

AGRICULTURAL INFORMATION LITERACY AMONG THE FARMERS: A CASE STUDY OF AMBALA DISTRICT, INDIA

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The present study aims to explore the agricultural information literacy among the farmers in Ambala district of Haryana state. Survey method with convenience sampling has been used in this study and by using a self-structured questionnaire, data were collected from 75 farmers of two selected villages in Ambala district. The demographic profile indicates the male dominancy on agriculture field, and a high rate of literate population. Their primary source of income was found agriculture (77.34%) and main crops grown by the farmers were rice (100%), wheat (98.67%), and sugarcane (48%). Farmers need information mainly on Modern Cultivation System ($M=5.00$) and New Crop Production Material ($M=4.97$). Agriculture, education, health and agriculture economy are the key areas on which farmers information needs were focused. Newspapers were found as the major source of information to get the required information on various aspects. Inadequate price of crop production ($M=4.84$), lack of electricity in rural areas ($M=4.83$), and low level of information literacy ($M=4.75$) were found as the major hurdles in information searching by the farmers.

Keywords: Agriculture Information Literacy, Information Needs, Information Literacy, Farmers of Ambala district

INTRODUCTION

Agriculture is the primary occupation of Indian people in rural sector which plays a significant role in the Indian economy, for the continued growth of the economy. Farmers must be nourished with rich and authentic information on latest developments in agriculture sector as well as they should be provided with updated information about health and education. Indian government is also offering numerous schemes and programs in this direction but unfortunately due to the lack of information literacy, farmers could not get benefitted. In the present study efforts have been made to find out that how the information literacy is important in satisfying the agricultural information needs of farmers and how the way they fulfill such needs by different information sources. The present study has focused to explore the agricultural information literacy among the farmers of the Ambala District of Haryana state in Northern India.

REVIEW OF RELATED LITERATURE

Ibegwan, Anasi and Uzuegbu (2016) conducted a study on “The Role of Agricultural Libraries in Literacy Education as a Prelude to Capacity Building among Rural Farmers in Nigeria” with the objectives of finding needs, information sources, use of disseminated agriculture information to rural farmers in Abia state of Nigeria by using a descriptive survey method. The study found that the majority of the farmers need information on fertilizers (83%) and the most reliable source of information to fulfill the required needs are radio (81%) and relatives and friends or fellow farmers (79%). Roja (2018) examined the information needs of the rural women farmers of Karnataka by using survey method and found that 81.25% of the rural women were using mobile phone for getting the agriculture information according to their need and women farmers needed information on seed availability (39.58%). While in the case of information need on farming activity they need more information on market oriented agriculture products and milk products (22.92%) each. Newspaper (33.33%), television and other farmers (16.67%) each were being considered the most reliable information source for getting the desired information. Watti and Tiwari (2015) explored the extent of mass media literacy among farmers in the Chhattisgarh state in their study entitled “A Study on Mass Media Literacy among Indian Farmers with Special Reference to Chhattisgarh”. The study found that there are various types of mass media channels for accessing information such as Kisan Call

Centre (KCC) (59.75%), Short messages services (SMS) (54.25%) to farmers, Television programme (33.75%) and Internet. Further, farmers access information from KCC only 12.5%, through SMS (50.75%), Radio (25%), Television (81.75%) and 6.25% respondents access through internet. However, the data shows that maximum number (61.2%) of the respondents fulfill their information need from TV news broad casting.

Odini (2014) investigated how women farmers in Vihiga County access and use information in their endeavors to attain food security. In her study entitled “Access to and Use of Agricultural Information by Small Scale Women Farmers In Support of Efforts to Attain Food Security in Vihiga County, Kenya” data was collected 150 women and it was found that food insecurity is a serious problem among the poor households especially among older women, larger households, members with low education levels, and the unemployed. 80% women farmers required relevant and adequate information on agricultural inputs, improved varieties of seeds and access to credit (67% each) and marketing (65%), moreover, 62% of the women farmers gathered information from people such as friends, neighbors and relatives. Ignorance of information Source (62% each) Language barrier (61%) were pointed out as major obstacles in information access and its use by the rural farmers. Kumar & Devi (2020) in their study entitled “Farmers’ Perspective on Agricultural Information Literacy: A Case Study of Jind District, India” explored the information literacy level of the farmers and found that Agriculture, education, and health are

the primary areas on which all the farmers need information, and TV & newspapers are found as the primary sources of acquiring the required information. The main problem in acquiring the information includes, lack of electricity in rural areas (M=4.85), and low level of literacy (M=4.73). Kumar & Singh (2020) in their study entitled “Information Needs and Use of Information Sources by the Farmers: A Survey of Kurukshetra District, Haryana” found that 98.1% farmers required the information relating to government schemes/policies followed by availability of seeds (96.2%), Agricultural loan (73.1%) and weather/ weather forecast (73.1%). Mobile phones (69.2%) and Television (67.3%) were major electronic sources for acquiring the required information. The major problems faced by the farmers included, insufficient information literacy & information communication technology (ICT) skills (87.7%), and inadequate training opportunities (61.5%). All these studies focussed on various aspects of agricultural information literacy, but did not cover Ambala district of Haryana state. This paper would bridge the gap.

OBJECTIVES OF THE STUDY

The major objectives of the study are as given below:

1. To find out the information needs of the farmers on agriculture.
2. To find out the farmers ‘area of interest on which they seek the information.
3. To identify the various information sources which help the farmers in fulfilling their information needs.

4. To know different problems being faced by the farmers in acquiring the required information

RESEARCH METHODOLOGY

The present study is based on survey and a well-structured questionnaire was designed for data collection. Convenience sampling methods was used for data collection. The researcher personally visited the farmers and elaborated each question to them. Total 75 questionnaire were analyzed. Data analysis was done with SPSS 25 as most of the questions in the questionnaire were on a 5-point Likert scale (very often to never, strongly agree to strongly disagree) and mean values of the variables were extracted for convenience. The analyzed data has been presented in the tabular form with the help of Microsoft Word & Excel 2019.

SCOPE OF THE STUDY

The scope of this study is limited to the Ambala district of Haryana state and due to the scarcity of time, the farmers from two villages namely Bari Bassi and Chhoti Bassi has been chosen for this survey.

DATA ANALYSIS AND INTERPRETATION

The collected data, as discussed in the research methodology section, is being presented in the form of tables and graphs. The interpretation of the data is incorporated with each table. The data analysis and interpretation are as follows:

Table 1: Demographic Profile of the Farmers (N=75)

Sl. No.	Demographic Variable		Number of Respondents	Percentage (%)
1	Gender	Male	75	100.0
		Female	0	0.00
2	Age	Up to 30	14	18.67
		Between 31 and 40 years	17	22.67
		Between 41 and 50 years	21	28
		Above 50 years	23	30.66
3	Education	Illiterate	6	8
		Up to 5 th standard	13	17.34
		Between 6 th and 12 th standard	43	57.33
		Graduation	10	13.33
		PG	3	4
4	Agricultural Experience	Less than 10 years	9	12
		Between 10 and 20 years	25	33.34
		Between 21 and 30 years	15	20
		Between 31 and 40 years	14	18.66
		More than 40 years	12	16
5	Language Known	Hindi	57	76
		Hindi & English (Both)	18	24
6	Main Source of Income	Govt. Job	5	6.66
		Business	4	5.34
		Private Job	8	10.66
		Agriculture	58	77.34
7	Land Ownership (in acre)	Less than 4 acres	34	45.33
		Between 5 and 8 acres	17	22.67
		Between 9 and 12 acres	7	9.33
		Between 12 and 16 acres	11	14.67
		Between 17 and 20 acres	6	8
8	Land taken on rent for agriculture	Yes	22	29.33
		No	53	70.67
9	Land on Rent (in acre) N=22	Less than 5 acres	11	50
		Between 6 and 10 acres	5	22.72
		Between 11 and 15 acres	4	18.18
		More than 15 acres	2	9.1
10	Type of crops grown	Rice	75	100
		Wheat	74	98.67
		Jowar/Bajra/Cotton	29	38.66
		Mustard	4	5.33
		Sugarcane	36	48
		Vegetables	24	32

Table 1 shows the demographic profile of the farmers' viz gender, age, marital status, education, agriculture experience, income source, land ownership, & on rent and significant crops. All the respondents are male farmers, and 30.66% of them are above the age of 50 years. 28% farmers are between 41-50 years, 22.67% are between 31-40 years and 18.67% are up to the age of 30 years. 57.33% farmers are having education between the 6th to 12th class standard followed by up to 5th class and graduation with 17.34% and 13.33% respondents respectively. 33.34% farmers have 10-20 years of agricultural experience followed by 20% respondents who have 21 to 30 years of agricultural experience. 18.66% farmers have 31-40 years experience of in the field of agriculture followed by 16% farmers who have more than 40 years experience. 76% of farmers speak Hindi language only and remaining 24% are comfortable in both Hindi and English language. Agriculture is the basic and primary source of income for 77.34% farmers whereas 10.66% farmers also do private jobs. 6.66% farmers have government job and 5.34% farmers are doing business along with

agriculture. The majority of the farmers i.e. 45.33% have the land ownership of less than 4 acres, followed by 22.67% farmers who have ownership of 5-8 acres land. 14.67% respondents are the owners of 12-16 acres land. 29.33% farmers take the land on rent/contract for agriculture and out of this proportion (N=22), 50% farmers usually take less than 5 acres of land on rent, 22.72% farmers take 6-10 acres and 18.18% farmers take 11-15 acres of land on lease. The main crop is rice which is grown by the 100% farmers wheat is the second highest crop in demand which is grown by 98.67% farmers. 48% farmers grow sugarcane followed by 38.66% farmers who prefer Jowar/Bajra/Cotton. Farming of vegetables is also preferred by 32% farmers.

Table 2 shows that all the farmers i.e. 100% seek the information on the agriculture. 94.67% and 92% farmers also seek information on health and education along with information agriculture. Farmers are also remain willing to get information on the other topics i.e. agriculture economy, current information, society, and entertainment with (89.34%), (82.67%), (74.67%) and (44%) responses respectively.

Table 2: Types of Information Needs

S. No.	Information Needs	Number of Respondents	Percentage
1	Agriculture	75	100
2	Health	71	94.67
3	Education	69	92
4	Agriculture economy	67	89.34
5	Society	56	74.67
6	Current information	62	82.67
7	General information	48	64
8	Entertainment	33	44
9	Other	37	49.34

Table 3: Sources for Acquiring the Information

Sl. No.	Sources	Number of Respondents	Percentage (%)
1	Internet	59	78.66
2	TV	71	64.66
3	Newspaper	63	84
4	Books	33	44
5	Radio	57	76
6	Social media	52	69.33
7	Public information centre	39	52
8	NGO	9	12
9	Other	18	24

Note : Multiple answers were permitted

The table 3 reveals that major source of information for farmers is newspaper with 84% responses, Internet is the second highest source of information for farmers with 78.66%

responses. Farmers also rely on other means of media for getting information i.e., radio, social media, and television with 76% and 69.33%, 64.66% responses respectively.

Table 4: Frequency of Acquiring the Information Needs

Sl. No.	Frequency	Number of Respondents	Percentage (%)
1.	Daily	63	92
2.	Weekly	10	13.33
3.	Fortnightly	2	2.67
4.	Total	75	100

Table 5: Types of Information required for Agriculture

Sl. No.	Type of information for agriculture	Mean	SD	Rank
1.	Modern cultivation system	5.00	0.000	1
2.	New Crop Production Material	4.97	0.162	2
3.	Govt. scheme on agriculture	4.81	0.512	3
4.	Fertilizer management	4.73	0.553	4
5.	Disease pest management	4.63	0.487	5
6.	Market information	4.56	0.642	6
7.	Post harvesting technique	4.41	0.699	7
8.	Agricultural Loan	4.21	0.576	8
9.	Seeds and plant material	4.19	0.783	9
10.	Subsidize product	4.16	0.871	10
11.	Weeding thinning	4.11	0.727	11
12.	Soil and water management	3.64	0.816	12
13.	Weather information	3.52	0.844	13
14.	Storage of crops	3.39	0.971	14

Table 4 signifies the frequency of need for acquiring the information by the farmers which shows that 92% farmers need information daily followed by 13.33 farmers who seek information weekly 2.67% farmers need information fortnightly.

The table 5 indicates the types of information required by the farmers on agriculture, and the responses of the farmers were recorded on a five-point Likert scale from very often to never. Higher the mean value represents high requirement and vice versa. The finding shows that information on the modern cultivation technique is highly

required with the mean value of 5.00. followed by information on new crop production material (M=4.97), government scheme on agriculture (M=4.81), information on fertilizer management (M=4.73), information and disease/pest management (M=4.63). market information (M=4.56), post-harvesting techniques (M=4.41), agricultural loan (M=4.21), seed and plant material (M=4.19), subsidize product (M=4.16), weeding thinning (M=4.11), soil and water management (M=3.64), weather information (M=3.52) and last, storage of crops (M=3.39).

Table 6: Sources of Getting Information on Agriculture

Sl. No.	Sources of information on agriculture	Mean	SD	Rank
1.	Mobile	4.91	0.408	1
2.	Newspapers	4.88	0.401	2
3.	Television	4.81	0.512	3
4.	Agriculture Exhibition	3.72	1.047	4
5.	Radio	3.52	0.921	5
6.	SMS alert service	3.27	0.935	6
7.	Public library	3.20	0.944	7
8.	Krishi Vigyan Kendra	3.12	1.150	8
9.	Workshop	3.03	0.870	9
10.	Book	3.03	1.026	10
11.	Social Media	2.99	1.121	11
12.	Co-operative Bank	2.39	0.928	12

The table 6 shows the sources for getting information on agriculture i.e. mobile (M=4.91) and newspapers (M=4.88) were being used mostly for obtaining information on agriculture followed by television (M=4.81), agriculture exhibition (M=3.72), radio (M=3.52), SMS alerts service

(M=3.27), and the public library (M=3.20). The least used sources were Krishi Vigyan Kendra (M=3.12), workshop & books (M=3.03), social media (M=2.99) and cooperative banks (M=2.39).

Table 7: Problems Faced by the Farmers while Searching the information

Sl. No.	Nature of problems	Mean	SD	Rank
1.	High cost of crop production	4.84	0.404	1
2.	Lack of electricity in rural area	4.83	0.503	2
3.	Low level of information literacy	4.75	0.496	3
4.	Lack of weather proof storage (Godowns) of crop production in market (Mandi)	4.63	0.610	4
5.	Less acceptability to rural area by NGOs	4.55	0.703	5
6.	Inadequate market information	4.44	0.575	7
7.	Inadequate subsidy or support price from government	4.39	0.733	8

Table 7 relevant that farmers were facing different problems in getting information on agriculture of crop production (M=4.84), lack of electricity in rural areas (M=4.83) and low level of literacy (M=4.75) were found major problems. Some other problems includes lack of weather proof storage of crop production in the market (M=4.63), less acceptability to rural areas by NGOs (M=4.55), inadequate market information (M=4.44), inadequate subsidy, or support price of crops from government (M=4.39) was found as a big challenge for the farmers.

CONCLUSION

Agriculture plays an important role to boost up the economic condition of a country like India which is farmer driven who feed the whole country by putting their efforts in agriculture. Information literacy, as a key component of today's knowledge cycle which plays an important role in creating a sustainable agriculture environment by making the farmers aware of their information need on different aspects such as health, education, agriculture, entertainment, economy, etc. Keeping in consideration the same emphasis should be on a common learning platform should be developed

where farmers and agriculture experts can exchange their issues, ideas and concerns with each other. Information literacy and skill-based program should be conducted at village level to enhance agriculture efficiency of the farmers. More initiatives are required by the Govt. to help the farmers by making provision weather proof storage facility and NGOs should come forward to make farmers into literate. Moreover, there is a need to make the farmers aware about the different information channels and initiatives taken by the government in the field of agriculture.

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