

Original Research Article

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Evaluation of Mobile Based Advisory Services on Agri and Allied Sectors in Adilabad District

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ABSTRACT

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Interactive Information Dissemination System (IIDS) - Annapurna Krishi Prasar Seva (AKPS) is a mobile based agro advisory service from Professor Jayashankar Telangana State Agricultural University (PJTSAU). Registered farmers receive text messages and can contact with experts to solve their queries using its toll free number 1800 425 3141. The present study conducted by Krishi Vigyan Kendra, Adilabad to evaluate mobile based advisory services on agri and allied sectors in the district with a sample of 120 farmers during 2018-19 to 2019-20. The study found high relevancy (57.50%), high timelines (71.67%), high accuracy (60.00%), high knowledge levels (48.33%) and medium adoption (42.50%) of the advisories. The advisories sent through AKPS were accessible, adoptable and useful to the farmers because the advisories were mostly need based, problem solving and preventive in nature.

Introduction

Information and Communication Technology (ICT) plays an important role in dissemination of information from source to receiver. Mobile phone technology has rapidly extended its roots all over the world. In developing countries like India mobile phone usage is on increasing trend. As per the Telecom Statistics India, 2019, number of mobile phone connections in country is 1161.71 million with an overall teledensity (No. of connections per 100 households) of 90.10. Teledensity in the rural India is 57.50 and in urban it is 159.66.

India having 636.73 million internet subscribers of which 35.65 per cent resides in rural areas. State of Andhra Pradesh (Erstwhile) having 88.17 millions of telecom subscribers among which 42.24 million in rural area and 45.93 million in urban area with a teledensity of 97.55 of which 64.96 in rural area 181.15 in urban area. (Source: Telecom statistics India, 2019)

Agriculture is the primary source of livelihood for about 58 per cent of India's population. India stands at 10th place in the world in arable land resources possessing 46 of the 60 soil types. India is the largest producer of spices, pulses, milk, tea, cashew

and jute; and the second largest producer of wheat, rice, fruits and vegetables, sugarcane, cotton and oilseeds. (Source: <https://www.ibef.org/industry/agriculture-presentation>)

Adilabad is one of the districts inhabited by highest number of tribal people in Telangana state of India with more than 75% rural population and among them 35% of people are tribes. Majority of the farmers are marginal and small accounting to 67.8% of total land holdings in the district (Poshadri *et al.*, 2019). In total gross cropped area of the district, pulses, soybean and cotton occupy 18%, 12% and 77% area respectively (Directorate of Economic and Statistics, 2016-17).

The data usage of Indian shows the strength of internet penetration in rural India and ample opportunities to connect farming community. Connecting farmers using mobile phone plays an important role in dissemination of information among the rural areas of India. Different studies showed that general application of mobile phones has improved the standard of living of the poor farmers in developed nations.

There are many possibilities of integration of mobile phones in agriculture for the overall agriculture and rural development. Mobile phones which are normally in use to communicate with family and friends could be used for agriculture. Mobile phone services focusing on Farmer centric SMS services, weather alerts, improving know how knowledge of the farmers, accessing agriculture market information which helps in taking better decisions at farmer's level.

Providing Timely, reliable and accurate information for the farmers with respect to crop protection, production, weather and market plays a major role in field level decision making.

Interactive Information Dissemination System (IIDS) - Annapurna Krishi Prasar Seva (AKPS) is a mobile agro advisory service offered to farmers by PJTSAU. Registered farmers receive text and voice messages on their mobile phone through AKPS portal. Farmers can directly contact with experts and solve their queries using toll free number 1800 425 3141.

The agro advisories sending by KVK, Adilabad scientists were based on contemporary agricultural issues in the district viz., Pest and diseases management in agriculture and horticultural crops, fertilizer management, weed management, others. This project has been started in the year 2014 and running successfully till date. There are 1914 farmers registered with KVK, Adilabad, under this project covering 224 villages of 23 mandals across erstwhile Adilabad district.

Madan *et al.*, (2015) in their study on Constraints faced in mobile based agro-advisory services and strategy for enhancing the effectiveness of mKRISHI® found that the most severe constraint in the functioning of mKRISHI® was Lack of updated information followed by High cost for service provided, low IT literacy and low literacy.

Ram *et al.*, (2015) Concluded that information gathered through agro advisory services has been very useful and helpful and farmers started taking interest in accessing information on agriculture and animal husbandry.

Reddy *et al.*, (2017) in their study on Perception and Usefulness of Mobile Phone Based Agro-Advisories (MBAs) found 48.33 per cent of respondents indicated as mobile phone based agro-advisories were moderately useful and the majority (50.00%) of the respondents had positive perception towards the mobile phone based agro-advisories.

Jadhav *et al.*, (2018) expressed that timely dissemination of these advisories/contingency crop plans/measures will help the farmers to maximize the yield by optimum use of inputs and enhance the economic returns of the farmers.

Lakshmi *et al.*, (2018) found in their study on Impact of Annapurna Krishi Prasara Seva (AKPS) Agro Advisory Services in East Coastal Districts of Andhra Pradesh that majority of the respondents have moderately favorable attitude (44.16%) towards AKPS agro advisory service where the messages were partially understandable (41.66%), needful (83.33%), timely (53.33%), saves time& money (83.33%), increase in knowledge (79.16%), increase productivity (83.33%), information can be adoptable in field conditions (43.33%), AKPS is a boon to the farming community (60.83%).

Soumya *et al.*, (2018) found in their study on Usefulness of agro advisories disseminated through interactive information dissemination system (Annapurna Krishi Prasara Seva) in the state of Telangana that majority i.e., 53.34 percent of the respondents were getting highly relevant advisories, 49.17 percent of the respondents were reading the advisories easily, 42.50 percent of the respondents were getting the advisories with adequate content without missing any information and 40.00 percent of respondents were said that given advisories were most useful.

Materials and Methods

Ex-post facto research design and simple random sampling followed. Data collected using Semi structured interview schedule, Focused group discussions and Google forms. A total of 120 farmers in 2018-19 interviewed and discussed with. Descriptive statistics used for distribution of respondents against each category.

Objectives

- To study the relevance of the advisories sent through AKPS
- To reveal the timeliness of the advisories sent through AKPS.
- To find out the accuracy of the advisories sent through AKPS.
- To identify the level of knowledge of the registered farmers on advisories sent through AKPS.
- To assess the extent of adoption of advisories sent through AKPS by the registered farmers
- To elicit the constraints and suggestions from the discontinued and continuous callers for improving mobile agro-advisories system of AKPS.

Results and Discussion

In the year 2018-19 and 2019-20, 77 and 115 agro advisories sent to the registered farmers addressing the contemporary issues in agriculture.

1	Total no. of farmers registered	1914
2	No. of farmers registered in 2018-19	321
3	No. of farmers registered in 2019-20	204

District covers with Cotton, Soybean and Red gram during *kharif* and Bengal gram *rabi*. Most of the advisories sent related to crop protection based on field diagnostic visits. Advisories related to food and nutrition also sent during 2019-20 to address malnutrition in the district.

The advisories sent covering Pest and diseases management in agriculture and horticultural crops, fertilizer management, weed management, information about Govt. schemes etc. the relevancy of the advisories found high (57.50%) followed by medium (31.67%) and low (10.83%). The reason could be that the advisories sent by KVK, Scientists

were based on field visit observations and precautionary measures in order to manage pest and diseases in major crops.

The above findings were in partial confirmation with the findings of Laksmi *et al.*, (2018) and Soumya *et al.*, (2018).

Majority (71.67%) of the farmers felt that the advisories sent were timely and matching with field level problems followed by medium (20.00%) and low (8.33%). Most of the crop protection advisories sent in advance as a precautionary measure. The above findings were in partial confirmation with the findings of Laksmi *et al.*, (2018) and Soumya *et al.*, (2018).

Majority (60.00%) of the farmers felt that the advisories sent were highly accurate followed by medium (23.33%) and low (16.67%).

Farmers expressed the advisories sent were accurate in terms of damage symptoms, pest name, suggested chemical name and its dosage. The above findings were in partial confirmation with the findings of Laksmi *et al.*, (2018) and Soumya *et al.*, (2018).

From the study it is evident that most (48.33%) of the farmers having high knowledge in terms of sent advisories followed by medium (29.17%) and low (22.50%). Frequent sending of advisories made farmers to aware about the pest and diseases and its control measures. Advisories on pink bollworm management and pod borer in red gram imparted knowledge among farmers.

The above findings were in partial confirmation with the findings of Laksmi *et al.*, (2018) and Soumya *et al.*, (2018).

Table.1 Distribution of services based on discipline in the year 2018-19 and 2019-20

S. No.	Discipline	No. of advisories in 2018-19	No. of Advisories in 2019-20
1.	Crop protection	35	43
2.	Crop production	14	16
3.	Horticulture crops	23	19
4.	Others	5	37
	Total	77	115

Table.2 Timeliness N=120

Category	Frequency	Percentage (%)
Low	10	8.33
Medium	24	20.00
High	86	71.67
Total	120	100

Table.3 Accuracy N=120

Category	Frequency	Percentage (%)
Low	20	16.67
Medium	28	23.33
High	72	60.00
Total	120	100

Table.4 Level of Knowledge N=120

Category	Frequency	Percentage (%)
Low	27	22.50
Medium	35	29.17
High	58	48.33
Total	120	100.00

Table.5 Extent of Adoption N=120

Category	Frequency	Percentage (%)
Low	26	21.67
Medium	51	42.50
High	43	35.83
Total	120	100

From the study it is evident that most (42.50%) of the farmers having medium or partial level of adoption of agro advisories sent through AKPS followed by high (35.83%) and low (21.67%). The reason could be that the suggested chemicals may not be available at local markets or farmers end. Farmers also confusing with the chemical name vs trade name. Farmers also spraying mixed chemicals or chemicals with combined insecticides.

The above findings were in partial confirmation with the findings of Laksmi *et al.*, (2018) and Soumya *et al.*, (2018).

Problems

The suggested chemicals may not available in rural markets.

Confusion in finding appropriate chemical due to different trade names.

Majority of the farmers sourcing pesticides on credit basis, so retailer selling the chemicals which were available at his shop.

Some of the symptoms were not clear to understand.

Some of the messages were not compatible with their cropping systems.

Suggestions

Farmers suggested to advice mixed chemicals.

More number of messages on weather alerts need to be sent. (Presently KVK, Adilabad is sending weather alerts to the farmers from District Agromet Unit (DAMU) receiving medium range weather forecast).

More number of messages on market information needs to be sent.

In conclusion from the study it could be concluded that the advisories sent through AKPS were useful to the farmers because the advisories were mostly need based, problem solving and preventive in nature. The text messages sent were acting as reminder and alert the farmers for performing farming practices. Number of active farmers or callers dropping off due to other alternate interactive digital platforms like agriculture mobile apps and whatsapp, where farmers can share digital content.

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