



Extent of Adoption of Agro Advisories Disseminated Through Annapurna Krishi Prasar Seva (AKPS) at Krishi Vigyan Kendra, Palem in Telangana State, India

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Agriculture is the most sector in developing countries like India, the majority of them depending on it, to upliftment of their economic status. Most farmers have adopted traditional agricultural practices for farming in the last several years. In this context, the extension system depends on the

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ICT platform, and it plays a greater role in uplifting the livelihoods of rural people by effectively providing need-based and location-specific information. ICT's today serving many purposes in agriculture, business, and social development activities, etc., especially in agriculture from crop production technologies to marketing, facilitating forward & backward linkages to the farm produce. In this study impact of agro advisories disseminated through AKPS inferred that 42.50 per cent of the respondents were grouped under the medium category of adoption followed by high (40.00%), low (10.83%) and very low (06.67%) respective categories. Most of the respondents irrespective of the crop had a high level of knowledge about modern technologies. It was also found that the knowledge level of the farmers changed with what they had been growing seasonal crops.

Keywords: ICTs; agriculture; AKPS; extent of adoption; information and farmers.

1. INTRODUCTION

“Indian agriculture is primarily subsistence-based, and the farming community faces numerous challenges to improve productivity. Farmers have encountered numerous difficulties in terms of production, processing, marketing, and profit generation, etc. They have come to the realization that, in order to achieve higher yields, location-specific information based on needs is more crucial than farm inputs. However, the adoption of information and communication technologies (ICT) in the agricultural sector has led to a several modifications to the extension system's methodologies” [1].

“The information and communication technologies (ICT) like radio, TV, newspaper, telephone and magazines are playing a major role in agricultural development since the early decades. Now the modern ICTs such as mobiles and computers have created an information revolution” [2]. “In the 21st century, cost effective and efficient communication technologies are required to take the lead in changing agricultural scenario. Mobile phone usage has been drastically increased in the recent times. Due to advances in communication technology even in the remote rural areas were also brought under the mobile phone network [3,4,5]. Further, Mobile phone is becoming an all-time partner to all individuals and farmers are also nowadays having mobile phones. Sending information to the mobile is easy and scalable and reducing cost, time and money” [1].

The Professor Jayashankar Telangana State Agricultural University (PJTSAU) has its agricultural extension wing steering the frontline extension efforts in agriculture across the state at district level through Krishi Vigyan Kendras (KVKs) and District Agricultural Advisory and Transfer of Technology Centres (DAATTCs) is aiming at assessment, refinement and

dissemination of the location specific technologies. “The use of Annapurna Krishi Prasaar Seva (AKPS) (Information interactive dissemination system-IIDS) in extension system is a new ICT initiative to meet the information needs and expectations of the farmers. The major subject areas of AKPS are Crop production, Plant protection, Horticulture, Animal science, home science, Dairy, etc. The advantages of AKPS are farmers can get location specific information at free cost, provide information in the form of text and voice in vernacular (local) language and be cost effective” [6]. So, keeping these points in the view present study focusing mainly to find out the extent of adoption farmers on advisories disseminated through AKPS by the respondents of Nagarkurnool district.

2. METHODOLOGY

A systematic interview schedule was used in accordance with the Ex-Post facto study approach. Ex-post facto research is a methodical empirical investigation in which the variables being studied are independent and have already manifested, therefore the researcher has no direct control over them. Without direct intervention, influence over the relationships between variables is made by concurrent variation of independent (influencing) and dependent (consequential) variables. The extent of adoption of farmers on agro advisories disseminated through AKPS was studied. The AKPS is one of the flagships programme of Krishi Vigyan Kendra, Palem to disseminate the need based and location specific information to the farmers of erstwhile Mahabubnagar district from 2014-15 year with toll free no 1800-425-3141. The study was conducted with registered farmers of four division of i.e., Nagarkurnool, Kollapur, Achampet and Kalwakurthy divisions in Nagarkurnool district and three villages were selected randomly from each division. Ten

respondents were selected randomly from each village thus the total sample size is 120. A primary source of the data was collected from the registered farmers and secondary data was collected from the AKPS official records of KVK-Palem and Annapurna Krishi Prasara Seva (IIDS) data base. Thirty-one statements were prepared with consulting of experts of various subject matter specialist, scientist and other officials for sent to the respondents and assess information seeking behavior of the respondents on agro advisories. The advisories mainly focused on crop cultivation information like crop varieties, weed management, nutrient management, pest and disease management, weather and other related information [7]. A structured schedule was prepared to measure the extent of adoption of the farmers.

2.1 Scoring and Categorization

A schedule was developed with 31 items comprising various advisories related to the crop varieties, weed management, pest and disease management, weather and other agri enterprise 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 93 and 31 respectively. The maximum and minimum obtained scores were 65 and 22 respectively. Based on adoption scores obtained, the respondents were classified into following three categories by using inclusive class interval method. The results were expressed in the form of frequencies and percentages.

3. RESULTS AND DISCUSSION

From Table 1 it was evident that, most of 42.50 per cent of the respondents were grouped under medium category of adoption followed by high (40.00%), low (10.83%) and very low (06.67%) respective categories on agro advisories disseminated through AKPS our results were in accordance with earlier findings of Soumya et al. [8].

The category wise analysis of adoption status on agro advisories offered through AKPS more than half of the respondents inferred that full adoption on pest and disease management, crop

management technologies followed by weed management practices, crop varieties and other information Table 2.

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

S. No	Category	Class Interval	Frequency	Percentage
1	Very low	22-32	8	06.67
2	Low	33-43	13	10.83
3	Medium	44-54	51	42.50
4	High	55-65	48	40.00

Table 2. Ranking assessed category wise

S. No	Category	Weighted Mean Score	Rank
1	Crop varieties	2.425	IV
2	Weed management practices	2.517	III
3	Pest & disease management	2.617	I
4	Crop management technologies	2.542	II
5	Other	2.233	V

"The responses of the respondents on agro advisories of crop varieties, weed management, pest and disease management and other related information were categorized and ranked based on extent of adoption scores. "The rank assigned to crop varieties category indicated that majority of the respondents had high adoption rate on 'Suitability of PRG-176 a Redgram variety (I), 'WGG-42 a green gram variety as preceding crop to RNR-15048 Paddy (II), & 'very low adoption is PCH-111 Castor variety suitable for rabi season" [9]. Under the pest & disease management category majority of them had high knowledge adoption in 'Seed treatment of Groundnut with Tebuconazole @ 1 gram per kg of seed for control of stem, root, collar rot and leaf spots (I), 'Application of Emamectin benzoate @ 0.5 grams per liter of water to control the fall army worm in Maize (II), and 'low adoption rate in 'Growing of Castor and Safflower in 2-3 rows on crop boundaries to minimize the wild boar attack in Maize. Whereas weed management high adoption rate on 'Application of imazythapyr @ 250 ml per acre as post emergence herbicide to control the weeds in pulse crops (I), 'Application of pendimethalin @ 5 ml per liter of water as a pre emergence herbicide to control weeds in Groundnut(II), & 'low in Power weeder in rainfed crops and Crop management technologies category high adoption rate on 'Application of gypsum to increase crop yields(I), 'Seed cum

ferti drill in Groundnut sowings to enhance the stand and for better pod initiation etc. (II) and low adoption rate in the application of PSB in soil for enhance the available form phosphate to the crops.

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

S. No	Independent variables	Coefficient correlation r
1	Age	-0.391*
2	Education	0.610**
3	Farm size	0.278NS
4	Experience	0.350*
5	Training	0.455**
6	Extension contact	0.453*
7	Information seeking behavior	0.522**
8	Socio-political participation	0.115NS
9	Risk orientation	0.252NS
10	Innovativeness	0.687**

*Significant at 0.05 level of probability

**Significant at 0.01 level of probability

NS – Non significant

3.1 Relationship between Profile and Extent of Adoption of agro Advisories

The relationship between extent of adoption of respondents with profile characteristics was tested by applying correlation technique and drawing relevant null and empirical hypothesis.

3.2 Null Hypothesis

There will be no significant relationship between extent of adoption of respondents and their profile characteristics. Both of these are independent.

3.3 Empirical Hypothesis

There will be significant relationship between extent of adoption of respondents and their profile characteristics. Both of these are dependent.

It is revealed from the Table 3 that, calculated “r” values between extent of adoption of respondents and age, farming experience and extension contact were greater than table “r” values at 0.05 level of probability, whereas, the calculated “r” value of the variables education, training, information seeking behaviour and innovativeness is greater than table “r” value at 0.01 level of probability.

Consequently, it can be said that the variables of education, farming experience, training, extension contact, information-seeking behavior, and innovativeness were positively and significantly correlated with the respondents' level of adoption of agro recommendations. Age was one of the independent variables that had a strong negative association with the level of adoption. Therefore, the empirical hypothesis was accepted and the null hypothesis was rejected for these variables.

However, the calculated "r" values between risk orientation, socio-political participation, and farm size are lower than the "r" value in the table. Thus, the empirical hypothesis was rejected and the null hypothesis was accepted. Thus, it can be said that there was no meaningful correlation between the aforementioned trait and the degree of farmer adoption.

The probable reason for this trend might be, now a day's middle to young aged farmers with high formal education, regularly participated in training programme with high information acquiring behavior and medium level of extension contacts with high innovativeness on information acquisition and adaptation are highly helpful to high adoption rate on agro advisories disseminated through AKPS related crop varieties, weed management, pest and disease management, weather and other related information.

4. CONCLUSION AND SUMMARY

Most of the respondents irrespective of the crop had high level of knowledge on modern agricultural practices. It was also found that the knowledge level of the farmers changed with what they had been grown seasonal crops and available information with less cost. At the same times extension contact, training and innovativeness was a factor which lead to increase the adoption of new agriculture practices in farming to maintain income sustainability.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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