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## **Impact Assessment of Reuters Market Light (RML) in Agricultural Information Dissemination in Punjab**

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### **Abstract**

To improve the present agricultural marketing information system, a novel information dissemination system was adopted in the state of Punjab by launching The Reuters Market Light (RML) services in October 2008. The present study has examined different aspects of this venture such as acceptance, awareness, utilization, satisfaction, information-content, subscription rates, impact on marketing-decisions, etc. The study conducted in 2009-10, is based on the information collected from 116 subscribers to this scheme. It has also listed the suggestions given by the subscribers for improving the RML scheme. The sources of RML scheme were the officials of Punjab Mandi Board (61% respondents), representatives of RML scheme (16%), friends and relatives (7%) and neighbours (11%). A vast majority of the member respondents belonged to the large category or medium category of farm holdings, indicating that the scheme was being utilized mainly by the economically better-off farmers. Most of the respondents have rated the RML scheme as advantageous as they could get a higher price for their produce, disposed of their produce according to market conditions, got imminent warning on the outbreak of the disease, etc. A large number of respondents have opined that subscription charges are high. Some have also reported that the information should be given through phone call rather than by SMS so that farmers can interact with the officials of RML scheme for better understanding of the message. The suggestions given by the respondent-subscribers included (i) coverage of all crops including fruits and vegetables, (ii) coverage of all markets of the state, (iii) information-content should include production aspects also, (iv) information should be given by experts, and (v) information should be in local language. If farmers are provided with the latest and reliable market information on different crops, it will go a long way in making farming more remunerative.

**Key words:** Reuters Market Light, SMS, information dissemination, agriculture, marketing decisions, Punjab

**JEL Classification:** L86, Q16

### **Introduction**

The agricultural sector is critically important in developing countries like India where it contributes about 15 per cent of gross domestic product (GDP) and engages 52 per cent of the workforce. The development and application of better customized technologies specific to agro-climatic conditions, farm size and level of agricultural development is the real

challenge for the policymakers. The bane of Indian agriculture is not lack of technologies and R&D efforts but inadequate and inefficient dissemination of relevant information to the farmers (Bahl, 2008). In most of the developing countries, much of the agricultural information is traditional and sometimes outdated and not applicable to small farmers' needs, leaving such farmers with little information or resources to improve their productivity (Meera *et al.*, 2004). The timely availability of right information and its proper utilization are as critical as the availability of major

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inputs required for farming. Information and communication technology can act as a driving force in the agricultural development process. The information facilitates the farmers to decide what and when to plan, how to cultivate, when and how to harvest, what post-harvest management practices to follow, when and where to market the produce, etc. (USAID, 2010).

In view of the importance of information in agricultural development and agri-business, various players have entered into to market for information dissemination using information and communication technology (ICT). An ICT-based initiative has been tried by one such player, namely Reuters Market Light (RML) in the state of Punjab. To improve the present agricultural marketing system, the Reuters Market Light service was launched in 2008 which offers customized, localized, personalized, timely and accurate information to farmers that help them in making informed decisions. Using RML, farmers can have access to weather forecasts, market prices, crop advisory and news via mobile phone through SMS. It may be stated that about one lakh farmers from across 12000 villages of India have already benefited from the services provided by RML ([www.thomsonreuters.com](http://www.thomsonreuters.com)). In this backdrop, the present study was undertaken to examine awareness about and utilization of information by the farmers and the extent of satisfaction of the subscribers to the RML scheme. It has also suggested measures for improvement in the contents and coverage of information.

### Methodology and Data

The study was conducted in Punjab during 2009-10. A list containing mobile numbers and complete addresses of 200 subscribers was obtained from the officials of the RML scheme. A sample of 116 farmers was selected from this list and information was collected on the stipulated aspects of the scheme using a comprehensive questionnaire through personal interview method. The data were collected on education level, landholding pattern, cropping pattern, period of subscription to the RML scheme, sources of information about the scheme, satisfaction regarding subscription charges, information provided by the scheme, frequency of information provision, usefulness of information, etc. The data were analyzed by simple

statistical tools such as averages, percentages, etc.

## Results and Discussion

### Socio-economic Profile

The socio-economic profile of the respondent subscribers to RML scheme is presented below.

### Educational Level of Respondent-subscribers

The education level of the sample subscribers to RML scheme in Punjab, presented in Table 1, shows that about 94 per cent of them were literate though with varying schooling years. The percentage of respondents with education level up to 5<sup>th</sup>, 10<sup>th</sup> and 10+2 levels was 15.52 per cent, 48.28 per cent and 15.52 per cent respectively. About 15 per cent of the respondents had obtained graduate degrees. Thus, more than 78 per cent of the respondents were at least matriculates, which depicted overall good education level of subscribers to the RML scheme.

**Table 1. Educational level of respondent-subscribers to RML scheme: 2009-10**

Educational level	No. of respondent-subscribers	Percentage to total
Illiterate	7	6.03
5 <sup>th</sup> standard	18	15.52
10 <sup>th</sup> standard	56	48.28
10+2 standard	18	15.52
Graduation	15	12.93
Post-graduation	2	1.72

### Operational Holdings of Respondent-subscribers

The results depicted in Table 2 show that 6.03 per cent of the respondent- subscribers had less than two hectares of operational landholdings. The average size of holding was 1.16 ha, 2.65 ha and 6.09 ha for small, medium and large farmers, respectively.

A significant feature observed was that a vast majority (94%) of the respondent-subscribers belonged to large or medium category of farm holdings. Thus, the RML scheme was being utilized mainly by economically better-off farmers. In other words, access to information had increased with increase in the size of holdings.

**Table 2. Size of operational holdings of the respondent-subscribers to RML scheme: 2009-10**

Farm category	Respondent-subscribers		
	No.	Percentage	Average landholding size (ha)
Small (< 2ha)	7	6.03	1.16
Medium ( $\leq 2$ ha and < 4 ha)	13	11.21	2.65
Large ( $\geq 4$ ha)	96	82.76	6.09

\* Farm category is based on the methodology used in the “Comprehensive Scheme for Studying the Cost of Cultivation of Principal Crops in Punjab State”, Department of Economics & Sociology, PAU, Ludhiana

**Table 3. Source of information about RML scheme**

Source of information	No. of respondent-subscribers	Percentage to total
Officials of Punjab Mandi Board	71	61.21
Representatives of RML scheme	19	16.38
Relatives and friends	8	6.89
Neighbours	13	11.21
Did not know about date of subscription	1	0.87
Electronic media	None	-
Others	4	3.45

#### Source of Information about RML Scheme

The respondents got information about RML scheme from different sources as presented in Table 3. About sixty-one per cent of the respondent-subscribers got information about this scheme from the officials of Punjab Mandi Board, 16.38 per cent, 6.89 per cent and 11.21 per cent got information from the representatives of RML scheme, friends & relatives and neighbours, respectively. Some of them got information from other sources such as commission agents. It is interesting to note that none of the respondents had information about this scheme through electronic media. This shows that the major source of information about RML scheme was officials of Punjab Mandi Board, followed by representatives of RML scheme.

#### Association with RML Scheme

It was found that 12.07 per cent of the respondents have been associated with this scheme since 2008 (Table 4). Then, 6.89 per cent of the respondents became members of this scheme during January to June 2009, 15.52 per cent were enrolled in July 2009 and 55.18 per cent became members during August-December, 2009. About 10 per cent joined this scheme

**Table 4. Association with RML scheme**

Year	No. of respondent-subscribers	Percentage to total
2008	14	12.07
January to June, 2009	8	6.89
July 2009	18	15.52
August- December, 2009	64	55.18
2010 (up to March)	12	10.34

in 2010 (up to March). This shows that the enrolment under this scheme has picked up with time and it is expected that more farmers will join to avail the benefits of this scheme.

#### Type of Subscription to RML Scheme

The study has revealed that in 2008-09, 1.72 per cent of the respondents had paid the subscription fee on quarterly basis and 0.86 per cent paid annual subscription, and 0.86 per cent got gratis membership of the scheme. The results revealed that 84.48 per cent of the respondents had paid annual subscription for the year 2009-10. It was reported by 7.76 per cent of the respondents that they had not subscribed to this

**Table 5. Views of respondent-subscribers on subscription to RML scheme**

Particulars	No. of respondent-subscribers	Percentage to total
Subscription charges not commensurate with the services provided	11	11.11
Services provided not satisfactory	42	42.42
Information not timely	17	17.18
Information not accurate	16	16.16
Information not relevant	11	11.11
Other (ambiguous SMS)	2	2.02

scheme but RML officials on their cell phones activated it on trial basis.

#### Views of Respondent-subscribers on Subscription Charges

The respondents revealed that they were being charged ₹ 800 per annum for providing services under the RML scheme (Table 5). It was reported by 11.11 per cent of the respondents that subscription charges did not commensurate with the services provided by the RML scheme. A considerable number of respondents (42.4%) was dissatisfied with the services. Regarding information, dissatisfaction of respondents was on timeliness (17.2%), accuracy (16.2%), relevance (11.1%) and ambiguity (2.0%).

#### Opinion of Respondents regarding Amount of Subscription

Regarding subscription amount, 21.6 per cent opined that it should not exceed ₹ 200 per annum, 44.8 per cent viewed that it should be in the range of ₹ 250-₹500 and 29.8 per cent suggested the range of ₹ 500-₹ 850. A few (4.3%) respondents were ready to pay even more than ₹ 850 per annum if the information provided was relevant and updated. Overall, a vast majority of the respondents were of the opinion that annual charges should not be more than ₹ 500.

#### Frequency of Market Information Supply

The revelations by the respondent-subscribers about the frequency of supply of market information under RML scheme differed widely — from once a week to five times in a week.

The majority of the respondents (80%) were of the opinion that the information was provided thrice/ four times in a week. On the extreme sides, no

subscriber reported receiving information daily and only a small segment (1.7%) reported receiving information five times in a week. Regarding coverage, at the most three crops were covered under this scheme. This means market information relating to three crops was shared through SMS by the company with the subscribers. About 18 per cent of the respondents received information for only one crop, 47.4 per cent received information on two crops and 34.5 per cent received information about prices of these crops in different markets (Table 6).

**Table 6. Frequency of market information supply**

Particulars	No. of respondent-subscribers	Percentage to total
Daily	-	-
Once in a week	11	9.48
Twice in a week	10	8.62
Thrice in a week	45	38.79
Four times in a week	48	41.39
Five times in a week	2	1.72

#### Usefulness of RML Scheme

The advantages being availed by the subscribers of this scheme have been listed in Table 7. It was reported by 21.6 per cent of the respondents that they could get a higher price for their produce on the basis of information provided by the RML scheme. Similarly, 50.9 per cent of the respondents took decision on disposal of their produce keeping in view the market information provided by the RML scheme. More than half (54%) of the respondents carried out various farming operations such as irrigation, etc. by keeping in view the information on weather conditions. The

**Table 7. Advantages of RML scheme**

Particulars	Response (No.)	Percentages to total
Could receive higher price	25	21.55
Spent less time in disposal of produce	14	12.07
Utilized warning about outbreak of disease/insect-pest attack	20	17.24
Availability of inputs	5	4.31
Demand and supply situation of a particular commodity	4	3.45
Weather conditions	63	54.31
Latest market situation of a commodity	59	50.86
Others	8	6.90

\*The total of percentages exceeded one hundred because of multiple responses.

warning provided by RML about the outbreak of a disease or attack of insect-pests was utilized by 17.2 per cent subscribers by taking precautionary measures for protection of their crops. Some (3.5%) planned their acreage to a particular crop based on the information provided by RML on future demand and supply situation. A few respondents availed information regarding the availability of farm inputs. On the whole, the information provided by RML scheme seemed to be highly useful to the farmers of the area.

#### Marketing Decisions of Respondent Subscribers

Marketing is a crucial aspect of farming process and is directly related to the income of a farmer. It was found that only 27.6 per cent of the respondents sold their produce based the information provided by the RML pertaining to prices of different commodities. The vast majority (72.4%) did not follow the recommendations of RML to dispose of their produce in different markets in spite of the fact that prices were higher in other markets compared to the local regulated markets. This calls for more concerted efforts on the

part of RML and other extension agencies on educating the farmers to dispose of their produce in the markets where prices are higher.

#### Opportunities of Sale in other Markets

The perusal of Table 8 reveals that the farmers were benefited in terms of price received in other markets compared to the local regulated market. The results revealed that 10 basmati growers sold 962 quintals of basmati rice at the rate of ₹ 2266 per quintal in the nearby market in the same district, whereas 8 growers sold 607 quintals at ₹ 2333 per quintal of the produce in the distant markets. In the case of potato, 12, 20 and 7 farmers disposed of 1300 quintals, 11010 quintals and 1000 quintals of their produce in the nearby market, markets in other districts and distant markets, respectively and realised ₹ 216, ₹ 350 and ₹ 700 per quintal in these markets, respectively. This shows that the farmers were benefited in terms of getting higher prices for the produce based on the market information provided by RML scheme.

**Table 8. Benefits in terms of price derived based on information from RML scheme**

Particulars	Basmati			Potato		
	Farmers* (No.)	Quantity (q)	Price ₹/q	Farmers* (No.)	Quantity (q)	Price ₹/q
Nearby market in the same district	10	962	2266	12	1300	216
Market in other districts of the Punjab state	-	-		20	11010	350
Distant markets	8	607	2333	7	1000	700

\*Some of the sample farmers used more than one sale outlets for the disposal of potato and basmati

### Suggestions to Improve RML Scheme

Following suggestions were given by the respondent-subscribers for improving the RML scheme:

- Information should be given on phone.
- Information should be in Punjabi.
- Information should be provided by experts, including about fruits and vegetables.
- Information about all markets of Punjab should be given
- Information about all the crops should be given.
- It should provide detailed information.

With the adoption of these suggestions, the RML Scheme will go a long way to improve the market system in the state.

### Conclusions

The study has examined the impact the Reuters Market Light (RML) on agricultural information dissemination in Punjab. In this context, different aspects of RML scheme such as acceptance, awareness, utilization, satisfaction, information-content, subscription rates, impact on marketing decisions, etc. have been examined. The study has revealed that the sources of information about RML scheme were the officials of Punjab Mandi Board (61% respondents), representatives of RML scheme (16%), friends and relatives (7%) and neighbours (11%). A vast majority of respondent-subscribers belonged to the large or medium category of farm holdings, indicating that the scheme was being utilized mainly by the economically better-off farmers. Most of the respondents have rated the RML scheme as advantageous as they could get a higher price for their produce, disposed of their produce according to market conditions, got imminent warning on the outbreak of the disease, etc.

A large number of respondent-subscribers have opined that subscription charges (₹ 800 per annum) were high and should not be more than ₹ 500 per annum. Some respondents have also reported that the

information should be given through phone call rather than by SMS so that farmers can interact with the officials of RML scheme for better understanding of the message. The suggestions given by the respondent-subscribers included (i) coverage of all crops including fruits and vegetables; (ii) coverage of all markets of the state, (iii) information-content should include production aspects also, (iv) information should be given by experts, and (v) information should be in local language, Punjabi. If farmers are provided with the latest and reliable market information on different crops, it will go a long way in making farming a more remunerative venture.

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