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Analyzing farmers' perception towards integrated farming system in Madhya Pradesh

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Abstract

This paper is concerned with the Farmers Perception about utility of Integrated Farming System apropos in Mandla district of Madhya Pradesh was conducted on 250 small and marginal tribal farmers. Perception is mental organization and understanding of sensory information. It is the opinion expressed by the farmers. The farmer's perception about IFS was based on two-point continuum *viz.* yes/no; complex/simple, complex/cheap, quick/slow, risky/safe, more secured/ less secure and agree/ disagree with a score of 1 and 0 respectively. The selected IFS practicing farmers have been interviewed personally with the help of a well structured and pre-tested interview schedule. Results revealed that, majority 93.00 per cent of the farmers as IFS programme increase the employment opportunities to the rural people were recorded rank (I) of the respondents and while 28.00 per cent of the respondents felt that, how risky it is adopt of IFS apropos were recorded very least statements and rank (XIII) of the respondents.

Keywords: Integrated farming system, perception, marginal farmers

Introduction

Agriculture is the most important part of economy in India as it provides food and livelihood security. The development and dissemination of new technology is an important factor determining the future of agriculture. It plays a vital role in Indian economy and contributes 17 per cent to the total GDP and also provides employment to more than 60 per cent of the population. It seems that Indian economy is mostly rural and agricultural – based and dependent on Indian cultivable land consisting of mainly small holdings (65%) and overall 86.2 per cent farmers are small and marginal (Meshram *et al.* 2019) [7]. Madhya Pradesh is the second largest state with respect to area (30.82 M ha) and fifth in terms of population (72 Million) in the country. More than 70% of the area is rainfed dominated by small and marginal holdings. Agriculture is the only backbone of the farmers living in this state and is characterized by a number of wide crop diversifications. In the present scenario besides agriculture farmers grow fruits cultivation, dairy, goat rearing, poultry, bee-keeping etc., nowadays this type of system including at least one component of farming is called the Integrated Farming System (Meshram *et al.* 2020) [8]. The integrated farming system approach is considered to be the most powerful tool for enhancing the profitability of small and marginal farmers. These integrated farming systems need to be socially acceptable, economically viable and eco-friendly (Madhu Prasad V.L and Chandrashekar S. 2018) [3]. It also leads to improvement in nutritional quality of daily diet of farmers. An integrated farming system with available resources accessible to farmers ensures high standard of food production with minimum environmental impact even in highly vulnerable climate. It has revolutionized conventional farming of livestock, aquaculture, poultry, horticulture, agro industry and allied sector (Nair *et al.* 2019) [10]. The basic principles involved in integrated farming are the utilization of the synergetic effects of inter-related farm activities, and the conservation, including the full utilization of farm wastes (Mahbub, 2013) [4]. Overall an integrated farming system fulfil the multiple objective of making farmers self-sufficient by ensuring the family members a balance diet, improving the standard of living through maximizing the total net returns and provide more employment, minimizing the risk and uncertainties and keeping harmony with environment (Mali *et al.* 2014) [5].

Perception is a process by which individuals organize and interpret their sensory impression in order to give meaning to their environment. It is important to understand perception since people's behaviour is based on their perception of what reality is, not on it reality itself. The world as it is perceived is the world that is behaviourally important. (Robbins and Judge, 2012) [12]. Perception is mental organization and interpretation of sensory information. It is the opinion expressed by the respondents.

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Perception was operationally defined as the meaningful sensation about Integrated Farming Systems (IFS) as perceived by the farmers. Understanding the process of human perception is crucial to understanding human behaviour (Dadabhau *et al.* 2015) ^[1]. The objective of present paper is Farmers Perception about utility of Integrated Farming System apropos in Mandla district of Madhya Pradesh State.

Material and Methods

The study was conducted in purposively selected Mandla districts of Madhya Pradesh State as it possesses adequate population of tribal farmers. From Mandla district five blocks namely Mandla, Nainpur, Niwas, Mawai and Gughari have been selected purposively. Further, from each block five villages were selected and after then ten small and marginal tribal farmers are selected from each village. Thus, a total of 250 small and marginal tribal farmers are considered to study of the Farmers Perception about Integrated Farming System apropos in Mandla district of Madhya Pradesh State. Farmer's perception regarding the utility of integrated farming system apropos was operationalized as the farmer's awareness about the benefits of various components of IFS. The selected IFS practicing farmers have been interviewed personally with the help of a well structured and pre-tested interview schedule to

get the appropriate information. The total number of statements was thirteen in number out of which two were negative statements. The farmer's responses about Integrated Farming System were rated with the help of a two point continuum *viz.* yes/no; complex/simple, complex/cheap, quick/slow, risky/safe, more secured/ less secure and agree/disagree with a score of 1 and 0 respectively. The scoring pattern was still reversed for negative statements. Here also the scoring range was between 0 and 13. Analysed the data by using frequency, percentage and rank correlation.

Results and Discussion

Characteristics of Farmers

The characteristics of the farmers indicated that, majority of the respondents (66.40%) were of the middle age group, followed by young (17.20%) and old (16.40%) age categories. Almost similar findings were also observed by Kumaran and Vasanthakumar (2010) ^[2] and Morya (2015) ^[9].

The educational background of farmer indicated that, both among marginal and small farmers, less than two fifth of the respondents (38.40%) had higher secondary education, followed by 31.20 per cent had primary education and 25.60 per cent had college and above level of education, while 04.80 per cent were illiterate. The results of the present study are similar to the findings of Tekale (2013) ^[13] and Morya (2015) ^[9].

Table 1: Personal Characteristics of Farmers

Personal Characteristics		Marginal farmers (n = 125)		Small farmers (n = 125)		Total Farmers (n = 250)	
Parameter	Variable	f	%	f	%	f	%
Age	Young (upto 35 years)	19	15.20	24	19.20	43	17.20
	Middle (36 – 55 years)	85	68.00	81	64.80	166	66.40
	Old (above 55 years)	21	16.80	20	16.00	41	16.40
Education	Illiterate	06	04.80	06	04.80	12	04.80
	Primary education	38	30.40	40	32.00	78	31.20
	Higher secondary education	47	37.60	49	39.20	96	38.40
	College and above education	34	27.20	30	24.00	64	25.60
Family size	Small family (up to 4 members)	46	36.80	49	39.20	95	38.00
	Medium family (5 – 8 members)	61	48.80	54	43.20	115	46.00
	Large family (more than 8 members)	18	14.40	22	17.60	40	16.00
Occupation	IFS	101	80.80	65	52.00	166	66.40
	IFS + Service	09	07.20	33	26.40	42	16.80
	IFS + Business	15	12.00	27	21.60	42	16.80

f = frequency, % = percentage

The family size of the farmers revealed that, higher percentage of the respondents (46.00%) had medium size family, followed by 38.00 per cent small family size and 16.00 per cent large family size. These findings are in line with the results of Tekale (2013) ^[13] and Rai (2015) ^[11].

Occupation of the farmers reported that, majority of the respondents (66.40%) were practiced IFS (farming includes dairy, poultry, goat rearing and fishery) followed by, 16.80

per cent had under the category of IFS + service and IFS + business. It inferred from the data, majority of the respondents (66.40%) had IFS (farming includes dairy, poultry, goat rearing and fishery) alone or as their main occupation. The study has the conformity with the findings of Morya (2015) ^[9].

Farmer's perception towards IFS

Table 2: Farmers Perception about utility of Integrated Farming System

Sr. No.	Particulars	Perception		Rank
		f	%	
1.	Do you feel the IFS Practices helped in increasing the returns from farming	217	87	VI
2.	Do you think local resources can be effectively utilized in IFS	214	86	VII
3.	How do you feel about the degree of complexity of IFS practices	158	64	X
4.	How do you feel about the cost effectiveness of IFS practice	155	62	XI
5.	Do you feel IFS can provide return or regular basis	187	75	IX
6.	How quick you can get returns from IFS	78	32	XII
7.	How risky it is adopt of IFS	69	28	XIII
8.	How secure you feel with the adoption of IFS	203	82	VIII
9.	Whether the IFS programme increase the employment opportunities to the rural people	232	93	I
10.	Species planted on wasteland increase the productivity of land	224	89	III
11.	Whether farmer under IFS programme are more subsidy oriented than development oriented	218	88	V
12.	Income of the farmers will be raised due to more employment opportunity	221	89	IV

13.	IFS is more feasible because it helps rural people to conserve their own resources to meet their day to day requirements	225	90	II
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f = frequency, % = percentage

The results presented in Table-2 revealed that among the thirteen statements of farmers perception towards utility of IFS apropos, majority of the respondents 93.00 per cent of the farmers expressed that, whether the IFS programme increase the employment opportunities to the rural people (Rank I), similarly 90.00 per cent of respondents IFS is more feasible because it helps rural people to conserve their own resources to meet their day to day requirements (Rank II), about 89.00 per cent of the respondents opinion that, Species planted on wasteland increase the productivity of land (Rank III), same as 89.00 per cent of the farmers express that, Income of the farmers will be raised due to more employment opportunity (Rank IV), Whether 88.00 per cent farmer under IFS programme are more subsidy oriented than development oriented (Rank V), while 87.00 per cent of the farmers felt that, Do you feel the IFS Practices helped in increasing the returns from farming (Rank VI), about 86.00 per cent farmers opinion that, Do you think local resources can be effectively utilized in IFS (Rank VII), whether 82.00 per cent farmers opinion that, How secure you feel with the adoption of IFS (Rank VIII), about 75.00 per cent respondents express that, Do you feel IFS can provide return on regular basis (Rank IX), whether 64.00 per cent farmers perception that, How do you feel about the degree of complexity of IFS practices (Rank X), similarly 62.00 per cent farmers responses as, How do you feel about the cost effectiveness of IFS practice (Rank XI). While 32.00 per cent respondents felt that, How quick you can get returns from IFS (Rank XII) and about 28.00 per cent respondents response as How risky it is adopt of IFS (Rank XIII). The similar findings were reported by Mangala (2008) [6], Dadabhau *et al.* (2015) [1], Madhu Prasad *et al.* (2018) [3] and (Nair *et al.* 2019) [10].

Conclusion

It is evident from the study that tribal farmers in Mandla district of Madhya Pradesh, India were practiced Integrated farming system approaches including agricultural, dairy, poultry, goat rearing and Fishery. Farmer perception about utility of Integrated Farming System apropos in Madhya Pradesh State. Integrated Farming System (IFS) approach plays a vital role to sustain production, environmental security and meeting consumer demand, is the only alternative for the small and marginal tribal farmers of the Mandla district. It is not only provides income generation but also employment enhancement to the small and marginal farmers of the society. The characteristics of the farmers revealed that, majority of the respondents were middle-aged, having higher secondary school education, medium family size, Integrated farming system (Crop includes dairy, poultry, goat rearing and fishery) is main occupation and Based on the results, it can be concluded that the different 13 statements towards IFS, majority of the farmers 93.00 per cent as IFS programme increase the employment opportunities to the rural people were recorded rank first of the respondents that means Integrated Farming System (IFS) approach has been identified as the way-out for providing income and employment to the millions farmers and farm women engaged in agriculture sector. While 28.00 per cent of the respondents felt that, how risky it is adopt of IFS apropos were recorded very least statements and rank (XIII) of the respondents.

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