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Opinion and relationship of farmers towards weather based agro advisory services by mobile

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Abstract

The study was conducted in Maharashtra, Parbhani district, 120 farmers were of YouTube were surveyed. The result show that the majority of respondent belonged to middle age group having higher secondary education belonged to small family size with small size land holding having medium annual income, medium level of social participation, majority of the respondent had medium innovativeness, belonged to medium risk preference, respondent belonged to medium possession of ICT tools. The study aimed to understand the relationship between various independent variables and opinion of farmers towards weather based agro-advisory services by mobile among the farmers The variables namely education, land holding, cropping pattern, annual income, social participation, extension contact, innovativeness, risk preference and possession of ICT tools had positive correlation with opinion of the respondent and Age, family size were non-significant with opinion of farmers towards weather based agro advisory services by mobile.

Keywords: Agro-advisory services, agromet, meghdoot, technology, opinion, utilization, weather, ICT tools

Introduction

Weather plays a crucial role in agriculture and changes in weather patterns can have a significant impact on crop yields. Weather-based crop advisory services can provide real-time information about weather patterns, crop health and appropriate measures to the farmers enabling them to make informed decisions about various crop management practices leading to higher yields and increased income. In order to cater the need of the farming community, District level AAS was initiated in collaboration with ICAR and SAUs through the network of 130 AMFUs located across the country with an aim of providing more relevant weather information and location and crop specific advisories. After successful implementation of district level AAS, with the introduction of upgraded high-resolution models, the service has further extended to the block level with the establishment of DAMUs in the premises of KVKs of ICAR. AAS rendered by IMD is a step towards weather-based crop and livestock management strategies and operations dedicated to enhancing crop production and food security besides reducing crop damage and loss due to unusual weather.

Information and Communication Technology (ICT) is an umbrella term that includes computer hardware and software, digital broadcast and telecommunication technologies as well as digital information repositories online or offline. Organizations like IFFCO Kisan Sanchar limited and KVKs are providing agricultural services on mobile.

Objectives

- To study profile of farmers about Weather based agro-advisory services.
- To find out the relationship between the profile characteristics of farmers with their opinion for weather based agro-advisory services.

Methodology

The present study was conducted in Parbhani district purposively as a Headquarter of the University where farmers are using weather based agro advisory services through mobile and the information provided to the farmers by mobile through Agriculture University under “Gramin Mausam Sewa”. Three talukas viz Parbhani, Manwath, and Pathri talukas were selected purposively. The sample constituted 120 farmers from 12 villages. Ex-post facto research Design was used for present study. Data from the respondents were collected by personally interviewing with the help of structured and pretested interview schedule. Collected data were classified, tabulated and analysed by using statistical methods like frequency, percentage, mean, standard deviation, correlation of coefficient.

The schedule of opinion was developed with help of teacher to quantify opinion of farmers about mobile based weather based agro-advisory services was measured by computing the score. For not satisfied (up to 31), somewhat satisfied (32 to 36) and For Highly satisfied (37 and above).

Results and Discussion

Table 1: Profile of farmers

Sr. No.	Profile characters	Category	Frequency	Percentage
1	Age	Young (up to 29)	9	7.5
		Middle (30 to 50)	75	62.5
		Old (above 50)	36	30
2	Education	Illiterate	0	00
		Primary education	15	12.5
		Secondary education	34	28.33
		Higher secondary education	40	33.33
		Post graduation	28	23.33
3	Land holding	Marginal	25	20.83
		Small	41	34.17
		Semi-medium	34	28.33
		Medium	13	10.83
		Big	7	05.83
4	Family size	Small	60	50
		Medium	48	40
		Large	12	10
5	Annual income	Low (Up to Rs.93,837)	14	11.67
		Medium (Rs.93,837 to 3,39,246)	85	70.83
		High (Rs. 3,39,246 and above)	21	17.50
6	Cropping Pattern			
	(kharif)	Soybean	90	75.00
		Sorghum	65	54.16
		Pigeon pea	48	40.00
		Black Gram	25	20.83
		Green Gram	49	40.83
		Sunflower	32	26.66
	(Rabi)	Chick pea	88	73.33
		Wheat	70	58.33
		Sorghum	28	23.33
		Safflower	22	18.33
	(summer)	groundnut	52	42.50
		Maize(Fodder)	36	30.00
		Vegetables	17	14.16
	Annual	Sugarcane	38	31.66
	Perennial	mango	5	04.06
		Sapota	2	01.66
		Banana	2	01.66
7	Social Participation	Low	31	25.83
		Medium	63	52.50
		High	26	21.67
8	Extension contact	Low	27	22.50
		Medium	44	36.67
		high	49	40.83
9	Innovativeness	Low	45	37.5
		Medium	58	48.33
		High	17	14.17
10	Risk preference	Low	46	38.33
		Medium	62	51.67
		High	12	10.00
11	Possession of ICT Tools	Low	23	19.17
		Medium	80	66.67
		high	17	14.17

1. Age

It can be seen from Table 1. that (62.50%) of the respondents were from middle group followed by (7.5%) and (30%) respondents from young age group and old age group respectively. This shows that most of the farmers were from middle age group. The reason might be that most of the farming population belong to middle age group as comparing to the young and old aged. These findings are consistent with Kailas (2016) [10], Gawali (2019) [8] and Lade *et al*. (2024) [15]

2. Education
Shows that, 33.33 percent respondents were educated up to Higher secondary education, followed by 28.33 percent secondary education and 23.33 percent respondents were graduated. It was further noticed that 12.5 percent were educated up to the primary education followed by 00.00 percent respondents were illiterate. These findings are consistent with (2015) and Sidharth *et al*. (2024) [24]

3. Land holding
majority (34.17%) of the respondents were having small i.e. 1.01 to 2.00 ha land holding followed by 28.33 percent were having semi-medium i.e. 2.01 to 4.00 ha land holding, 20.83 percent were having marginal land holding i.e. 2.01 to 4.00 ha 6.67 percent respondents were having medium land holdings i.e up to 1 ha. And 05.83 percent respondents were having big land holding i.e. above 10.01 ha. These findings are consistent with Avilesh (2017) [2] and Gawali (2019) [8]

4. Family size
Majority (50%) of respondents were from medium size of family followed by 40 percent and 10 percent respondents were small and Large family size respectively. These findings are consistent with Sindhu (2016) [9] and Gawali (2019) [8].

5. Annual income
The majority (70.83%) of the respondents were in medium annual income followed by 17.50 percent of the respondents had high annual income and 11.67percent of the respondents had low annual income.
The attributable reason might be that, as majority of respondents had semi-medium and small land holdings they belonged to medium annual income group category ((Rs. 93,837 to 3,39,246).
These findings are consistent with Jaiswal *et al*. (2018) [13] and Gawali (2019) [8]

6. Cropping Pattern
During kharif season in Parbhani district, majority (75.00%) of the farmers were growing soybean followed by sorghum (54.16 %), Pigeon pea (40.00%), green gram (40.83 %), sunflower (26.66 %), black gram (20.83%) and during rabi season majority (73.33%) of the farmers were growing chick pea followed by wheat (58.33), sorghum (23.33%), safflower (18.33 %) and in summer season some of the farmers in Parbhani districts are growing groundnut, maize, and vegetable and sugarcane is the annual crop given by some of the farmers (31.66%) and also some perennials viz, Mango (04.16%) followed by Sapota (01.66%) and Banana (01.66%). The possible reason might be due to soil type i.e. medium black soils to light soils which has medium water holding capacity, frequently occurrence of rain in optimum condition which helps in better yield of sorghum, soybean, Pigeon pea etc. Another reason might be jowar is the staple food in districts and crops like sugarcane, soybean, ground nut, chick pea and wheat have the higher market demand. These findings related with Babu (2019) [3] and Gawali (2019) [8].

7. Social participation
Majority (52.50%) of respondents were from medium social participation, followed by 1525.83 percent of respondents from low social participation and 21.67 percent of the respondents were from high social participation. These findings were consistent with Patidar (2015) [17] and Thakare (2017) [23], Gawali (2019) [8] and Chauhan (2021) [6]

8. Extension contact
40.83 percent had High extension contact followed by 36.67 percent had medium and 22.5 percent had low extension contact. These findings are consistent with Bhosle *et al.* (2008) [5], Bhongale (2018) [4] and Dhola (2019) [7].

9. Innovativeness
That majority of the respondents 48.33 percent were having medium innovativeness, followed by 37.5 percent were having low innovativeness and 14.17 percent were having high innovativeness. These findings are consistent with Manjeet (2019) [16], Singh (2019) [22], Pavankumar (2023) [18].

10. Risk Preference
Majority of the respondents 51.67 percent were having medium risk preference, followed by 38.33 percent were having high risk preference and 10.00 percent were having low risk preference. These findings are consistent with Kausdikar (2000) [14], Ovhar (2013) [19] and Gawali (2019) [8].

11. Possession of ICT Tools
Majority (66.67%) of the respondents belonged to medium possession of ICT tools followed by Low (19.17%) and rest (14.17%) of the respondents belonged to High possession of ICT tools. The plausible reasons for the above trend might be due to the fact that the majority of the farmers with high income that helps them to purchase a new ICT tools. The result was in accordance with Saikia (2016) [20], Anusha *et al*. (2023) [1].

Table 2: Relationship between profile and opinion of the respondent towards weather based agro advisory services by mobile.

Sl. No.	Independent variable	Opinion 'r' values
1	Age	0.126 NS
2	Education	0.335**
3	Family size	0.078NS
4	Land holding	0.213*
5	Cropping pattern	0.255*
6	Annual income	0.269*
7	Social participation	0.286**
8	Extension contact	0.315**
9	Innovativeness	0.303**
10	Risk preference	0.246*
11	Possession of ICT too	0.304**

*Significant at 0.05 level of probability
**Significant at 0.01 level of probability

The variables had exhibited positive significant relationship with existing opinion of the respondents. Education, Land holding, Cropping pattern, Annual income, Social participation, Extension contact, innovativeness, Risk preference and Possession of ICT tools had positive correlation with opinion of the respondents at 5 percent and 1 percent significant level respectively. Age and Family size were non-significant.

Implication

The findings of the study, will be useful to the extension administration, planner, extension personnel, universities, department of agriculture and weather based agro advisory services related to agriculture and others who are involved directly or indirectly in the transfer of technology. Also, it will be excellent through audio visual aid as a reference material since very few studies are available on advisory services.

An overview of The findings revealed that majority of the respondents were somewhat satisfied with opinion regarding to mobile based agro advisory service. Therefore it was suggested that other farmer who have not aware about the mobile based agro-advisory service, can be motivated to use of advisory service by creating awareness through mass media.

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Conflict of Interest

No conflict of interest among researchers

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