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Integrated Farming System: Exploring the Attitudinal Dimensions of Farmers

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Abstract
The present study was conducted in Latur, Ausa, and Chakur tehsils of Latur district from Marathwada region of Maharashtra state in 2024 -2025. four villages from each tehsil were selected purposively. Total twelve villages were selected for research study. Ten farmers where selected from each village and hence 120 farmers were selected for the study. Ex-post-facto research design was used for the study. As regards with independent variable farming experience, family size, annual income, land holding and social participation had positive and significant relationship with attitude of farmers towards integrated farming system. Whereas education, cropping pattern, sources of irrigation, sources of information, knowledge, innovativeness, risk orientation and market orientation had positive and highly significant relationship with attitude of farmers towards integrated farming system in Marathwada region.

Keywords: Attitude, Integrated farming system, Farm enterprises, Sustainability.

Introduction

Agriculture in India is not just a means of livelihood but a way of life for a large portion of the rural population. however, in recent decades, the sector has faced numerous challenges including declining soil fertility, increased input costs, environmental degradation, and income instability. In response to these issues, the Integrated Farming System (IFS) has emerged as a holistic and sustainable approach to agricultural development. IFS involves the scientific combination of different interdependent agricultural components such as crop production, livestock, poultry, fishery, horticulture, sericulture, and agro-forestry to achieve maximum productivity, income diversification, and ecological balance on a given piece of land. Integrated farming system is an eco-friendly approach with the combination of many system.Modern agriculture has included several innovative ideas to enhance crop production and productivity, such as integrated farming system holds a special position as in this system nothing is wasted, the by-product of one system becomes the input for other. Integrated farming system seems to be possible solution to the

continuous increase of demand for food, production stability of income and nutritional security particularly small and marginal farmers with limited resources. It refers to agriculture system that integrate livestock and crop production. Moreover, the system helps small farmers, who have very small land holding to crop production and a few heads of livestock to diversify farm production, increase cash income, improve quality and quantity of food produced and exploitation of unutilized resources. Approximately 6.75 million hectors of land in India are covered by integrated agricultural system (as stated in the study of NABARD 19 feb 2024) As of the latest available data, the Maharashtra government has aimed to promote IFS practices to cover around 30-40% of the agricultural land over the coming years. Since it utilizes wastes as resources, we not only eliminate wastes but we also ensure overall increase in productivity for the whole agricultural systems. Integrated Farming Systems ensure a rational mixture of one or more elements and cropping, resulting in a complementary effect through the effective use (recycling) of wastes and crop residues. IFS is considered a source of additional income to the farmers' community. Dhaka et al. found that IFS assume greater attention of proper management of available farm resources to boost productivity besides reducing environmental degradation.in the context of Maharashtra, particularly the Marathwada region, where small and marginal holdings are predominant and vulnerability to climatic variability is high, the adoption of IFS can be a game changer. However, the rate of adoption largely depends on how farmers perceive the feasibility, profitability, and sustainability of the integrated model. Understanding these attitudes is thus critical for researchers, policymaker, and extension workers to design effective interventions and promote widespread implementation. This study, therefore, aims to analyze the attitude of farmers towards the Integrated Farming System, explore the factors influencing their perception, and identify the key barriers and suggestions to improve its adoption. The insights gained will help in formulating farmer-centric strategies to strengthen sustaina- ble agriculture in the region.

Materials and Methods

The present study was carried out in randomly selected Latur district from the Marathwada region of Maharashtra State. The Latur district consist of ten tehsils namely. Latur, Udgir, Ahmedpur, Ausa, Nilanga, Renapur, Chakur, Deoni, Shirur Anantpal, and Jalkot Out of these three tehsils namely Latur, Ausa and Chakur were selected randomly. From each selected tehsil four villages were selected purposively. Thus twelve villages from three tehsils were selected for this study. From each of the selected village ten farmers were selected Purposively. Thus a total 120 farmers were selected as respondent for the present study. This selection was done by using simple random sampling method. Data were collected by personally interviewing the farmers with the help of pretested and structured interview schedule. The collected data was organized, tabulated and analyzed with the help of statistical tools like frequency, mean, percentage, standard deviation, correlation of coefficient (r) and multiple regression.

Results

As regard with the profile of farmers it was observed that nearly more than half (62.50%) of the farmers had medium farming experience. nearly half (55.00%) of the farmers had education level up to high school level. Majority (46.67%) of the farmers belonged to medium size of family. Majority (60.83%) of the farmers had medium annual income. Majority (73.34%) of the farmers belong to marginal to small category of land holding. nearly (25.00%) of the farmers fall under perineal type of cropping pattern. nearly (24.17%) of the respondents uses open well as major source of irrigation. more than half (54.17%) of the respondents were belonged to category of medium social participation. nearly more than half 55.00

per cent were making medium use of sources of information. less than half (44.17%) of the respondent, had medium level of knowledge regarding integrated farming system, nearly three-fifth (57.50%) of the respondents were belonged to medium category of innovativeness three-fifth (64.17%) of the respondents had medium level of risk orientation. nearly half of the respondents (50.00%) medium level of market orientation. majority (59.17%) of the respondents had favourable attitude towards integrated farming system. followed by 22.50 per cent of the respondents had more favourable attitude towards integrated farming system.

Table 2: Distribution of farmers according to their profile

Sl. No	Category	Farmers (N = 120)	
		Frequency	Percentage (%)
1.1 Farming experience			
1	Low (Up to 9)	21	17.50
2	Medium (10 to 27)	75	62.50
3	High (28 and above)	24	20.00
1.2 Education			
1	Illiterate (No education)	12	10.00
2	Primary School (1st to 4th standard)	13	10.83
3	Secondary School (5th to 10th standard)	8	6.67
4	Higher Secondary School (11th to 12th standard)	39	32.50
5	Graduation (Degree programme)	27	22.50
6	Post-Graduation and above (Post degree programme and philosophy in doctorate)	21	17.50
1.3 Family size			
1	Low (Up to 3)	20	16.66
2	Medium (4 to 5)	56	46.67
3	High (6 and above)	44	36.67
1.4 Annual income			
1	Low (Up to 100000)	15	12.50
2	Medium (100001 to 400000	73	60.83
3	High (400001 and above)	32	26.67
1.5 Land holding			
1	Marginal (Up to 1 ha.)	32	26.67
2	Small (1.01 to 2 ha.)	56	46.67
3	Semi medium (2.01 to 4 ha.)	21	17.50
4	Medium (4.01 to 10 ha.)	11	09.17
5	Large (Above 10 ha.)	0	00.00
1.6 Cropping pattern			
1	Seasonal	28	23.33
2	Bi-seasonal	25	20.83
3	Annual	17	14.17

4	Biannual	20	16.67
5	Perennial	30	25.00
1.7 Sources of irrigation			
1	Canal	26	21.00
2	Open well	29	24.00
3	Bore well	24	20.00
4	Tank	21	17.50
5	Multiple sources of irrigation	21	17.50
1.8 Social Participation			
1	Low (Up to 20)	33	27.50
2	Medium (21 to 34)	65	54.17
3	High (35 and above)	22	18.33
1.9 sources of information			
1	Low (Up to 24)	26	21.67
2	Medium (25 to 40	66	55.00
3	High (41 and above)	28	23.33
1.10 Knowledge			
1	Low (Up to 12)	26	21.66
2	Medium (13 to 17)	53	44.17
3	High (18 and above)	41	34.17
1.11 Innovativeness			
1	Low (Up to 13)	26	21.67
2	Medium (14 to 28)	69	57.50
3	High (29 and above)	25	20.83
1.12 Risk orientation			
1	Low (Up to 8)	16	13.33
2	Medium (9 to 21)	77	64.17
3	High (22 and above)	27	22.50
1.13 Market orientation			
1	Low (Up to 13)	31	25.83
2	Medium (14 to 33)	60	50.00
3	High (34 and above)	29	24.17
2	**Attitude**		
1	Less favourable (Up to 54)	22	18.33
2	Favourable (55 to 61)	71	59.17
3	More favourable (62 and above)	27	22.50

Table 3: Correlation coefficient between profile of farmers and attitude

Sl. No.	Independent Variable	Correlation coefficient ('r')
1	Farming experience	0.227*

2	Education	0.443**
3	Family Size	0.202*
4	Annual income	0.235*
5	Land holding	0.200*
6	Cropping pattern	0.302**
7	Sources of irrigation	0.347**
8	Social participation	0.235*
9	Sources of information	0.316**
10	Knowledge	0.273**
11	Innovativeness	0.411 **
12	Risk orientation	0.384**
13	Market orientation	0.403**

** Significant at 0.01 per cent level.
* Significant at 0.05 per cent level.
It is concluded that from table 3 farming experience, family size, annual income, land holding and social participation had positive and significant relationship with attitude of farmers towards integrated farming system. Whereas education, cropping pattern, sources of irrigation, sources of information, knowledge, innovativeness, risk orientation and market orientation had positive and highly significant relationship with attitude of farmers towards integrated farming system.

Conclusions

The present study on the Attitude of Farmers Towards Integrated Farming System in the Marathwada Region reveals a promising yet cautious receptivity among the farming community towards integrated agricultural practices. The majority of farmers exhibited a favourable attitude towards IFS, the profile analysis highlights that most farmers possess medium levels of farming experience, income, education, and landholding, which positions them at an intersection of tradition and innovation. While farmers demonstrated moderate to high knowledge, innovativeness, and market orientation, their attitudes were found to be significantly influenced by key factors such as education, cropping pattern, irrigation sources, risk orientation, and access to information. These findings affirm that socio-economic and psychological dimensions play a vital role in the adoption of IFS

In conclusion, while the attitude of farmers in the Marathwada region toward integrated farming systems is largely favourable, targeted support mechanisms and capacity-building programs are essential to convert this attitude into tangible action. Addressing the identified constraints through policy and institutional support will not only enhance adoption rates but also pave the way for sustainable, diversified, and resilient rural livelihoods.

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