



Adoption of Improved Varieties of Chickpea in Sehore District of Madhya Pradesh

Rekha Parmar, Abhilasha Sharma, Akanksha Thaku, R.S.Gurjar and K.N.Pathak

Department of Agriculture Extension & Communication, R.A.K. Agriculture College Sehore M.P.
Corresponding author-abhilashasharmakcc@gmail.com

ABSTRACT

The present study was conducted in the Sehore district of Madhya Pradesh in the Department of Agriculture Extension & Communication, R.A.K. Agriculture College Sehore M.P. in the Year 2017-18 to study the adoption level of Improved Varieties of Chickpea. The study found that the majority of chickpea growers (45.83%) adopted overall technology in chickpea cultivation by medium level followed by (27.50%) adopted overall technology in chickpea cultivation by low level and (26.67%) adopted overall technology in chickpea cultivation by high level respectively.

Key Words- Adoption level, Chickpea Varieties, chickpea growers

Received 30.08.2018

Revised 01.09.2018

Accepted 29.10.2018

INTRODUCTION

Pulse crops play an important role in Indian agriculture. Besides being rich in protein, pulses are the main sources of essential amino acids for predominantly vegetarian population of India. They contain 22-24 per cent of protein, which is almost twice the protein in wheat and thrice as that of rice. In India, owing to its diverse agro-climatic conditions, pulses are grown throughout the year and plays an important role in crop rotation, mixed and inter-cropping, maintaining soil fertility through nitrogen fixation, release of soil-bound phosphorus and thus contribute significantly to sustainability of the farming systems. In the production process, pulses require less water than cereals [1-6].

Among various pulse crops, chickpea dominates with over 40 per cent share of total pulse production followed by pigeonpea (18-20 %), mungbean (11 %), urdbean (10-12 %), lentil (8-9 %) and other legumes (20 %). Thus, India is the largest importer, producer and consumer of pulses. On the other hand, India is also the largest pulses processor, as pulses exporting countries like Myanmar, Canada and Australia do not have adequate pulses processing facilities. contribute 80 per cent of total pulse production and area. Madhya Pradesh is one of the important pulses growing State in India. The common pulses growing in Madhya Pradesh are pigeonpea, moong bean, urad bean during kharif season and chickpea, lentil, pea and rajma during rabi season. The split data on these pulse crops' statistics shows that 60 per cent of pulses are grown in rabi and 40 per cent in kharif season respectively [7-10]. So keeping in this view the present study was conducted with following objective Adoption level of improved chickpea varieties (JG-16, JG-130, Jaki-9218 and RVG 202) among chickpea growers.

MATERIAL AND METHODS

Sampling design:

Multi stage random sampling design has been adopted for selection of sample for study.

Area of study:

The study was conducted in Sehore district of Madhya Pradesh. The major consideration for choosing study area was due to important area under chickpea cultivation using different improved varieties.

Selection of block:

Sehore district is comprised of 5 blocks namely Sehore, Ashta, Ichhawar, Budhni and Nashurallagunj, out of which the Sehore block was selected randomly.

Selection of villages and chickpea growers:

A list of major chickpea growing villages was prepared with the help of Office of the block level personnel. From this list 2 villages were selected randomly. Again, a list of chickpea growers of two selected villages namely Bamuliya and Dhaboti was prepared with the help of RAEO. From these lists, 30 chickpea growers for each variety were selected on the basis of simple random sampling method. Thus, in this manner, a total sample comprising of 120 chickpea growers as respondents from 2 villages in Sehore block of district Sehore.

RESULT AND DISCUSSION

Adoption level of improved chickpea varieties (JG-16, JG-130, Jaki-9218 and RVG 202) among chickpea growers:

Adoption is a decision to continue full use of an innovation. It may be defined as the integration of an innovation into a farmer's normal farming activity over an extended period of time. Thus, adoption can be termed as a behaviour response.

The table 1 showed that higher number of "chickpea variety JG-16 growers" 43.33 per cent adopted medium level followed by 33.33 per cent adopted low level and 23.33 per cent adopted high level of "overall technology in cultivation of chickpea variety".

The table 2 showed that higher number of "chickpea variety JG-130 growers" 43.33 per cent adopted medium level followed by 30.00 per cent adopted high level and 26.67 per cent adopted low level of "overall technology in cultivation of chickpea variety".

The table -3 showed that higher number of "chickpea variety JAKI 9218 growers" 50.00 per cent adopted medium level followed by 26.67 per cent adopted high level and 23.33 per cent adopted low level of "overall technology in cultivation of chickpea variety".

Table-4 showed that higher number of "chickpea variety RVG 202 growers" 46.66 per cent adopted medium level followed by 26.67 per cent adopted high level and 26.67 per cent adopted low level of "overall technology in cultivation of chickpea variety".

The Table no 5 describes the distribution of chickpea growers as per their level of adoption in cultivation of chickpea varieties (JG-16, JG-130, Jaki-9218 and RVG 202) and overall adoption level in chickpea cultivation. Data depicted that the highest number of chickpea growers adopted technology and package of practices in cultivation of chickpea variety JAKI-9218 and JG130 (mean score 2.03 each) followed by cultivation of chickpea variety RVG 202 (mean score 2.00). The minimum adoption was found in cultivation of chickpea variety JG-16 (mean score 1.90).

Table -1 Adoption of improved technology for chickpea variety (JG-16). (n=30)

S.No.	Technology practices (Variety JG-16)	Level of adoption			Mean Score
		Low	Medium	High	
1.	Ploughing and land preparation	12 (40.00)	13 (43.33)	5 (16.67)	1.77
2.	Improved varieties of chickpea	10 (33.33)	12 (40.00)	8 (26.67)	1.93
3.	Sowing of seed	9 (30.00)	15 (50.00)	6 (20.00)	1.90
4.	Fertilizer and manure application	8 (26.67)	17 (56.66)	5 (16.67)	1.90
5.	Application of weedicide and hand weeding	8 (26.67)	16 (53.33)	6 (20.00)	1.93
6.	Application of plant protection measure	10 (33.33)	8 (26.67)	12 (40.00)	2.07
7.	Proper stages of irrigation	14 (46.67)	9 (30.00)	7 (23.33)	1.77
8.	Overall average	10 (33.33)	13 (43.34)	7 (23.33)	1.90

Figure in parentheses shows percentage to total

Table -2 Adoption of improved technology for chickpea variety (JG-130) (n=30)

S.No.	Technology practices (Variety JG-130)	Level of adoption			Mean Score
		Low	Medium	High	
1.	Ploughing and land preparation	10 (33.33)	13 (43.34)	7 (23.33)	1.90
2.	Improved varieties of chickpea	9 (30.00)	9 (30.00)	12 (40.00)	2.10
3.	Sowing of seed	8 (26.67)	15 (50.00)	7 (23.33)	1.97
4.	Fertilizer and manure application	8 (26.67)	15 (50.00)	7 (23.33)	1.97
5.	Application of weedicide and hand weeding	6 (20.00)	14 (46.67)	10 (33.33)	2.13
6.	Application of plant protection measure	9 (30.00)	8 (26.67)	13 (43.33)	2.13
7.	Proper stages of irrigation	10 (33.33)	14 (46.67)	6 (20.00)	1.87
8.	Overall average	8 (26.67)	13 (43.33)	9 (30.00)	2.03

Figure in parentheses shows percentage to total

Table -3 Adoption of improved technology for chickpea variety (Jaki 9218). (n=30)

S.No.	Technology practices (Variety Jaki 9218)	Level of adoption			Mean Score
		Low	Medium	High	
1.	Ploughing and land preparation	6 (20.00)	18 (60.00)	6 (20.00)	2.00
2.	Improved varieties of chickpea	9 (30.00)	15 (50.00)	6 (20.00)	1.90
3.	Sowing of seed	4 (13.33)	19 (63.34)	7 (23.33)	2.10
4.	Fertilizer and manure application	8 (26.67)	14 (46.66)	8 (26.67)	2.00
5.	Application of weedicide and hand weeding	10 (33.33)	14 (46.67)	6 (20.00)	1.87
6.	Application of plant protection measure	7 (23.33)	14 (46.67)	9 (30.00)	2.07
7.	Proper stages of irrigation	6 (20.00)	12 (40.00)	12 (40.00)	2.20
8.	Overall average	7 (23.33)	15 (50.00)	8 (26.67)	2.03

Figure in parentheses shows percentage to total

Table -4 Adoption of improved technology for chickpea variety (RVG 202). (n=30)

S.No.	Technology practices (RVG 202)	Level of adoption			Mean Score
		Low	Medium	High	
1.	Ploughing and land preparation	6 (20.00)	16 (53.33)	8 (26.67)	2.07
2.	Improved varieties of chickpea	10 (33.33)	11 (36.67)	9 (30.00)	1.97
3.	Sowing of seed	8 (26.67)	14 (46.66)	8 (26.67)	2.00
4.	Fertilizer and manure application	5 (16.67)	17 (56.66)	8 (26.67)	2.10
5.	Application of weedicide and hand weeding	11 (36.67)	10 (33.33)	9 (30.00)	1.93
6.	Application of plant protection measure	5 (16.67)	19 (63.33)	6 (20.00)	2.03
7.	Proper stages of irrigation	8 (26.66)	11 (36.67)	11 (36.67)	2.10
8.	Overall average	8 (26.67)	14 (46.66)	8 (26.67)	2.00

Figure in parentheses shows percentage to total

Table: 5 Overall Adoption of improved technology for chickpea variety

S.No	Name of Chickpea varieties	Level of Adoption			Mean score	Rank
		Low	Medium	High		
1.	JG-16	10 (33.33)	13 (43.34)	7 (23.33)	1.90	III
2.	JG-130	8 (26.67)	13 (43.33)	9 (30.00)	2.03	I
3.	JAKI 9218	7 (23.33)	15 (50.00)	8 (26.67)	2.03	I
4.	RVG 202	8 (26.67)	14 (46.66)	8 (26.67)	2.00	II
5.	Overall adoption in Chickpea cultivation	33 (27.50)	55 (45.83)	32 (26.67)	1.99	

Figure in parentheses shows percentage to total

REFERENCES

1. Badodiya,S.K. and Gautam,D.S. (2007). Awareness and adoption of recommended package of practices of chickpea production technology. *4th National Extn.Edu.Congress, Society of Extn.,Agra and JNKVV,Jabalpur*. pp:142.
2. Chatterjee,A.; Patel,M.M.; Chatterjee, Amit and Bhargav (2003). Adoption of chickpea production technology. *Indian J. Pulses Res.* 16(1):36-38.
3. Islam,Q.M.S.; Karim,M.R.; Ali,M.O. and Rahman,M.M. (2002). Adoption of HYV chickpea and the profitability of chickpea cultivation in the High Barind Tract of Bangladesh. *Economic Affairs (Calcutta)*. 47(2):100-107
4. Patel,M.M.; Chatterjee, Amit and Bhargav,A.K. (2003). Adoption of chickpea production technology. *Indian Journal Pulses Res.* 16(1):36-38.
5. Shakya,M.S. (2007). A study on adoption behaviour of chickpea growers in Indore District of M.P. *M.Sc. (Ag.) Thesis submitted to, J.N.K.V.V., Jabalpur*.
6. Sharma,H.O.; Singh,R.P. and Mahesh Patidar (2003). Production constraints in adoption of improved chickpea technology in Madhya Pradesh. *Indian Journal of Pulses Research.* 16(2):125-127.
7. Sharma, Panjak (2007). A study on adoption behaviour of chickpea production technology among the farmers of Aron Block of Guna district of M.P. *M.Sc. (Ag) Thesis submitted to J.N.K.V.V., Jabalpur*.
8. Solanki, Suresh (2008). A study on communication gap about recommended chickpea production technology among chickpea growers of Sehore block of Sehore district of M.P. *M.Sc. (Ag.) Thesis (unpublished), J.N.K.V.V., Jabalpur*.
9. Soni,S.N. (2002) Perception analysis of adoption of improved gram production technologies. *Maha.J.Extn.Edu.* 3(4&5):62-65.
10. Taram, Ravindra (2011). A study on technological gap of recommended chickpea production technology among grower of Indore district of Madhya Pradesh. *M.Sc. (Ag.) Thesis Submitted to the R.V.S.K.V.V. Gwalior*.

CITATION OF THIS ARTICLE

R Parmar, A Sharma, A Thaku, R.S.Gurjar and K.N.Pathak. Adoption of Improved Varieties of Chickpea in Sehore District of Madhya Pradesh. *Bull. Env. Pharmacol. Life Sci.*, Vol 7 [12] November 2018 : 115-118