

**RESEARCH ARTICLE :**

Management behaviour of the farmers in relation to improved cultivation of hybrid rice in Satna district (M.P.)

■ Toran Lal Nishad, Antim Birla, Sanjay Singh, Shilpi Singh and Azlan Khan

ARTICLE CHRONICLE :**Received :**

28.11.2018;

Revised :

12.01.2019;

Accepted :

18.01.2019

SUMMARY : Hybrid rice technology appears to be a feasible and readily available option for raising the yield potential. However, there is still scope for raising hybrid rice production in Satna district by adoption of recommended practices of hybrid rice by the All India Co-ordinated Rice Improvement Project (ICAR) College of Agriculture Rewa (M.P.). The present study was carried out in Satna district of Madhya Pradesh to assess management behaviour of the farmers in relation to improved cultivation of hybrid rice with a sample of 120 hybrid rice growers. The study revealed that among all the components of management behaviour of hybrid rice cultivation in highest mean score was observed in technology management (1.35), followed by labour management (1.28) and planning (1.19). It was also found that 49.17 per cent respondents showed medium extent of management of improved hybrid rice production technology, while 28.33 per cent respondents showed low extent of management of improved hybrid rice production technology and remaining 25.50 per cent showed high extent of management of improved hybrid rice production technology. The data indicate that the characteristics as education, size of land holding, farming experience, source of information, contract with extension agents, mass media exposure, innovativeness, economic motivation, risk orientation and decision making had significant relationship at 5 per cent level of significance with the management of improved hybrid rice cultivation practices.

KEY WORDS :

Hybrid rice,
Technology,
Management,
Farmers

How to cite this article : Nishad, Toran Lal, Birla, Antim, Singh, Sanjay, Singh, Shilpi and Khan, Azlan (2019). Management behaviour of the farmers in relation to improved cultivation of hybrid rice in Satna district (M.P.). *Agric. Update*, 14(1): 75-79; DOI: 10.15740/HAS/AU/14.1/75-79. Copyright@ 2019: Hind Agri-Horticultural Society.

Author for correspondence :

Toran Lal Nishad
Department of
Extension Education,
College of Agriculture
(J.N.K.V.V.), Rewa
(M.P.) India
Email: torannishad57@gmail.com

See end of the article for
authors' affiliations

BACKGROUND AND OBJECTIVES

Rice (*Oryza sativa* L.) is a plant belonging to the family of grasses, Gramineae. There are three major food crops (wheat, rice and maize) of world and rice is one of the foremost cereal crops feeding over more than half of the world's population. It is grown in more than a hundred countries, with a total

cultivated area of about 161.5 million hectare, producing more than 680 million tones grains annually. About 90 per cent rice of the world is grown in Asia.

India is the second leading producer of rice in entire world preceded only by china. Rice is grown extensively in India in about 37.42 million hectares area with an annual production of 106.19 Million tonnes and

average yield of 2837 kg/ha. West Bengal, Uttar Pradesh, Chhattisgarh and Haryana are the major rice producing states. In Madhya Pradesh rice is considered as most important cereal crop. It occupies an area of around 2.02 million hectare with the production of 3.58 million tones and productivity of 1768 kg/ha (2015-16).

Hybrid rice technology appears to be a feasible and readily available option for raising the yield potential. The average yield of hybrid rice is at least 20-30 per cent more than that of inbred rice and it has been anticipated that hybrid rice technology will play a key role in ensuring food security worldwide in the new century. In Satna district of rice is grown 110 thousand hectares area with 2683 kg/ha productivity, which can be extended through adopting recommended production technology with proper management by the farming community. The considerable achievement in increasing the production of rice crop was made by the farmers. However, there is still scope for raising hybrid rice production in Satna district by adoption of recommended practices of hybrid rice by the All India Co-ordinated Rice Improvement Project (ICAR) College of Agriculture Rewa (M.P.).

The soil and climatic condition of Satna district is most suitable for rice cultivation and production of rice can be increased through proper management of timely adoption of recommended hybrid rice production technology by the farmers. Keeping this in view, the present study was undertaken with following objectives:

– To assess the extent of management of improved rice production technology among the hybrid rice growers.

– To find out the association between the management of improved production technology of hybrid rice by the rice growers and their selected characteristics.

RESOURCES AND METHODS

The present study was conducted in Satna district (M.P.) Satna district was selected purposively since presently it has larger area under hybrid rice cultivation. Satna district comprises eight blocks. Rampur Baghelan block was selected purposively because this block has maximum area under hybrid rice cultivation as compared to other blocks Satna district. Ten village of Rampur Baghelan were selected on the basis of larger area under hybrid rice production for the present study. From this list the farmers were selected from each village through

proportionate random sampling method to make a sample of 120 hybrid rice growers. Finally the sample was consisted of 120 respondents. An interview schedule was designed for collecting the relevant information. The data were collected personally from the respondents through this pre tested interview schedule. Data collected were qualitative as well as quantitative. The quantitative data were interpreted in terms of percentage and qualitative data were tabulated on the basis of approved categorization method.

OBSERVATIONS AND ANALYSIS

It was found that among all the components of management behaviour of hybrid rice cultivation, highest mean score was observed in technology management (1.35), followed by labour management (1.28) and planning (1.19) (Table 1). It means the respondents were managing the components - technology, labour and planning in an efficient manner. On the contrary the management of hybrid rice production techniques was not found to be in desired extent in the components *viz.*, information seeking, marketing, input, information evaluation and financial management. The overall average mean score of management behaviour of hybrid rice cultivation was 1.12.

Table 2 the data indicate that 49.17 per cent respondents showed medium extent of management of improved hybrid rice production technology, while 28.33 per cent respondents showed low extent of management of improved hybrid rice production technology and remaining 25.50 per cent showed high extent of management of improved hybrid rice production technology. Similar findings were reported by Gajbiye (2014); Roy *et al.* (2007); Shashidara *et al.* (2007); Verma (2009) and Shashidhar and Manjunath (2014).

The data (Table 3) indicate that the characteristics as education, size of land holding, farming experience, source of information, contact with extension agents, mass media exposure, innovativeness, economic motivation, risk orientation and decision making had significant relationship 5 per cent level of significance with the management of improved hybrid rice cultivation practices. The results also reveal that the characteristics *viz.*, age, caste, social participation did not establish significant relationship at 5 per cent level of significance with the management of improved

Table 1 : Mean score of various components of management of hybrid rice production technology among the farmers

Sr. No.	Components	Extent of management			Total score	Mean score	Rank
		Completely	Partial	Not of all			
Planning							
1.	Time scheduling of operational work	38	70	12	146	1.22	II
2.	Plan and analysis of cost and return	42	56	22	140	1.16	III
3.	Arrangement of field/nursery	46	57	17	149	1.24	I
4.	Preparation of contingent plan	38	62	20	138	1.15	IV
	Average mean score				1.19		
Information seeking management							
1.	Individual contact	38	58	24	134	1.12	II
2.	Group contact	40	60	20	140	1.17	I
3.	Mass media contact	30	65	25	125	1.04	III
	Average mean score				1.11		
Information evaluation management							
1.	Discussion with family members	28	68	24	124	1.03	II
2.	Discussion with friend and neighbours	32	62	26	126	1.05	I
3.	Discussion with progressive rice cultivation	29	61	30	119	0.99	III
4.	Discussion with officers of line departments	22	55	43	99	0.82	IV
	Average mean score				0.97		
Labour management							
1.	Utilization of family labour	55	55	10	165	1.37	I
2.	Labour management as per operational work	52	56	12	160	1.33	II
3.	Evaluation of labour	42	60	18	144	1.20	IV
4.	Engagement of labour on the basis of their work efficiency	48	55	17	151	1.25	III
	Average mean score				1.28		
Input management							
1.	Arrangement of organic manures / bio- fertilizers	20	40	60	80	0.67	V
2.	Arrangement of fungicides	30	44	46	104	0.87	IV
3.	Arrangement of insecticide	55	25	40	135	1.12	III
4.	Arrangement of weedicide	68	10	42	146	1.20	II
5.	Improved implements	62	25	33	149	1.24	I
	Average mean score				1.02		
Technology management							
1.	Nursery management	39	61	20	139	1.16	VI
2.	Improved varieties	98	14	8	210	1.75	II
3.	Sowing method	100	16	4	216	1.80	I
4.	Integrated Nutrient Management (INM)	34	60	26	128	1.06	VII
5.	Weed management	25	65	30	115	0.96	IX
6.	Plant protection	58	34	28	150	1.25	V
7.	Harvesting	86	22	12	194	1.61	III
8.	Water management	82	21	17	185	1.54	IV
9.	Transplanting	32	62	26	126	1.05	VIII
	Average mean score				1.35		
Marketing management							
1.	Trends of Mandi selling rate	36	70	14	142	1.18	II
2.	Sale at block and district level	48	55	17	151	1.26	I
3.	Selling out of state	22	56	42	100	0.83	III
	Average mean score				1.09		
Financial management							
1.	Kisan Credit Card	30	44	46	104	0.87	II
2.	Bank loan	20	40	60	80	0.67	III
3.	Own capital	68	10	42	146	1.20	I
	Average mean score				0.91		
	Over all average mean score of all components				1.12		

Table 2: Extent of management of improved hybrid rice production technology

Sr. No.	Extent of management of improved hybrid rice production technology	Number of respondents	Percentage
1.	Low	34	28.33
2.	Medium	59	49.17
3.	High	27	25.50
	Total	120	100

Table 3: Relationship between the management of hybrid rice technology of hybrid rice by the respondents and their selected attributes

Sr. No.	Attributes	' r ' value
1.	Age	-0.1221
2.	Caste	-0.1167
3.	Education	0.2867*
4.	Social participation	-0.1113*
5.	Size of land holding	0.2124*
6.	Farming experience	0.2372*
7.	Source of experience	0.2457*
8.	Contact with extension agents	0.2315*
9.	Mass media exposure	0.2178*
10.	Innovativeness	0.2847*
11.	Economic motivation	0.2720*
12.	Risk orientation	0.2621*
13.	Decision making	0.2784*

* indicate significance of value at P=0.05

practices in relation to hybrid rice cultivation. Similar findings were also supported by Katkar (2000); Painkra *et al.* (2004); Pawan (2013); Vishvajeet *et al.* (2014) and Panwar *et al.* (2000).

Conclusion:

It may be concluded from the above findings that the management behaviour of the farmers in relation to improved cultivation of hybrid rice was quite satisfactory in the aspects namely technology management, followed by labour management and planning. It was also found management behaviour of the farmers in relation to improved cultivation of hybrid rice was considerable low in the respect of the components information evaluation management and financial management. The study suggests that their should be a sound linkage between the scientists/ extension officers and the farmers during the stages of hybrid rice production namely information seeking, planning, marketing, technology, input, information

evaluation, labour and financial management.

Authors' affiliations :

Antim Birla, Sanjay Singh and Azlan Khan, Department of Extension Education, College of Agriculture (J.N.K.V.V.), Rewa (M.P.) India

Shilpi Singh, Department of Agricultural Economics, Mahatma Gandhi Chittrakoot Gramodaya Vishwavidyalaya, Chittrakoot, Satna (M.P.) India

REFERENCES

- Gajbiye, S.** (2014). A study on technological gap in relation to hybrid rice production practices among the hybrid rice growers of Rewa block of Rewa District M.P. M.Sc. (Ag.) Thesis, College of Agriculture, Rewa, Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur, M.P. (M.P.) India.
- Katkar, B. S.** (2000). Adoption of management practices of drip irrigation system in Malshiras tahsil of Solapur district. M.Sc. (Ag.) Thesis, Mahatma Phule Krishi Vidyapeeth, Rahuri, M.S. (India).
- Painkra, S.K.,** Nag, S.K. and Kirar, B.S. (2004). Adoption of

recommended rainfed rice production technology by the farmer of Tokapal block of Bastar district (C.G.) In: *IRRI* (abstract) pp 263.

Panwar, M.P., Pande, A.K. and Sonaria, Y.C. (2000). Knowledge and adoption of soybean production technology among farmers. *Maharashtra J. Extn. Edu.*, **2 & 3** : 26-29.

Roy, S., Bhagat, R. and Rao, D.U.M. (2007). Level of knowledge and extent of adoption of farmers on recommended gladiolus production practices. *Indian Res. J. Extn. Edu.*, **7(2&3)** : 69-71.

Shashidara, K.K., Bheemappa, A., Hirevenkanagoudar, L.V. and **Shashidhar, K.C.** (2007). Adoption of drip irrigation management practices by the plantation crop growers.

Karnataka J. Agric. Sci., **20** (1):79-81.

Shashidhar, K.K. and Manjunath, L. (2014). Adoption of eco-friendly management practices by vegetable growers of North Karnataka. *Kasetsart J. Soc. Sci.*, **35** : 158 – 166.

Verma, S. (2009). A study on knowledge and adoption of organic farming practices in paddy cultivation among the tribal farmers of Kanker district (C.G.). M.Sc. (Ag.) Thesis, Indira Gandhi Krishi Vishwavidyalaya, Raipur (C.G.) India.

Vishvajeet, J., Patel, N.M. and Chauahan (2014). Information seeking behaviour of the rice growers Krishi Vigyan Kendra (NAU), TAPI (Gujarat), India. Subscribe/Renew Journal.

12th
Year
★★★★★ of Excellence ★★★★★