

Assessing Farmers Access to Information in Arid Western Rajasthan

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ABSTRACT

Agriculture in north western arid region of India is mainly rainfed. Scanty rainfall, recurrent droughts, and poor soils are characteristic of this region. Beside the agroclimatic disadvantage, the farmer of this region is resource-poor and constrained due to poor access to information on technology market and policies. The farmer is already disadvantaged because he is lacking in rainfall moreover he is lagging behind in terms of information about the sowing time, improved variety, access to information, its reliability, timeliness and cost effectiveness. The present study was conducted with the objective to assess farmer's access to information and assessing its timeliness, cost effectiveness and reliability of the information to farmers using primary data collected from randomly selected 30 farmers each from Jodhpur and Jhunjhunu district of arid western Rajasthan. It was observed that farmer is not getting timely, reliable and cost effective information. Majority of the farmers hardly have any access to reliable information. Major sources of information were private input dealers and fellow farmers.

Keywords: Access to information, Cost effectiveness, Reliability, Source of information, Timeliness

INTRODUCTION

Agriculture in north western arid region of the India is mainly rainfed. Scanty Rainfall, recurrent droughts, poor soils, are the characteristic of this region. Farmers of this region are resource-poor and constrained due to poor access to information on technology, market and policies. Besides, man-made reasons like poor access to technology, lack of timely information, and reliability in cost-effectiveness are also the major reasons behind low productivity in this part of Rajasthan. Though there are different sources of information in the region like NGO, state agriculture department, private companies etc., farmers access to information is perceived to be very poor, less reliable, untimely and not cost-effective. Hence this paper attempts to Context specific information could have a greater impact on the adoption of technologies and increase farm productivity for marginal and small agricultural landholders (Sammadar 2006).

However, making information context-specific is more resource intensive. It requires information at the farm level, which could vary spatially and temporally, and with different degrees of specificity (Garforth et al. 2003). Despite the additional cost and time associated with generating localized content, this content could be more relevant and useful in meeting farmers' information needs (Cecchini and Scott 2003). Since developing appropriate educational and marketing strategies for farmers will need to reflect how farmer groups differ in their information search behavior, a better understanding of farmers' agricultural information needs and information search behaviors could help guide extension and other agricultural programs to better target specific groups of farmers. This has important implications for extension programs, particularly where information failures in public-sector extension systems (such as limited feedback and reach to farmers) have reduced content relevance and thus extension impact (Anderson and Feder 2004).

METHODOLOGY

To assess farmers’ access to information in arid western Rajasthan, two districts namely, Jhunjhunu and Jodhpur districts were selected randomly. The study was done at Bibasar village in Jhunjhunu and Utamber village in Jodhpur. A sample of 60 farmers constituting 30 farmers from each village was taken randomly. Primary data was collected with the help of pretested and structured interview schedule. Cumulative cube root method was used for classifying farmers based on score for different practices. Data related to farmers access to information, reliability of the information, timeliness and its effectiveness were collected. While giving scores, one score was given to Yes and two scores for No. Five data was taken and for each data the responses were classified into 5 categories based on cumulative cube root method. These were again classified on five point continuum viz. 1-1.2 (very poor), 1.2-1.4 (poor), 1.4-1.6 (average), 1.6-1.8 (good) 1.8-2 (very good).

No of Classes $K = 1+3.322 \text{ Log}$

$N = \text{Total Number of observations}$

$\text{Class Interval} = (\text{Maximum value}-\text{Minimum value})/K$

$$QK = L + \frac{N/K - C}{K} \times h$$

K^{th} Group class will be obtained by looking into N/K in class interval column

$L = \text{Lower limit of the } K^{\text{th}} \text{ group class.}$

$N = \text{Total frequency}$

$C = \text{Cumulative frequency of the class preceding } K^{\text{th}} \text{ group class}$

$F = \text{frequency of the } K^{\text{th}} \text{ group class}$

$h = \text{Width of the class interval}$

RESULTS AND DISCUSSION

The results presented below describe the following: 1. Farmers access to information 2. Farmers access to timely information 3. Farmers access to reliable information 4. Farmers access to cost effective information 5. Preferred Information Medium

Lack of awareness among the farmers is also observed as a reason for poor access to information (Table 1). Illiteracy, lack of the visit of Agriculture officers (AOs and AAOs) and failure to visit KVKs,

Table 1: Farmers access to information (n=30)

Sl. Access to information No.	Percentage farmers	
	Jhunjhunu	Jodhpur
1. Very poor access to information (1-1.2)	33.3	40.0
2. Poor access to information (1.2-1.4)	26.6	20.0
3. Average access to information (1.4-1.6)	16.6	20.0
4. Good access to information (1.6-1.8)	13.3	16.6
5. Very good access to information (1.8-2)	10.0	6.66

ATICs and farmers fairs also constitute the other factors. Thus both the government system and farmer are responsible for the poor access of information to the farmers. Farmers having good/very good access to information (10%-13.3%) may be attributed to good education, their good economic status, better contacts with key informants and agriculture officials, participation in farmers fairs, and frequent visits to KVKs, ATICs.

Most of the farmers do not have timely access to timely information (Table 2). In case of Utamber village in Jodhpur 63% of the farmers have poor to very poor access to timely information. A major factor is the lack of information provided by the supervisors, AOs and AAOs. Farmers who often visited KVKs and ATICs had better access to timely information.

Table 2: Farmers access to timely information (n=30)

Sl. Timely access to information No.	Percentage of farmers	
	Jhunjhunu	Jodhpur
1. Very Poor access to timely information (1-1.2)	43.3	33.3
2. Poor access to timely information (1.2-1.4)	26.6	30.0
3. Average access to timely information (1.4-1.6)	13.3	16.6
4. Good access to timely information (1.6-1.8)	10.0	13.3
5. Very good access to timely information (1.8-2.0)	6.66	6.66

Out of 30 farmers the majority (33-40%) fall under the category of access to very poor reliable

information. This implies that the majority of them do not have access to reliable information because they are getting information either from dealer or other unreliable sources. While 6.6% farmers did fall under access to very good information and 13.3% also fall under good reliability of information, it has been observed that good reliable information is because of their access to reliable source of information such as ATICs or KVKs.

Table 3: Farmers access to reliable information (n=30)

Sl. Reliability of information No.	Percentage of farmers	
	Jhunjhunu	Jodhpur
1. Access to very poor reliable information (1-1.2)	33.3	40.0
2. Access to poor reliable information (1.2-1.4)	26.6	30.0
3. Access to average reliable information (1.4-1.6)	20.0	10.0
4. Access to good reliable information (1.6-1.8)	13.3	6.6
5. Access to very good reliable information(1.8-2)	6.6	13.3

With respect to farmers’ access to cost effective category most of the farmers (30%) fell under access to good cost effective information while 26.3% farmers fell under good access to cost effective information (Table 4) since they are getting information within nominal price or at almost free of cost at ATICs or KVKs. Similar trend has been observed at Utamber.

The major constraints to information access were poor availability and unreliability of

Table 4: Farmers access to cost effective information (n=30)

Sl. Cost effective of information No.	Percentage of farmers	
	Jhunjhunu	Jodhpur
1. Access to very poor cost effective information(1-1.2)	10.0	13.3
2. Access to poor cost effective information(1.2-1.4)	20.3	26.6
3. Access to average cost effective information(1.4-1.6)	13.3	6.6
4. Access to good cost effective information.(1.6-1.8)	26.6	23.3
5. Access to very good cost effective information(1.8-2)	30.0	30.20

information. Respondents also cited a lack of awareness of information sources available and said that the information available was not timely. Lack of credit meant that for many, applying new information could be costly as the capacity for risk taking was low. There was also some frustration in the application of the information, with one instance in which the information failed to produce desired results, and another where there was no change in yield. As one respondent woman famer cited, they needed information which do not increase their cost of cultivation but rather keep the costs the same or reduces them. Information from the public-sector extension system (university, research stations, AOs and AAOs) was described as being “locked” and difficult to access. Follow-up and field visits were lacking. Lack of interest in agriculture due to poor profits and lack of credit reduced the incentive to search for information, with many saying they did not know what information was needed.

While access to reliable and timely information is important to farmers, the major bottlenecks in improving their farm income were related to physical resources and the natural situation including climate variability, flood conditions, and inadequate irrigation. High costs of inputs, labor availability, and access to markets were also ranked as major bottlenecks to improve farm incomes. Poor road access affected one village, where transport costs were high. The contextual issues within each village are important to understand in order to address the residents’ specific information needs which are influenced by these issues.

Despite these constraints, most respondents considered the information received from the sources they used as very relevant (59.2%) or somewhat relevant (27.5%). About 83.2% of the information received was acted on. The main reasons for not applying information were because of poor relevance and usefulness (40.5%), lack of technical advice for follow-up (28.4%), or poor format (18.1%). Suggestions for improvements included better quality and reliability (23.4%), better timeliness (15.8%), increasing frequency of meetings or demonstrations (10.8%), improvement in professional competence (9.4%), and taking greater consideration of farmers’ needs and interests (8.3%).

The preferred medium to obtain information was personal contact, followed by mobile phone voice messages and a mobile phone helpline. The

preferred language was Hindi (99%). Direct contact was almost always the preferred medium cited in all the women groups, with the AAO often suggested as the preferred contact. Training and demonstration programs were also preferred. The mobile phone helpline was suggested as a useful practice as well. In fact, a number of farmers had tried to access the national toll-free phone number for farmers, the Kisan Call Center, but there were always problems in getting a response. Another interesting suggestion was the use of a public notice board to display information. The village tea shop was often cited as a place where information was shared among the male farmers. When asked which ICT media were preferred, television arose often, though better timing (mainly mentioned by the women groups) and more local contextualization were suggested. Voice messages via mobile phone were preferred over short message service (SMS) due to literacy limitations.

The main sources for agricultural information highlighted in the group discussions were the input dealers, neighbors and relatives, and AO or AAO. There were number of bottlenecks in using these sources, however. While providing inputs on credit, the input dealer was criticized for exploiting farmers' time pressure to purchase inputs by pushing certain products. In one village farmers said that each of the input dealers sold products from only one company, so it was difficult for farmers to compare product prices. One farmer said that farmers tend to follow the input application and use patterns of their neighbors, so information is integrated between different sources to apply inputs. Despite the use of the state department of agriculture staff, there were many complaints about the service provided. In some villages the AO did not visit frequently or was not interested in talking with farmers, while in another the extension staff dealt with only certain farmers, namely progressive farmers. While in one village the women group stated that the AAO for their village was a female, and she interacted with them, the case was not true for another village where the male AO did not interact with them. The benefits of trainings the women group received were still being felt - for example, one woman said she could successfully identify pests and diseases in the crops. Some considered the information from the extension staff untrustworthy and inconsistent with other information sourced. Despite the problems

identified in the Group Discussion, the AAO was suggested as a preferred source of information. The women often cited their husbands as information sources as well. Farmers watched their neighbors' fields, met with other farmers in tea shops, and spoke with progressive farmers.

It is interesting to note that reliance on the input dealer decreases as the number of information sources increases. As more sources are used, the use of each source becomes almost even. For certain sources, though, there is a similar percentage of use regardless of the number of sources accessed - that is, family and relatives and progressive farmers, television and newspapers become important sources of information as more sources are accessed.

The main reasons for choice of source were proximity (33.7%), assured quality (21.1%), the only available option (20.6%), and timely availability (13.7%). The main crop for which information was obtained was Bajra (72.8%), followed by wheat (5.8%), guar (5.1%), and black gram (3.1%). The average distance to the information source was 5.3 km (SD 22.46). The main reasons for not using other sources listed included non-availability (68.4%), did not know about the source (16.2%), poor service (9.2%), and low relevance (3%). The main types of information received were on plant protection (28.2%) and overall crop information (22%)

CONCLUSION

Most of the farmers fall under very poor information access category. While in reliability category, most of the farmers fall under the access to unreliable information, and majority of them fall under untimely access to information. But farmers were observed to have access to cost effective information. The main reasons for choice of source were proximity, assured quality, only available option, and timely availability. The main crop for which information was obtained was bajra, followed by wheat and guar. Major implication of the study was that by making information more relevant, accessible, timely and trustworthy, it is possible to make farming more productive. Another implication is that the AOs, AAOs and supervisors should work in collaboration with private sectors so that efficiency of work in the form of reliability,

access, timeliness and cost effectiveness could be increased. Besides these, the idea of opening village knowledge center in each village of Rajasthan is also workable as a policy implication.

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