



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2022; SP-11(2): 1576-1578
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www.thepharmajournal.com
Received: 08-12-2021
Accepted: 15-01-2022

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Constraints perceived by the farmers towards integrated farming system adopting in agro climatic zone (IVa) of Rajasthan

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Abstract

The present investigation was carried out in agro climatic zone (IVa) of Rajasthan State. Sample of 240 respondents were selected by simple random sampling technique for the study purpose. Response of integrated farming system owners was taken by personal interview schedule. The purpose of this study was to find out the constraints faced by farmers in adoption of recommended integrated farming system production technology. In this context, a suitable scale was developed to measure the constraints faced by the respondents in adoption of integrated farming system. These constraints were divided into five groups i.e. Production constraints, Marketing constraints, Situational constraints, Financial and Extension constraints. The present study indicated that “Lack of required finance” (82.08 MPS) was the most serious financial constraints followed by, “Low price for the produce” (81.80 MPS) marketing constraints, “Non availability of quality Planting material/species” (80.55 MPS) production constraints, “Uneven distribution of rainfall” (75.00 MPS) situational constraints, and “Non availability of clinical services for livestock & poultry” (60.13 MPS) extension constraints.

Keywords: integrated farming system, constraints and adoption

Introduction

In India, agriculture production is a backbone of Indian economy, but in recent past agriculture in gross domestic product is declining 14%, average size of land holding is gradually decrease 85% of the farming community. Under the continuing decrease of land holding, horizontal extension of land is not possible. For this reason, vertical integration of farm enterprises will make farming more cost-effective and reliable. Yadav *et al.* (2019) [6].

Integrated farming method holds special importance in this context. In IFS system none of the byproducts are wasted. Byproduct of one system becomes the inputs for other crops in an integrated farming approach as compared to the existing mono culture approaches. IFS has multiple advantages in the areas such as sustainability, food security, farmer security and poverty reduction etc. Integrated farming systems proved as viable approach with an appropriate combination of farm enterprises, such as Crop production, Forestry, Poultry, Horticulture, Livestock, Fishery, Apiculture and Sericulture etc. in precise farming condition to address the problems of decreasing economic growth of our Indian farming communities.

Objective

To study the constraints being faced by farmers in adoption of integrated farming systems.

Research Methodology

An ex – post facto research design was used in present study. The present study was conducted in Rajasthan which literally means land of kings. The State of Rajasthan was purposively selected for the present study. The Integrated Farming System (IFS) approach was implemented in all agro climatic zones of Rajasthan under National Mission on Sustainable Agriculture. Out of ten agro climatic zones in which sub humid southern plain and aravalli (IVa) zone was selected purposively for the study. It comprises of four district Bhilwara, Chittorgarh, Rajsamand and Udaipur. Thus, all four districts were selected for the study. Two clusters from each district was selected for present study on the basis of maximum number of farmers benefitted about different farming systems. Therefore, a total of eight clusters were taken for the study.

An equal number 30 farmers were selected randomly from each identified cluster. Thus, a total of 240 farmers were selected for the present investigation. The data was collected through well-structured and pre-tested interview schedule. The collected data was coded, classified and tabulated with

the help of appropriate statistical tools to draw meaningful conclusion.

Results and Discussion

Table 1: Production constraints faced by the respondents of integrated farming system

S. No.	Statements Production	Bhilwara n1=60		Chittorgarh n2=60		Rajsamand n3=60		Udaipur n4=60		Over all N=240	
		MPS	R	MPS	R	MPS	R	MPS	R	MPS	R
1	Non availability of quality Planting material/species	75.55	II	78.88	I	87.77	I	80.00	I	80.55	I
2	Lack of appropriate technologies for enhancing production	74.44	III	74.44	III	68.88	IV	55.55	V	68.33	IV
3	Lack of knowledge regarding identification of pest and diseases	79.44	I	77.22	II	69.44	III	82.22	II	77.08	II
4	Lack of the technical knowledge regarding crop harvest	56.66	VI	53.88	VI	62.22	V	56.11	IV	51.11	VI
5	Lack of resistant varieties for various pests and diseases	73.00	IV	73.66	IV	80.55	II	79.44	III	76.80	III
6	Lack of knowledge on balanced use of fertilizer	63.00	V	66.66	V	57.77	VI	53.88	VI	61.66	V

MPS= Mean Per cent Score, R= Rank

It is evident from table 1 that the overall production constraints statements in adoption of integrated farming system show that “Non availability of quality Planting material/species” (80.55 MPS) was the most severe statement by the respondents in Zone (IVa) of Rajasthan among the different statements, which was ranked first, followed by “Lack of knowledge regarding identification of pest and

Diseases” (77.08 MPS), “Lack of resistant varieties for various pests and diseases” (76.80 MPS), “Lack of appropriate technologies for enhancing Production” (68.33 MPS), “Lack of knowledge on balanced use of fertilizer” (61.66MPS), Lack of the technical knowledge regarding crop harvest (51.11 MPS) which were second, third, fourth, fifth and sixth, respectively.

Table 2: Situation constraints faced by the respondents of integrated farming system

S. No.	Statements Situation	Bhilwara n1=60		Chittorgarh n2=60		Rajsamand n3=60		Udaipur n4=60		Over all N=240	
		MPS	R	MPS	R	MPS	R	MPS	R	MPS	R
1	Inadequate irrigation facilities	61.11	III	65.55	IV	68.33	III	65.00	III	64.44	III
2	Uneven distribution of rainfall	76.66	I	76.11	I	77.22	I	75.55	I	75.00	I
3	Limited and irregular power supply	64.44	IV	58.33	V	59.44	VI	61.66	IV	59.72	IV
4	Non-availability of labour in peak seasons	60.55	V	71.66	II	73.33	II	70.55	II	67.36	II
5	Lack of custom hiring centers	65.55	II	68.33	III	60.55	IV	43.33	VI	48.75	VI
6	Lack of suitable farm implements	52.77	VI	57.77	VI	60.00	V	60.55	V	57.77	V

MPS= Mean Per cent Score, R= Rank

The data presented in Table 2revealed that the overall situation constraints statements in adoption of integrated farming system show that “Uneven distribution of rainfall” (75.00 MPS) was the most severe statement by the respondents in Zone (IVa) of Rajasthan among the different statements, which was ranked first, followed by “Non-

availability of labour in peak seasons”(67.36 MPS), “Inadequate irrigation facilities” (64.44 MPS), Limited and irregular power supply (59.72 MPS), Lack of suitable farm implements (57.77 MPS), “Lack of custom hiring centers” (48.75 MPS) which were second, third, fourth, fifth and sixth, respectively.

Table 3: Financial constraints faced by the respondents of integrated farming system

S. No.	Statements finance	Bhilwara n1=60		Chittorgarh n2=60		Rajsamand n3=60		Udaipur n4=60		Over all N=240	
		MPS	R	MPS	R	MPS	R	MPS	R	MPS	R
1	Lack of required finance	85.55	I	81.11	II	80.55	II	83.88	I	82.08	I
2	Lack of timely availability of credit	62.22	VI	43.33	VII	51.11	VI	45.00	VII	49.58	VII
3	High rate of interest on borrowings	72.77	V	72.22	IV	48.88	VII	61.11	V	66.11	V
4	High initial cost	82.22	II	81.66	I	81.66	I	83.33	II	78.88	II
5	Non availability of subsidy/credit in time	73.33	IV	70.55	V	64.44	V	79.44	III	73.19	III
6	High cost of production	77.77	III	75.55	III	76.11	III	74.44	IV	72.91	IV
7	Loan disbursement procedure is cumbersome	60.55	VII	57.77	VI	67.22	IV	54.44	VI	60.00	VI

MPS= Mean Per cent Score, R= Rank

Data in table 3 found that the overall financial constraints statements in adoption of integrated farming system show that “Lack of required finance” (82.08 MPS) was the most severe statement by the respondents in Zone (IVa) of Rajasthan among the different statements, which was ranked first, followed by “High initial cost” (78.88 MPS), “Non

availability of subsidy/credit in time” (73.19 MPS), “High cost of production” (72.91 MPS) “High rate of interest on borrowings” (66.11 MPS), “Loan disbursement procedure is cumbersome” (60.00 MPS), “Lack of timely availability of credit” (49.58 MPS) which were second, third, fourth, fifth, sixth and seventh, respectively.

Table 4: Marketing constraints faced by the respondents of integrated farming system

S. No.	Statements marketing	Bhilwara n1=60		Chittorgarh n2=60		Rajsamand n3=60		Udaipur n4=60		Over all N=240	
		MPS	R	MPS	R	MPS	R	MPS	R	MPS	R
1	Lack of marketing facilities at local level	76.66	III	75.55	III	73.33	III	53.33	VI	72.08	III
2	Fluctuations in the prices	81.11	I	83.88	I	73.88	II	82.22	II	81.11	II
3	Lack of storage facilities	70.55	V	65.00	V	55.00	VI	55.55	IV	64.86	V
4	Untimely payment for the produce	55.55	VII	56.11	VI	51.66	VII	57.22	III	54.86	VI
5	Lack of exclusive markets	73.88	IV	64.44	V	63.88	IV	53.88	V	69.16	IV
6	Problem of transportation	61.11	VI	54.44	VII	61.11	V	48.33	VIII	49.50	VII
7	Exploitation by the middleman	50.55	VIII	44.44	VIII	51.11	VIII	48.88	VII	48.75	VIII
8	Low price for the produce	78.88	II	80.55	II	77.22	I	83.88	I	81.80	I

MPS= Mean Per cent Score, R= Rank

The data presented in Table 4 revealed that the overall marketing constraints statements in adoption of integrated farming system show that “Low price for the produce” (81.80 MPS) was the most severe statement by the respondents in Zone (IVa) of Rajasthan among the different statements, which was ranked first, followed by “Fluctuations in the prices” (81.11 MPS), “Lack of marketing facilities at local

level” (72.08 MPS), “Lack of exclusive markets” (69.16 MPS), “Lack of storage facilities”(64.86 MPS), “Untimely payment for the produce” (54.86 MPS), “Problem of transportation” (49.50 MPS), “Exploitation by the middleman” (48.75 MPS) which were second, third, fourth, fifth, sixth and seventh and eighth, respectively.

Table 5: Extension constraints faced by the respondents of integrated farming system

S. No.	Statements extension	Bhilwara n1=60		Chittorgarh n2=60		Rajsamand n3=60		Udaipur n4=60		Over all N=240	
		MPS	R	MPS	R	MPS	R	MPS	R	MPS	R
1	Lack of extension services	60.55	II	60.55	II	55.00	II	61.66	I	56.38	II
2	Lack of capacity building programme	53.88	IV	58.88	III	53.88	IV	41.11	VI	51.66	V
3	Non availability of clinical services for livestock & poultry	63.88	I	68.33	I	56.66	I	60.00	II	60.13	I
4	Lack of demonstrations to prove the worthiness of the technology	48.88	V	56.66	IV	53.33	VI	42.22	IV	49.72	IV
5	Lack of trained extension personnel	48.33	VI	51.11	V	50.55	VI	41.66	V	50.57	VI
6	Non availability of extension personnel	60.00	III	50.55	VI	54.44	III	46.66	III	55.41	III

MPS= Mean Per cent Score, R= Rank

The data given in Table 5 clearly indicated that the overall extension constraints statements in adoption of integrated farming system show that “Non availability of clinical services for livestock & poultry” (60.13 MPS) was the most severe statement by the respondents in Zone (IVa) of Rajasthan among the different statements, which was ranked first, followed by “Lack of extension services” (56.38MPS), “Non availability of extension personnel” (55.41 MPS), “Lack of demonstrations to prove the worthiness of the Technology” (49.72 MPS), “Lack of capacity building programme” (51.66 MPS) “Lack of trained extension personnel” (50.57 MPS) which were second, third, fourth, fifth, and sixth, respectively.

Similar findings were also reported by, Meshram *et al.* (2020)^[1] and Gunaseelan and Singh (2018)^[2].

Conclusion

It can be concluded that constraints faced by the farmers in adoption of integrated farming system were non availability of quality planting material/species, uneven distribution of rainfall, lack of required finance, low price for the produce, non-availability of clinical services for livestock & poultry and fluctuations in the prices. This research will be extremely useful to policymakers and suitable policies can be established to encourage integrated farming system growers, from subsistence level to intensive level so that income from integrated farming system in the study area will increase.

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