P-ISSN: 2618-0723
E-ISSN: 2618-0731

NAAS Rating: 5.04
www.extensionjournal.com

International Journal of Agriculture Extension and Social Development

Volume 7; Issue 12; December 2024; Page No. 462-465

Received: 19-10-2024
Accepted: 25-11-2024

Indexed Journal
Peer Reviewed Journal

Knowledge of paddy growers about paddy cultivation in Haryana

[1]Priyanka, [2]Santosh Rani and [3]Beena Yadav

Ph.D. Scholar, Department of Extension Education and Communication Management, College of Community Science, CCS HAU, Hisar, Haryana, India

**Assistant Scientist, Department of EECM, COCS, CCS HAU, Hisar, Haryana, India

***Professor, Department of EECM, COCS, CCS HAU, Hisar, Haryana, India

DOI: https://doi.org/10.33545/26180723.2024.v7.i12g.1453

Corresponding Author: Priyanka

Abstract

A study on "knowledge of paddy growers about paddy cultivation in Haryana. In this study, 240 paddy farmers from six villages (40 from each), Kalayat block in Kaithal district, and Tohana block in Fatehabad district were chosen at random. Random selection was used to select three communities from the Kalayat and three from the Tohana block. The objectives of the present study were to assess the knowledge of paddy growers about paddy cultivation. A prepared interview schedule was used to help gather data on the dependent and independent variables. The result showed that cent percent knew about the time of transplanting and method of transplanting followed by 96.67 percent of the paddy growers who knew rice varieties. The findings showed that 81.67 percent had a high level of knowledge about paddy cultivation while, 18.33 percent had a medium level of knowledge about paddy growers.

Keywords: Knowledge, paddy cultivation, paddy growers and rice varieties

1. Introduction

Paddy cultivation is a crucial agricultural activity that underpins the food security and economy of India, particularly in states like Haryana. Haryana, located in the Indo-Gangetic Plains, is one of the leading contributors to India's rice production, primarily through its Green Revolution legacy. The state has witnessed tremendous progress in paddy production due to adopting modern farming techniques, irrigation facilities, high-yielding varieties (HYVs), and government-led initiatives. Despite such advancements, the level of knowledge among paddy growers regarding improved cultivation practices remains a significant factor influencing productivity and sustainability in paddy farming (Kumar *et al*. 2021) [3, 8].

Paddy growers in Haryana face various challenges, such as inadequate access to timely information, low awareness about scientific practices, and limited exposure to modern technologies (Gupta and Rani 2018) [1]. Farmers' knowledge about critical aspects of paddy cultivation—including nursery preparation, seed treatment, pest and disease management, irrigation, and harvesting techniques—significantly impacts crop yields and resource utilization (Singh *et al*., 2018) [10]. The dissemination of agricultural knowledge through extension services, training programs, and information technology has improved farmers' awareness to an extent; however, gaps persist in effectively reaching small and marginal farmers (Nirmala and Singh, 2020) [5]. Several studies have highlighted the importance of farmers' knowledge and their adoption of recommended agricultural practices for achieving better productivity (Prasad *et al*., 2020) [6]. Understanding the knowledge levels of paddy growers is essential to bridging these gaps and designing effective interventions for technology dissemination, training, and policy support (Zaman and Prakash, 2021) [14].

The present research focuses on assessing the knowledge of paddy growers in Haryana about various aspects of paddy cultivation. The study aims to identify areas where farmers possess adequate knowledge and those requiring improvements. This knowledge will aid policymakers, extension workers, and researchers in formulating targeted strategies to enhance farmers' capacities and promote sustainable paddy production in Haryana.

2. Materials and Methods

The study was carried out in the districts of Kaithal and Fatehabad in Haryana, India, by the Extension Education and Communication Management department of the I.C. College of Community Science at the CCS Haryana Agricultural University in Hisar. The Kaithal district is separated into seven community blocks. Kalayat Block was chosen at random from among them for the current investigation. Seven community blocks make up the administrative division of the Fatehabad district. Tohana Block was chosen at random from among them. A list of every village in Tohana and Kalayat, the chosen block, was acquired from the headquarters. A random sampling procedure was used to choose three sample villages from each of the chosen blocks. Kailram, Chausala, and Balu villages were chosen at random from the Kalayat block

while, Akanwali, Kullan, and Bosti villages were chosen at random from the Tohana block. 40 paddy growers from each village made up the total sample of 240 paddy growers selected by random sampling for the current study to collect final data and carry out its goals. The necessary data was gathered from the respondents using the interview schedule.

3. Results and Discussion

3.1 Knowledge regarding varieties of paddy

It can be revealed from the Table- 1 shows that cent percent of the paddy growers knew rice varieties, 90.00 percent source of seed procurement followed by 80.00 percent knew seed rate of paddy in Kaithal. Similarly, in Fatehabad 93.33 percent of the paddy growers had knowledge regarding rice varieties, 86.67 percent source of seed procurement followed by 75.83 percent had knowledge about seed rate of paddy. In total sample, 96.67 percent of the paddy growers had knowledge regarding rice varieties, 88.33 percent had a source of seed procurement followed by 77.92 percent had knowledge about the seed rate of paddy.

Table 1: Knowledge of paddy growers regarding varieties of paddy

S. No.	Statements	Kaithal (n1=120) f (%)	Fatehabad (n2=120) f (%)	Total (n= 240) f (%)
i.	Source of seed procurement	108 (90.00)	104 (86.67)	212 (88.33)
ii.	Regarding rice varieties	120 (100.00)	112 (93.33)	232 (96.67)
iii.	Seed rate of paddy	96 (80.00)	91 (75.83)	1877.92)

*Multiple response

3.2 Knowledge about agronomic practices

A glance at the Table- 2 shows that cent percent of the paddy growers in Kaithal knew land preparation for paddy crops, time of transplanting and method of transplanting. 98.33 percent of paddy growers know about nursery raising of paddy crops and at what time the seedling is ready for transplanting. Most of the paddy growers (91.67%) know about fertilizers required for paddy crop, water level of 3-5 cm be maintained during the entire paddy crop (83.33%), time of fertilizer application (81.67%), know about seed treatment (80.00%), most critical stages of water requirement (79.17%), when the irrigation should be stopped in paddy (77.50%) followed by know about direct seeded rice (DSR) (75.83%), method of sowing of DSR (63.33%), sowing time of DSR (36.67%) and seed rate of DSR (29.17%), respectively.

Whereas, in Fatehabad cent percent of the paddy growers know about the time of transplanting and method of transplanting. 97.50 percent and 96.67 percent paddy growers know about land preparation for paddy crops and nursery raising of paddy crops followed by at what time the seedling is ready for transplanting (95.00%). Most of the paddy growers (85.83%) know about fertilizers required for paddy crop, water level of 3-5 cm be maintained during the entire paddy crop (80.83%), time of fertilizer application (79.17%), most critical stages of water requirement (78.33%), seed treatment (75.83%), when the irrigation should be stopped in paddy (73.33%) followed by know about direct seeded rice (DSR) (69.17%), method of sowing of DSR (60.83%), sowing time of DSR (35.00%) and seed rate of DSR (31.67%), respectively.

Similarly, in pooled sample cent percent of the paddy growers know about time of transplanting and method of transplanting. 98.75 percent and 97.50 percent paddy growers know about land preparation for paddy crop and nursery raising of paddy crop followed by at what time the seedling is ready for transplanting (96.67%). Most of the paddy growers (88.75%) know about fertilizers required for paddy crop, water level of 3-5 cm be maintained during the entire paddy crop (82.08%), time of fertilizer application (80.42%), most critical stages of water requirement (78.75%), seed treatment (78.33%), when the irrigation should be stopped in paddy (76.67%) followed by know about direct seeded rice (DSR) (72.50%), method of sowing of DSR (62.08%), sowing time of DSR (35.83%) and seed rate of DSR (30.42%), respectively.

Table 2: Knowledge of paddy growers regarding agronomic practices of paddy

S. No.	Statements	Kaithal (n1=120) f (%)	Fatehabad (n2=120) f (%)	Total (n= 240) f (%)
i.	Seed treatment	96 (80.00)	92 (76.67)	188 (78.33)
ii.	Nursery raising of paddy crop	118 (98.33)	116 (96.67)	234 (97.50)
iii.	Land preparation for paddy crop	120 (100.00)	117 (97.50)	237 (98.75)
iv.	Time of transplanting	120 (100.00)	120 (100.00)	240 (100.00)
v.	At what time the seedling is ready for transplanting	118 (98.33)	114 (95.00)	232 (96.67)
vi.	Method of transplanting	120 (100.00)	120 (100.00)	240 (100.00)
vii.	Know about direct seeded rice (DSR)	91 (75.83)	83 (69.17)	174 (72.50)
viii.	Method of sowing of DSR	76 (63.33)	73 (60.83)	149 (62.08)
ix.	Sowing time of DSR	44 (36.67)	42 (35.00)	86 (35.83)
x.	Seed rate of DSR	35 (29.17)	38 (31.67)	73 (30.42)
xi.	Fertilizers required for paddy crop	110 (91.67)	103 (85.83)	213 (88.75)
xii.	Time of fertilizer application	98 (81.67)	95 (79.17)	193 (80.42)
xiii.	Water level of 3-5 cm be maintained during the entire paddy crop	100 (83.33)	97 (80.83)	197 (82.08)
xiv.	Most critical stages of water requirement	95 (79.17)	94 (78.33)	189 (78.75)
xv.	When the irrigation should be stopped in paddy	93 (77.50)	91 (75.83)	184 (76.67)

*Multiple response

3.3 Knowledge regarding plant protection, harvesting and processing and storage and marketing

Data in Table-3 presented that knowledge on different parameters of plant protection was reported by the paddy growers among weeds management, 95.00 percent of the paddy growers in Kaithal knew weeds of paddy followed by control measure of weeds (85.00%). Likewise, in Fatehabad 92.50 percent of the paddy growers had knowledge about weeds of paddy followed by control measure of weeds (80.33%). In pooled sample, 93.75 percent of the paddy growers knew weeds of paddy followed by control measure of weeds (82.92%), respectively.

Knowledge regarding disease management, the majority of the paddy growers (87.50% and 81.67%) in Kaithal and Fatehabad know about the common diseases of rice followed by control measures of the following diseases (77.50% and 70.00%) respectively. In the pooled sample, the majority of the paddy growers (84.58%) know about the common diseases of rice followed by the Control measure of the following disease (77.42%), respectively.

Insect Pest Management, 75.83 percent of the paddy growers in Kaithal and 70.00 percent in Fatehabad had knowledge about insects & pests that infect the paddy crop & their control. It can be concluded that 72.92 percent had knowledge about insects & pests that infect the paddy crop & their control.

Knowledge regarding harvesting and processing, cent percent of the paddy growers in both Kaithal and Fatehabad had knowledge about the right time of harvesting paddy and the method of harvesting.

Knowledge regarding storage and marketing, cent percent of the paddy growers in both Kaithal and Fatehabad had knowledge that to keep the paddy safe for storage, dry it in the sun for about a week and keep it in treated storage.

Table 3: Knowledge of paddy growers regarding plant protection, harvesting and processing and storage and marketing of paddy

S. No.	Statements	Kaithal (n1=120) f (%)	Fatehabad (n2=120) f (%)	Total (n= 240) f (%)
	Plant protection			
a)	**Weeds Management**			
1.	Weeds of paddy	114 (95.00)	111 (92.50)	225 (93.75)
2.	Control measure of weeds	102 (85.00)	97 (80.33)	199 (82.92)
b)	**Disease Management**			
1.	Common disease of rice	105 (87.50)	98 (81.67)	203 (84.58)
2.	Control measure of following disease	93 (77.50)	88 (73.33)	181 (75.42)
c)	**Insect Pest Management**			
i.	Insect & pest that infect the paddy crop & their control	91 (75.83)	84 (70.00)	175 (72.92)
	Harvesting and processing			
i.	Right time of harvesting of paddy	120 (100.00)	120 (100.00)	240 (100.00)
ii.	Method of harvesting	120 (100.00)	120 (100.00)	240 (100.00)
	Storage and marketing			
1.	To keep the paddy safe for storage, dry it in the sun for about a week and keep it in treated storage	120 (100.00)	120 (100.00)	240 (100.00)

3.4 Overall knowledge level of paddy growers about paddy cultivation

Result in Table- 4 depicts that 85.00 percent paddy growers in Kaithal and 78.33 percent in Fatehabad had high level of knowledge about paddy cultivation. However, 15.00 percent paddy growers in Kaithal and 21.67 percent in Fatehabad had medium level of knowledge. In case of pooled sample, most of the paddy growers (81.67%) had high level of knowledge followed by medium level (18.33%) of knowledge.

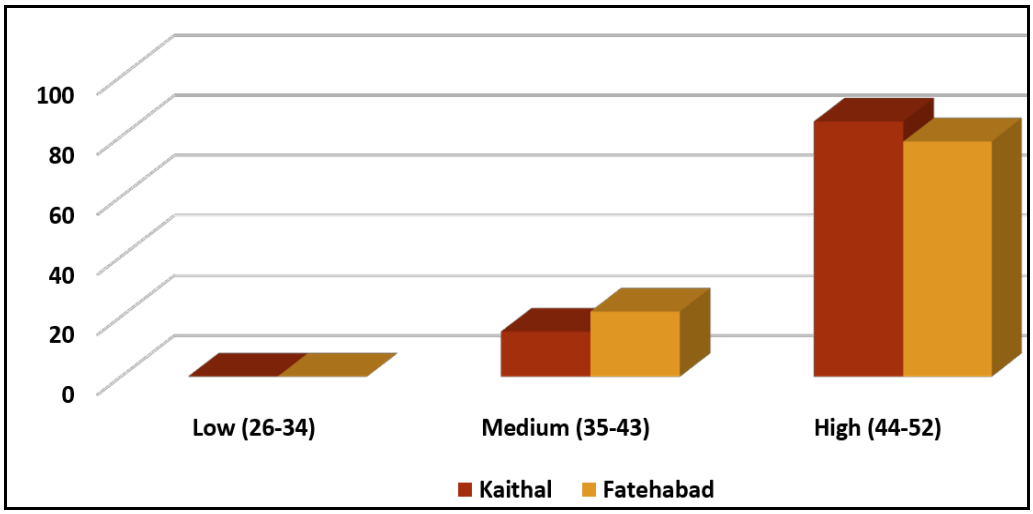

Fig 1: Overall knowledge level of paddy growers about paddy cultivation

4. Conclusion and Recommendations

The study on "Knowledge of Paddy Growers About Paddy Cultivation in Haryana" concluded that cent percent knew about the time of transplanting and method of transplanting followed by 96.67 percent of the paddy growers knew rice varieties, knew about weeds of paddy (93.75%), common disease of rice (84.58%), insect & pest that infect the paddy crop & their control (72.92%) and cent percent knew about right time of harvesting, method of harvesting and to keep the paddy safe for storage, dry it in the sun for about a week and keep it in treated storage. Overall, 81.67 percent had a high level of knowledge about paddy cultivation, while 18.33 percent had a medium level of knowledge about paddy growers.

5. Recommendations

Key findings emphasize the need for targeted interventions to bridge these knowledge gaps. Improved access to agricultural extension services, training programs, and dissemination of information through digital platforms can empower paddy growers to adopt advanced methods, thereby enhancing productivity and ensuring environmental sustainability.

Furthermore, collaborative efforts involving government agencies, research institutions, and local organizations are essential to equip farmers with the necessary skills and resources. By addressing these challenges, Haryana's paddy sector can not only sustain its contribution to food security but also adapt to the evolving demands of climate-resilient and resource-efficient agriculture.

6. References

1. Gupta S, Rani R. Farmer education and knowledge in promoting sustainable rice farming. J Agric Dev Policy. 2018;28(2):120-127.
2. Haryana Agricultural University (HAU). Agronomy research bulletin: paddy cultivation in Haryana. Hisar: Haryana Agricultural University Press; 2020.
3. Kumar A, Mishra S, Sharma R. Factors influencing knowledge and adoption of rice production technologies in Haryana. Agric Ext Rev. 2021;33(1):10-15.
4. Kumar V, Jat M, Singh R. Assessing knowledge gaps in paddy growers in Haryana. Int J Agric Sci. 2019;15(4):875-880.
5. Nirmala P, Singh M. Impact of extension services on knowledge and adoption of rice cultivation practices. Indian Res J Ext Educ. 2020;20(4):55-61.
6. Prasad A, Yadav R, Singh S. Role of knowledge in improving paddy productivity among smallholder farmers. J Rural Stud. 2020;36(2):104-113.
7. Raj R, Das S. Knowledge level of farmers regarding improved paddy cultivation practices in eastern India. Asian J Agric Sci. 2019;10(3):149-156.
8. Sharma S, Kumar M, Bhardwaj A. Role of ICT in dissemination of knowledge among paddy growers. Int J Ext Educ. 2021;17(2):36-41.
9. Singh K, Kaur G. Challenges in paddy cultivation and role of extension education in Haryana. Agric Ext J. 2017;24(2):56-60.
10. Singh R, Kumar P, Verma S. Knowledge and adoption level of paddy growers in Punjab. Indian J Agric Res. 2018;52(3):314-320.
11. Verma A, Kumar P. Knowledge and perception of farmers towards paddy cultivation in northern India. Indian J Agric Sci. 2018;88(5):780-784.
12. Yadav J, Singh R, Rana N. An analysis of knowledge gaps and adoption patterns among rice farmers. Indian J Ext Educ. 2020;18(1):40-47.
13. Zahid M, Ali H. Assessment of knowledge and skill development in paddy farmers: a case study from Haryana. J Agric Res Ext. 2019;11(3):290-296.
14. Zaman S, Prakash K. Knowledge dissemination and its impact on rice cultivation in India. Asian J Agric Ext. 2021;19(1):78-85.