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Adoption level of farmers about recommended cultivation practices of green gram (summer season) in Fatehpur district of Uttar Pradesh

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Abstract

The various legume crops grown in India Green gram (summer season) occupy an important place because of its excellent protein quality and high digestibility due to low flatulence. This quantum jump in production of this crop can meet the expectations of the policy makers and nutritional planners. To find out the adoption level of farmers about recommended cultivation practices of moongbean in the study area. The present study was carried out in Malwan block of Fatehpur district (U.P.). The Fatehpur district consists of 13 blocks. Out of which one block namely Malwan were selected by Purposive. Among these, 5- villages from Malwan block were selected by Purposive random sampling and a sample of 100 respondents was selected from these villages by using simple random sampling with proportion by SRS to the size of sample in the selected villages. An interview schedule was developed consisting of measuring devices of adoption level. The assessment of farmer's adoption devoted of three categories e.i. low, medium and high farmers. The study indicated the medium adoption level of farmers 61.00 per cent having whereas, 27.00 per cent having low adoption and remaining 12.00 per cent possessed high adoption about recommended cultivation practices of moongbean.

Keywords: Adoption, knowledge, green gram growers, scientific practices, agriculture innovation

Introduction

Role of pulses in Indian agriculture needs hardly any emphasis India is a premier pulse growing country. The pulses are an integral part of the cropping system of the farmers all over the country because these crops fit in well in the crop rotation and crop mixtures followed by them pulses are important constituents of the Indian diet and supply a major part of the protein requirement. Pulses crops besides being rich in protein and some of the essential amino acids enrich the soil through symbiotic nitrogen fixation from atmosphere.

In Indian, the total food production in 1999-2000 was about 209 million tonnes out of this only 13.4 million tonnes was contributed by pulses. The production of cereals increased by 460 per cent since 1950-51 but the production of pulses has increased only 178 per cent. There is a shortage of pulses in the country. The prices have increased considerably and the consumer is hard hit to buy his requirements. The availability of pulse per capita per day has proportionality declined from 71g (1955) to 36.9g (1998) against the minimum requirement of 70g per capita per day. There is not much possibility of the import of pulses in the country. The production of pulses has to be increased internally to meet the demand. Moong commonly known as moong is the most important pulse crop of India.

The all-time high production record of 17.29 million tonnes could be possible primarily due to availability of quality seeds to pulse growers. Apart from availability of quality seeds of high yielding varieties, the strong technology back-up, favourable monsoon, increase in minimum support prices and effective government programmes helped for increasing production of pulses in the country. Where as in Fatehpur district 1035 ha. Area was under green gram cultivation and production was 540 qtl/ha. And productivity was 5.22 qtl/ha. In (2013-14). The present study was carried out with specific objective "To find out the adoption level of farmers about recommended cultivation practices of moongbean in the study area".

Research Methodology

The present study was carried out in Fatehpur district of Uttar Pradesh. The Fatehpur district consists of 13 blocks. Out of which one block namely Malwan were selected by Purposive sampling technique. Among these, 5-villages from Malwan block were selected by Purposive random sampling technique. Thus, total five villages viz., Abhaypur, Ashapur, Aung,

Alipurand Bhaupurwere selected for the present investigation. Listed respondent were categorized as the marginal farmers (a farmer with less than 1 ha of land holding), small farmers (a farmer with 1 to 2 ha of land holding) and medium farmers (a farmer with 2 to 4 ha of land holding)). Finally respondents of each category from each selected village were selected in proportion by PRS such that the sample size is least 100. An interview schedule was developed consisting of measuring devices of adoption level. Ten major packages of practices of moong bean production cultivation practices were included in adoption test. Each selected practices was further divided into several questions to find out the existing adoption of respondents about moong bean production cultivation practices. One score was assigned to each correct answer. The respondents knowing the correct answer score one marked while others not knowing the subject matter obtained zero marks. Therefore, the possible maximum adoption score one could obtain was 11. The responses obtained from the respondents were counted and converted into mean per cent score (Appendix-II). The adoption index for each respondent was calculated by using the following formula:

$$AI = \frac{A}{P} \times 100$$

Where,

KI = adoption

K = adoption score obtained per practices

P = Possible maximum score per practices

The mean and standard deviation of all these respondents' adoption scores were computed for classifying the adoption in different categories. Based on the mean adoption score and standard deviation. The farmers were categorized under three adoption level categories, namely low, medium and high adoption level as follows:

Low adoption level= Score below (mean adoption – SD)

Medium adoption level = Score from (mean adoption -SD) to (mean+SD)

High adoption level = Score above (mean adoption + SD)

Results and Discussion

This section is devoted to assess adoption of small, marginal and medium farmers about improved practices of moong bean cultivation. To get an over view of the adoption level, the farmers about recommended cultivation practices of moong bean were grouped into (i) low (ii) medium (iii) high adoption

on the basis of calculated mean and standard deviation of the obtained adoption scores by the respondents.

Overall adoption level of small, marginal and medium farmers about recommended cultivation practices of Green gram (summer season)

The data in table 1 reveal that 61 respondents (61.00 per cent) fall in medium adoption groups, whereas, 27 respondents (27.00 per cent) were found in low adoption and remaining 12 respondents (12.00 per cent) possessed high adoption about recommended cultivation practices of Green gram (summer season).

Table 1: Over all adoption level of respondents. N=100

S. No.	Categories (score value)	Respondents	
		Number	Percentage
1.	Low (up to 8)	27	27.00
2.	Medium (9-10)	61	61.00
3.	High (11 and above)	12	12.00
	Total	100	100.00

Mean=9.22, S.D. =1.51, Min. =7, Max. =12

The Table-1 that majority of the respondents (61.00 %) were adoption in the medium category (9 to 10) score value of followed by 27.00% and 12.00% for (up to 8), and (11 and above) respectively. So, the majority of the adoption level of technological practices of green gram cultivation. Fall in the medium category (9 to 10). The average mean of scores of extent of adoption level observed to be 9.22.

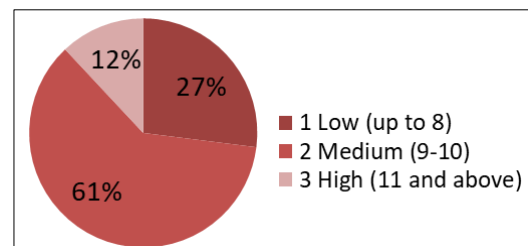


Fig 1: Adoption level of respondents

Practice wise knowledge of marginal farmers about recommended cultivation practices of Green gram (summer season)

The adoption of small, marginal and medium farmers with regard to improved cultivation practices of green gram was assessed. As many as ten practices were included in the adoption schedule to assess the knowledge of respondents as given in table 2.

Table 2: Extent of adoption level of technological practices of green gram cultivation. N=100

S. No.	Green gram cultivation practices	No. of respondent	Percentage
1.	High yielding varieties		
a.	Pusa Baisakhi	44	44.00
b.	Type-44	43	43.00
c.	K-4	52	52.00
d.	Sheela	36	36.00
2.	First ploughing done for cultivation	77	77.00
3.	Recommended Seed rate	81	81.00
4.	Much culture apply for treating the green gram seed		
a.	Rhizobium culture	80	80.00
b.	Thiram	18	18.00
5.	timely sowing	97	97.00
6.	Recommended dose of Fertilizers	47	47.00
7.	Irrigation management	97	97.00
8.	Intercultural operation	87	87.00

9.	Insect/Pest management	35	35.00
10.	Disease management	51	51.00
11.	Best time for Harvesting	82	82.00
	Overall percentage		61.8

The Table-2 Show that among all 11 technological practices of green gram cultivation, timely sowing and irrigation management each (97%) as far as knowledge possessed by the respondents was concerned. The practice intercultural operation (87%), best time for harvesting (82%), recommended seed rate (81%), rhizobium culture (80%), first ploughing done for cultivation (77%), high yielding variety K-4 (52%), disease management (51.00%), recommended dose of fertilizers (47%), high yielding variety pusabaisakhi (44%), high yielding variety Type-44 (43%), high yielding variety sheela (36%), insect/Pest management (35%), thiram (18%). The overall knowledge index was calculated to be 61.8%. It can be calculated that the extent of adoption level of technological practices of green gram cultivation seems to be satisfactory.

Conclusion

Majority of the farmers (small, marginal and medium) had fallen in medium category adoption about recommended cultivation practices of green gram. It was observed that small marginal and medium farmers possessed maximum adoption regarding “timely sowing and irrigation management” each (97.00 per cent) of green gram crop, respectively small, marginal and medium farmers possessed adoption regarding “The practice intercultural operation” (87.00 per cent).

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