	0.39	XII

Source: Field survey (2019)

Table 4: Usefulness of provided agricultural information to the respondents in the study area

Information	Level of usefulness		
	High	Medium	Low
Input market and prices	10 (8.33)	90 (75.00)	20 (16.67)
Seed	5 (4.17)	96 (80.00)	19 (15.83)
Soil management	17 (14.17)	82 (68.33)	21 (17.50)
Water management	9 (7.50)	94 (78.33)	17 (14.17)
Mulching	21 (17.50)	83 (69.17)	16 (13.33)
Weed control	35 (29.17)	70 (58.33)	15 (12.50)
Farm machinery	16 (13.33)	45 (37.50)	59 (49.17)
Fertilizer application	14 (11.67)	71 (59.17)	35 (29.16)
Disease and pest control	13 (10.83)	60 (50.00)	47 (39.17)
Cropping pattern	7 (5.83)	68 (56.67)	45 (37.50)
Postharvest technology	12 (10.00)	58 (48.33)	50 (41.67)
Output market and prices	5 (4.17)	40 (33.33)	75 (62.50)
Credit facilities	7 (5.83)	91 (75.84)	22 (18.33)
Farmers organization	32 (26.67)	80 (66.66)	8 (6.67)
Livestock production	22 (18.33)	71 (59.17)	27 (22.50)

Source: Field survey (2019)

Note: Figures in parentheses indicate percentage

Conclusion

Agricultural information is very essential for smallholder farmers as they contribute major part of production in Nepal. Need based and reliable information is required for ultimate increase in farm productivity. Majority of the smallholder farmers acquired agricultural information through agrovet shops followed by fellow farmers. The most needed agricultural information to smallholder farmers was about input market and prices followed by disease and pest control. Similarly, level of usefulness was moderate to the most of the agricultural information provided. Thus, Government, NGOs and private sectors should take a note on important information needs and focus on delivering the required agricultural information through effective channel.

Authors' contribution

B.P. Mishra designed the research plan, collected the data from household survey and analyzed the data. B.P. Mishra and S. Bhatta prepared the manuscript, critically revised and approved for publication.

Conflict of Interest

The authors declare that there is no conflict of interest with present publication.

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