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; SP-Issue 8; August 2024; Page No. 140-143

Received: 07-06-2024
Accepted: 11-07-2024

Indexed Journal
Peer Reviewed Journal

Knowledge of farmers towards improved chilli cultivation practices in Sonbhadra district of Uttar Pradesh

[1]Kajal Soni and [2]Dr. Dipak Kumar Bose

[1]Researcher, Department of Agriculture Extension and Communication Sam Higginbottom University of Agriculture, Technology & Sciences, Prayagraj, Uttar Pradesh, India

[2]Professor & Associate Dean (NAI), Department of Agriculture Extension and Communication Sam Higginbottom University of Agriculture, Technology & Sciences, Prayagraj, Uttar Pradesh, India

DOI: https://doi.org/10.33545/26180723.2024.v7.i8Sc.944

Corresponding Author: Kajal Soni

Abstract

The study considers the level of knowledge of improved chilli production practices among farmers. The present study was conducted in Sonbhadra district of Uttar Pradesh. Data was collected through surveys, interviews and field observations. A total number of 130 respondents were selected randomly from Robertsganj block. In addition to this, all chilli growers selected from the selected village. It was found that almost half of the respondents percent were of age group of 36-55 years, 25.38 percent were educated up to higher secondary, 40.00 percent had an operational land holding ranging from above 3 hectare, 40.77 percent were have only agriculture as main occupation, nearly one third 42.31 percent respondents had medium level of extension contact, 50.10 percent had high level of mass media exposure, 58.46 percent had low level of social participation, 47.69 percent had medium level of economic motivation and 53.08 percent had high level of scientific orientation. Regarding the knowledge level 56.92 per had medium level of knowledge towards improved production practices of chilli crop, 23.08 per had low level of knowledge and 20.00 percent had high level of knowledge. Variables education, occupation, extension contacts, mass media exposure, scientific orientation had positive and significant association with the knowledge level of the respondents at 5 percent level of significance. Meanwhile, age, caste, land holding, social participation, economic motivation had positive and significant association with the knowledge level of the respondents at 1 percent level of significance.

Keywords: Chilli production, knowledge, production practices

Introduction

Agriculture has been and will continue to be the life line of the Indian economy. As the largest private enterprise in India, agriculture contributes nearly one fourth of the national G.D.P., sustains livelihood of about two third of the population and is the backbone of agro-based industry. India is the world leader in chilli production followed by China, Thailand, Ethiopia and Indonesia. Indian chilli is considered to be world famous for two important commercial qualities of colour and pungency levels. Indian chilli is mainly exported to Asian countries like China, Sri Lanka, Malaysia, Bangladesh, Singapore, Thailand, UAE, etc. In India, major chilli producing states are Andhra Pradesh, Telangana, Madhya Pradesh, Karnataka, Uttar Pradesh and West Bengal. According to the 3rd advance estimates, India's chilli production estimate was 15.78 lakh tonnes for (2021-22) as against 20.49 lakh tonnes in 2020-21. (Agriculture Market Intelligence Sector, PJTSAU)

India the 'Land of spices' is the largest producer, consumer and exporter of spices with 40% share in the world trade. The history of Indian spices dates back to the beginning of the human civilization. Chilli (*Capsicum annuum* Linn.) is one of the important spice/ vegetable/cash crops grown in India. Chilli also called as red pepper, is also an important condiment crop, grown for its pungent fruits which are used both as green and ripe (red) to impart pungency and colour to food. Chilli is a good source of vitamins A, C and E. Oleoresins and essential oils of chilli which are the active principals, providing characteristic pungency, flavour and aroma. Chilli popularly known as 'wonder spice' is a major spice as well as vegetable crop grown in many countries. (Singh *et al.* 2020) [8]

Indian Scenario

Chilli is a unique and popular spice in the majority of the countries of the world. Chilli is one of the most important commercial crops of India. There are over 50 spices produced in India and good number of them are grown in the country which is indigenous. Among them pepper, cardamom, ginger and turmeric are important. Among spices, a few spices viz. clove, nutmeg, vanilla and certain varieties of chillies were introduced to the country. Many varieties of chilli are grown for vegetables, spices, condiments, sauce and pickles. India is the largest producer and consumer of chilli among other major producers in the world. Around 29% of the area under cultivation is that of chilli. India contributes 37 percent to total world's production and remained in first position in terms of

international trade by exporting nearly 30 percent from its total production (Geetha *et al.* 2017) [3].

Objectives

- To determine the socio-economic profile of the respondents.
- To determine the level of knowledge of the respondents regarding improved chilli production practices.

Research Methodology

Descriptive research design is adopted for the present study. It is a theory based design method which is created by gathering, analysing and presenting collected data. The study was conducted in Uttar Pradesh district. Out of 75 blocks, Robertsganj block was selected purposively based on maximum area under chilli cultivation. Proportionate random sampling was formed to select the chilli growers and make a total sample size as 130. Data were collected with the help of pre structured schedule using interview technique. Appropriate statistics tool was used to analyse the data.

Results and Discussion

From table no. 1. It was founded almost half of the respondents 53.10 percent were of age group of 36-55 years, 25.38 percent were educated up to higher secondary, 40.00 percent had an operational land holding ranging from above 3 hectare, 40.77 percent were have only agriculture as main occupation, nearly one third 42.31 percent respondents had medium level of extension contact, 50.10 percent had high level of mass media exposure, 58.46 percent had low level of social participation, 47.69 percent had medium level of economic motivation and 53.08 percent had high level of scientific orientation. (Bushetti *et al.*2023) [1]

Table 1: Socio-economic characteristics of the respondents.

Category	Frequency	Percentage
Age (in years)		
Young (16-35)	39	30.00
Middle (36-55)	69	53.10
Old (Above 56)	22	16.90
Education		
Illiterate	15	11.54
Primary Education	8	06.15
Junior High School	15	11.54
High School	28	21.54
Higher Secondary	33	25.38
Graduate & above	31	23.85
Occupation		
Agriculture	61	46.92
Agriculture + Business	47	36.15
Agriculture + Service	12	09.23
Agriculture + Others	10	07.69
Land Holding		
<1 Hect.	22	16.92
1-2 Hect.	28	21.54
2-3 Hect.	28	21.54
3< Hect	52	40.00
Extension Contact		
Medium (8-9)	55	42.31
High (10-11)	20	15.38
Mass Media Exposure		
Low (5-7)	65	50.00

Table 2: Knowledge of respondents about recommended chilli cultivation practices

S. No.	Statements	Responses					
		Fully Correct		Partially Correct		Not Correct	
		f	%	f	%	f	%
1.	Recommended chilli varieties grown a. VNR- 6013, 305 b. Bioseed - 10, 20	112	86.15	15	11.54	3	2.31
2.	Suitable soil (well drained loamy soil)	98	75.00	28	21.54	4	03.08
3.	Suitable season a. June – July b. September-October c. January-February	122	93.85	3	02.31	5	03.84
4.	Nursery sowing a. May b. September	82	63.10	40	30.80	8	06.15
5.	Transplanting after 35 days of seedling	111	85.40	13	10.00	6	04.61
6.	Suitable seed rate (1.0-1.5 kg./hect.)	91	70.00	18	13.85	21	16.20
7.	Bring the seed from KVK/local shop	124	95.38	5	03.85	1	0.77
8.	Seed treatment a. Thiram @ 3gm./kg. b. Carbendazim @ 2 gm./kg. c. Fir 2 gm./kg.	70	53.85	58	45.00	2	01.54
9.	Field preparation with FYM@25 tonn/hect. Or 150-200 q./hect.	33	25.40	44	33.80	53	40.80
10.	Spacing (plant-plant) a. 60×45 cm. (Varieties) b. 75×60 cm. (Hybrid)	51	39.23	76	58.46	3	02.31
11.	N:P:K (120:80:80 kg./hect.)	108	83.08	15	11.54	07	05.38
12.	Potassium sulphate (K2SO4) for fruit	112	86.15	15	11.54	3	02.31
13.	Growth regulator NAA10ppm mg./lit of water	92	70.80	17	13.08	21	16.20
14.	Intercropping with onion or coriander	19	15.00	15	11.50	96	73.80
15.	Pest control a. Profenophos + Cypermethrin b. Imidacloprid	83	63.85	22	16.92	25	19.00
16.	Disease control a. Trichoderma drenching	38	29.20	66	50.80	26	20.00
17.	Hand weeding or a. Metribuzin b. Pendimethaline @ 1 kg./hect.	124	95.38	5	03.85	1	0.77
18.	Irrigation at weekly interval	127	97.69	2	01.54	1	0.77
19.	Harvesting after 75 days of transplanting	129	99.23	1	0.77	0	0.00
20.	Yield (10-15 tonn/hect.)	41	31.50	84	64.60	05	03.85
21.	Storage	0	0.00	0	0.00	130	100.00

Table 3: Overall knowledge level of respondents to improved chilli cultivation practices

S. No.	Level of Knowledge	Frequency	Percentage
1.	Low (45-49)	20	15.38
2.	Medium (50-54)	81	62.31
3.	High (55-59)	29	22.31
	Total	130	100.00

From table 3, it can be seen that most of the respondents (62.31%) had medium level of knowledge regarding the recommended practices in chilli cultivation, followed by 22.31 percent of the respondents have high levels and 15.38 percent of the respondents have low levels of knowledge regarding the improved production practices in chilli cultivation. Findings were similar to Jahnavi *et al.* (2022) [4].

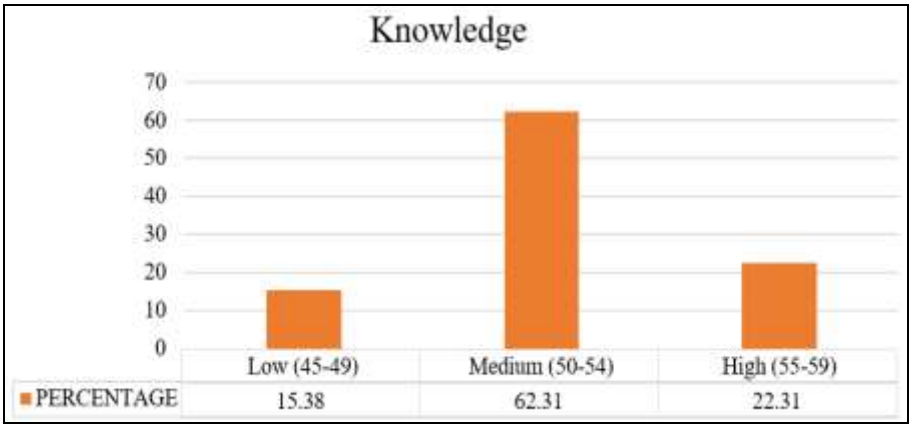

Fig 1: Overall knowledge level of respondents to improved chilli cultivation practices

Table 4: Relationship between the knowledge level and socio-economic profile of the chilli growers towards the improved production practices.

S. No.	Independent Variable	Coefficient Correlation
1.	Age	0.876**
2.	Caste	0.988**
3.	Education	0.321*
4.	Occupation	0.105*
5.	Land holding	0.695**
6.	Extension contact	0.376*
7.	Mass media exposure	0.168*
8.	Social participation	0.527**
9.	Economic motivation	0.781**
10.	Scientific orientation	0.432*

***** = Significant at 0.05 percent level of probability
****** = Significant at 0.01 percent level of probability
NS= Non- Significant

From table 4, it can be observed that 10 socio-economic characteristics has been studied among which characteristics like education, occupation, extension contacts, mass media exposure, scientific orientation had positive and significant association with the knowledge level of the respondents at 5 percent level of significance. Meanwhile, age, caste, land holding, social participation, economic motivation had positive and significant association with the knowledge level of the respondents at 1 percent level of significance Thus, it can be inferred that had positive influence to enhance the extent of knowledge about improved chilli cultivation practices. Therefore, the null hypothesis is rejected for these variables.

Conclusions

It was concluded that the socio-economic profile of the respondents, majority of the respondents are of middle age group (36-55), most of the respondents has attained higher secondary, majority of the respondents are engage in agriculture as their main occupation, majority of the respondents have (above 3 hectare) of land holding, most of respondents have medium level of extension contact, majority of the respondents have medium level of mass media exposure, majority of the respondents have low level of social participation, most of the respondents have medium level of economic motivation, majority of the respondents have high level of scientific orientation. Regarding the knowledge level 56.92 per had medium level of knowledge towards improved production practices of chilli crop, 23.08 per had low level of knowledge and 20.00 percent had high level of knowledge. Variables age, education, occupation, land holding, extension contact, mass media exposure, social participation, economic motivation and scientific orientation had positive and significant association with the level of knowledge. Farmers should be trained for better productivity, timely availability of organic fertilizers and proper education on plant protection measures should be ensured by the Department of Agriculture.

References

1. Bushetti V, Krishnamurthy B. Profile characteristics and economic performance of Byadagi chilli growers in Haveri District of Karnataka. Mysore J Agric Sci. 2023;57(1):409-420.
2. Chilli Outlook. Agriculture Market Intelligence Sector, PJTSAU. March 2023.
3. Geetha R, Selvarani K. A study of chilli production and export from India International Journal of Advanced Research and Innovative Ideas in Education. International J Adv Res Innov Ideas Educ. 2017;3(2):2395-2398.
4. Jahnavi P, Mazhar SH. Knowledge of farmers towards improved chilli cultivation practices in Guntur District of Andhra Pradesh. Int Acad Sci Eng Technol. 2022;11:117-122.
5. Jolly J, Mazhar SH. Knowledge of the respondents towards black pepper production technology in Idukki District of Kerala, India. J Exp Agric Int. 2023;45(7):147-151.
6. Navyasri K, Srilatha Ch, Jnaiah A, Suhasini K. Factors influencing the adoption of drip cum plastic mulch and drip irrigation systems in red chilli cultivation in Bhadradri Kothagudem District of Telangana state. The Pharma Innovation J. 2023;12(3):1122-1124.
7. Singh P, Dhillon BS, Singh S. Assessment of farmers' knowledge and their perceived constraints to recommended chilli production practices in Punjab, India. Int J Curr Microbiol Appl Sci. 2020;9(8):1423-1430.