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Extent of adoption of agro advisories disseminated through Annapurna Krishi Prasar Seva in Telangana state

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Abstract

The increasing penetration of ICT'S in agriculture scenario makes an opportunity to disseminate the useful information more widely among the farming community. These ICT's are helping to meet the information needs of farmer. The present study was conducted with 120 farmers who got registered under Annapurna Krishi Prasar Seva (AKPS) in two districts i.e. Nalgonda and Khammam Districts of Telangana State, India. The farmers were selected by random sampling method. The study used ex-post facto research design. The results indicated that 36.66 per cent of the respondents were grouped under medium category of adoption followed by high (34.17%) and low (29.17%) categories of extent of adoption of agro advisories disseminated through AKPS in rice crop. The relationship between profile and extent of adoption revealed that, higher the education, total annual income, farming experience, socio political participation, information acquisition behavior, use of ICT tool, innovativeness and access to KVK, the higher was the extent of adoption.

Keywords: AKPS, agro advisories, adoption, ICT'S

Introduction

Information and Communication Technologies (ICT's) are facilitating faster sharing of information and innovations and acting as a key agent for changing agrarian situation and farmers lives by improving access to information and sharing of knowledge. The information and communication technologies like radio, TV, newspaper, telephone and magazines are playing a major role in agricultural development since early decades. Now the modern Information Communication Technologies (ICTs) as mobiles and computers have created an information revolution. In the 21st century, cost effective and efficient communication technologies are required to take lead in changing agricultural scenario.

The government has a huge research and development infrastructure in the form of institutions such as the State Agricultural Universities (SAUs) and *Krishi Vigyan Kendras* (KVKs). The role of this set-up in research and extension activity is of great importance. The use of Annapurna Krishi Prasar Seva (AKPS) in extension system of *Krishi Vigyan Kendra's* is new ICT initiatives to meet the information needs and expectations of the farmers.

The project was sanctioned by the Indian Council of Agricultural Research (ICAR), Government of India, New Delhi under National Agricultural Innovation Project (NAIP), as a Consortium Leader with PJTSAU (formerly ANGRAU), Hyderabad, National Institute of Rural Development (NIRD), Hyderabad and Mudra Institute of Communication, Ahmedabad (MICA) as the partners. It has developed as an alternative ICT model to meet the information needs of Indian farmers. It was successfully pilot tested in Andhra Pradesh and Telangana states of India. Subject areas of AKPS are Agronomy, Plant protection, Horticulture, Animal science, Home science, Dairy, etc. Advantages of AKPS are farmers can get free information, location specific information delivery, provide information in local language and cost effective. So keeping these points in mind the study was mainly focused to reveal the extent adoption of agro advisories disseminated through AKPS and relationship between the profile and extent of adoption by the respondents of Nalgonda and Khammam districts.

Material and Methods

Ex-post facto research design was adopted for the study, since the variables chosen for the study have already occurred. Ex-post facto research is a systematic empirical enquiry, in which the researcher does not have direct control on influencing (independent) variables because their manifestations have already occurred. Influence about relations among variables are made without direct intervention, but from concomitant variation of independent (influencing) and dependent (consequent) variables.

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Extent of adoption of the agro advisories disseminated through AKPS was studied. The state of Telangana was selected purposively because AKPS project was implemented first time in Telangana state and erstwhile Andhra Pradesh and the investigator hails from the same state. A total of 120 AKPS registered farmers at the rate of sixty from each district were selected by adopting random sampling technique.

The variable adoption was operationally defined as number of agro advisories related to the rice cultivation adopted by respondent out of total number of agro advisories disseminated through AKPS in rice. An adoption schedule is prepared to measure the extent of adoption.

A schedule was developed with 20 items comprising various advisories related to the rice cultivation wise seed related and seed treatment advisories, weather based information, nutrient management, plant protection, weed management and other related information. The response of respondents on each item was measured on three point continuum that is fully adopted, partially adopted and not adopted with the scoring of 3, 2 and 1, respectively. The maximum and minimum possible scores

were 60 and 20 respectively. The maximum and minimum obtained scores were 48 and 18 respectively. Based on adoption scores obtained, the respondents were classified into following three categories by using exclusive class interval method. The results were expressed in the form of frequencies and percentages

S. No.	Category	Class interval
1.	Low extent of adoption	18-28
2.	Medium extent of adoption	28-38
3	High extent of adoption	38-48

Results and Discussion

Results presented in the table 1 unveils that, 36.66 per cent of the respondents were grouped under medium category of adoption followed by high (34.17%) and low (29.17%) categories of extent of adoption of agro advisories disseminated through AKPS in rice crop. The results were in confirmation with the Kanavi (2014) [2] and Kumar *et al.* (2014) [4].

Table 1: Distribution of respondents according to their extent of adoption (n=120)

S. No.	Category	Class interval	Frequency	Percentage
1.	Low extent of adoption	18-28	35	29.17
2.	Medium extent of adoption	28-38	44	36.66
3.	High extent of adoption	38-48	41	34.17

Further, the responses about the adoption of agro advisories disseminated in rice crop were categorized and ranked based on extent of adoption scores. From the table 2 it could be observed that extent of adoption of agro advisories disseminated through AKPS category wise. The rank assigned to each advisory on extent of adoption indicated that majority of the respondents had high adoption of seed treatment with Carbendizim @3grams per kg seed per one litre of water (I rank) followed by spraying of Zink Sulphate @ 2gm /l water for nutrient deficiency in winter (II rank), seed treatment with Spinosad @4.4 ml /Kg seed to control storage pests, covering nursery beds with polythene sheets during winter to protect nursery from temperature fluctuations (IV). Whereas lowest rank assigned on the adoption for advisories like cultivation of varieties like *Pradyumna* (XVIII), followed by preparation of nursery beds before July 10th for variety RNR 15048 (XIX) and advisories related to harvesting of crop (XX).

Table 2: Category wise ranking of advisories disseminated through AKPS

S. No.	Category	Mean score	Rank
1	Seed treatment and seed related information	6.24	II
2	Weather based information	4.95	IV
3	Nutrient management	5.39	III
4	Plant protection	8.40	I
5	Weed management	5.29	V
6	Others	3.31	VI

The category wise analysis of extent of adoption of advisories disseminated indicated that more respondents adopted plant protection advisories followed by seed treatment and advisories on seed treatment and seed related information, nutrient management, weather related advisories, advisories on weed management and others. Results were in line with the Parab *et al.* (2010) [5].

Relationship between profile and extent of adoption of agro advisories

In order to study the relationship between profile characteristics of respondents and extent of adoption, the correlation coefficient values were computed and findings are furnished were furnished in the table. 3.

It is revealed from the table 3 that, there was a positive and significant relationship between adoption of agro advisories disseminated through AKPS and education, information acquisition behavior and access to KVK at 1% level of significance. There was a positive and significant relationship at five per cent level of significance between adoption of agro advisories disseminated through AKPS and total annual income, farming experience, socio political participation, use of ICT tools and innovativeness. There was non-significant relation between farm size and adoption of agro advisories disseminated through AKPS. As far as age was concerned, it had negative and significant relationship with adoption of agro advisories disseminated through AKPS at 1% level of significance.

Table 3: Relationship between the profile characteristics of the respondents and extent of adoption of agro advisories

S. No.	Independent Variables	r
1.	Age	-0.396**
2.	Education	0.369**
3.	Total annual income	0.219*
4.	Farming experience	0.192*
5.	Farm size	0.040NS***
6.	Socio political participation	0.193*
7.	Information acquisition behavior	0.398**
8.	Use of ICT tool	0.216*
9.	Innovativeness	0.192*
10.	Access to KVK	0.248**

* Significant at 5 per cent level of probability (0.17934)

** Significant at 1 per cent level of probability (0.23430)

***NS - Non significant

The above results could be explained as, higher the education, total annual income, farming experience, socio political participation, information acquisition behavior, use of ICT tool, innovativeness and access to KVK, the higher was the extent of adoption.

It could be inferred from the results that, there was a significant negative relationship between age and extent of adoption. The possible reason for above trend might be due to the fact that, the farmers with middle aged might be interested to try new technologies disseminated through AKPS. Education, annual income, farming experience, socio political participation, information acquisition behavior, use of ICT tool, innovativeness and access to KVK were found to had positive and significant relationship with the extent of adoption of the respondents. The possible reasons for the above trend might be due to the fact that, literate farmers would be able to locate, understand, interpret, evaluate, and use information disseminated through AKPS. As the annual income increased the respondents adopted new technologies disseminated through AKPS. As socio-political participation, information acquisition behavior, use of ICT tools increased they were with adequate information about advisories, led to adoption. As innovativeness increased they wanted to try new advisories which they accessing through AKPS. As access to KVK increases with the help of scientists they clarified their queries and adopted advisories. It could be indicated from the results that, there was a non significant relation between farm size and adoption. It was due to the fact that irrespective of farm size respondents were adopting advisories. The results were in confirmation with Shankaraiah (2011) ^[6], Ganesan *et al.* (2013) ^[1] and Kanavi (2014) ^[2].

Summary and Conclusion

In a developing country like India where the introduction of ICT tools for agricultural extension is till new, challenges have been many both in the extension mechanism and the farmers or the end users side. Proper understanding of its use, its credibility and the access are the major bottlenecks along many others.

With respect to extent of adoption, 36.66 per cent of the respondents had medium extent of adoption followed by high (34.17%) and low (29.17%) extent of adoption of recommended agro advisories disseminated through AKPS in rice cultivation.

The category wise analysis of extent of adoption of advisories disseminated indicated that more respondents adopted plant protection advisories (pest and disease control) followed by seed treatment and advisories on seed aspects, nutrient management, weather related advisories, advisories on weed management and others.

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