Journal of Pharmacognosy and Phytochemistry

Available online at www.phytojournal.com

E-ISSN: 2278-4136
P-ISSN: 2349-8234
JPP 2019; 8(1): 414-416
Received: 24-11-2018
Accepted: 26-12-2018

Arvind Pratap Singh
Research scholar, Department of Extension Education, College of Agriculture, NDUAT, Narendra Nagar (Kumarganj), Faizabad, Uttar Pradesh, India

RK Doharey
Professor, Department of Extension Education, College of Agriculture, NDUAT, Narendra Nagar (Kumarganj), Faizabad, Uttar Pradesh, India

Prakash Singh
Professor, Department of Extension Education, College of Agriculture, NDUAT, Narendra Nagar (Kumarganj), Faizabad, Uttar Pradesh, India

Manoj Kumar
Guest Faculty, Department of Extension Education, College of Agriculture, NDUAT, Narendra Nagar (Kumarganj), Faizabad, Uttar Pradesh, India

RK Singh
SMS/Scientist-Agril. Extension, Mahayogi Gorakhnath Krishi Vigyan Kendra, Chaukmafi (Peppeganj), Gorakhpur, Uttar Pradesh, India

Ravindra Kumar Pandey
Department of Extension Education, College of Agriculture, NDUAT, Narendra Nagar (Kumarganj), Faizabad, Uttar Pradesh, India

Correspondence
Arvind Pratap Singh
Research scholar, Department of Extension Education, College of Agriculture, NDUAT, Narendra Nagar (Kumarganj), Faizabad, Uttar Pradesh, India

Technological gap in adoption of green gram (summer season) pulse crop cultivation in Malwan of district Fatehpur U.P

Arvind Pratap Singh, RK Doharey, Prakash Singh, Manoj Kumar, RK Singh and Ravindra Kumar Pandey

Abstract
The technological gap between existing and recommended technologies of Green gram (Summer Season) Pulse Crop was studied during 2014-15 among 100 respondents. It was found a majority that among all practices of green gram cultivation, thiram (82%), rhizobium culture (80%) as far as technological gap possessed by the respondents was concerned. The practice insect/pest measures (65%), improved variety sheela (64%), Type-44 (57%), improved variety pusabaisakhi (56%), recommended dose of fertilizers (53%), disease measures (49%), improved variety K-4 (48%), first ploughing done for cultivation (33%), recommended seed rate (19%), best time of harvesting (18%), intercultural operation (13%), irrigation management and best time of sowing each (03%). The overall technological gap index was calculated to be 42.86%. The respondents were facing constraints in terms of adopt a rank of first were agreed with the statements that "High cost of chemical fertilizers" is the common problem, followed by "Lack of knowledge about high yielding varieties" at ranks second, "High labour cost" at rank third, "Lack of post-harvest management" at rank fourth, "Lack of proper information" at rank fifth, "High transportation cost" at ranks sixth, "Lack of interest viewing the new practices" at rank seventh, "Lack of knowledge about insect/pest" at rank eights, "Lack of knowledge about disease" at ranks ninth, "Lack of education" at the ranks tenth, "High cost of different varieties of seed" at the ranks eleventh, "Lack of skilled labour" at the ranks twelfth and "Lack of storage facilities" at the ranks thirteen, respectively. Under technological constraints also faced difficulties regarding weak extension support, lack of conviction and awareness about technologies.

Keywords: Green gram Pulse crop, scientific technology, pulses scenario, technological gap, constraints

Introduction
Moong is of the important pulse crops of the world cultivated over an area of 12.0 million hectares with a production of about 9.2 million tonnes of grain (1999). The important green gram growing countries are India, Pakistan, and China. The important green gram growing ranks first in the world in respect of production as well as acre age followed by Pakistan. It is the most important pulse crop of India occupying an area of 6.3 million hectares with production of 5.1 million tonnes.

There is not much possibility of it 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. India alone has nearly 52.5 per cent of the world average and production of green gram. Moong occupies about 38 per cent of area under pulses and contributes about 50 per cent of the total pulse production of India. Estimated at 17.29 million tonnes, is all-time record. The previous pulses production record was 14.91 million tonnes during the year 2003-04. Among kharif pulses (7.3 million tonnes), pigeonpea (3.15 million tonnes) and blackgram (1.82 million tonnes) production are slated to hit all-time higher. It is also estimated that there will be bumper harvest of rabi pulses this year 2013-14. 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).

It is used for human consumption as well as for feeding to animals. It is eaten both whole fired or boiled and salted or more generally in the form of the split pulse which is cooked and eaten. Both husks and bits of the 'dal' are valuable cattle feed fresh green leaves are used as vegetable (sag) straw of moong is an excellent fodder for cattle.

The grains are also used as vegetable moong is considered to have medicinal effects and it is

used for blood purification moong contains 25 per cent protein.

The traditional method of crop raising still dominates in pulses cultivation which causes low production of crops. In spite of agricultural modernization in pulse crops, farmers are still facing diverse technological gap in cultivation. Keeping these in view, an attempt was made to analyze those factors which affect the pulses production with the following objectives, to ascertain the technological gap in recommended package of practices of pulse crops and to find out constraints of low production in pulse crops.

Methodology

The study was conducted since area of district was covered under the pulse crops in 2014-15) in Fatehpur district of Uttar Pradesh. Out of 13 community development blocks in Fatehpur district, the Malwan block was selected purposively for the study. The total numbers of selected villages were five. The total 100 respondents were chosen at random from the selected village. For studying the technological gap, 11 important cultivation practices *i.e.* High yielding varieties, First ploughing done for cultivation, Recommended Seed rate, Much culture apply for treating the green gram seed, Rhizobium culture, Thiram, Best time of sowing, Recommended dose of fertilizers, Irrigation management, Intercultural operation, Insect/pest measures, and Disease measures were considered. In this investigation, the constraint refers to the difficulty or problem faced by the respondents in adopting the recommended production technologies of Green gram crop were studied. The data were collected with the help of well-structured interview schedule by personal approach.

The technological gap refers to the gap between the recommended package of practices and practices actually applied in farming. The formula used for measuring the technological gap was as follows.

$$\text{Technological gap} \quad \frac{R - A}{R} \quad \text{x } 100$$

Where, R= Recommended technology

A=Technology actually adopted by the farmers.

Results and discussion

The technological gap between existing and recommended technologies of pulse crops in district Fatehpur is presented in Table 1. It clearly reveals that a majority that among all practices of green gram cultivation, thiram (82%), rhizobium culture (80%) as far as technological gap possessed by the respondents was concerned. The practice insect/pest measures (65%), improved variety sheela (64%), Type-44 (57%), improved variety pusabaisakhi (56%), recommended dose of fertilizers (53%), disease measures (49%), improved variety K-4 (48%), first ploughing done for cultivation (33%), recommended seed rate (19%), best time of harvesting (18%), intercultural operation (13%), irrigation management and best time of sowing each (03%), respectively. The overall technological gap index was calculated to be 42.86%. This might be due to lack of knowledge about the technological practices. The results are in line of conformity with the finding of Burman *et al.* (2010) [1] and Singh *et al.* (2001).

Table 1: Technological gap of farmer in green gram cultivation finding, (N=100)

S. No.	Practices of green gram cultivation	Max. attainable score	Obtained response of respondents	Gap in score	Gap in % gap	Rank
1.	High yielding varieties					
a.	PusaBaisakhi	100	44	56	56.00	VI
b.	Type-44	100	43	57	57.00	V
c.	K-4	100	52	48	48.00	IX
d.	Sheela	100	36	64	64.00	IV
2.	First ploughing done for cultivation	100	77	33	33.00	X
3.	Recommended Seed rate	100	81	19	19.00	XI
4.	Much culture apply for treating the green gram seed					
a.	Rhizobium culture	100	80	20	80.00	II
b.	Thiram	100	18	82	82.00	I
5.	Best time of sowing	100	97	03	03.00	IVX (a)
6.	Recommended dose of fertilizers	100	47	53	53.00	VII
7.	Irrigation management	100	97	03	03.00	IVX (b)
8.	Intercultural operation	100	87	13	13.00	XIII
9.	Insect/pest measures	100	35	65	65.00	III
10.	Disease measures	100	51	49	49.00	VIII
11.	Best time for harvesting	100	82	18	18.00	XII
	Overall percentage				42.86	

Constraints in pulses production

The constraints faced by the farmers in adoption of recommended production technology of pulse crops are presented in Table 2. that the majority of the respondents (92%) with adopt a rank of first were agreed with the statements that "High cost of chemical fertilizers" is the common problem, followed by "Lack of knowledge about high yielding varieties" (89%) at ranks second, "High labour cost" (79%) at rank third, "Lack of post-harvest management" (78%) at rank fourth, "Lack of proper information" (76%) at rank fifth, "High transportation cost" (71%) at ranks sixth, "Lack of interest viewing the new practices" (66%) at rank seventh, "Lack of knowledge about insect/pest" (65%) at rank eights, "Lack of knowledge about disease" (60%) at ranks ninth, "Lack of education" (58%) at the ranks tenth, "High cost of different varieties of seed" (47%) at the ranks eleventh, "Lack of skilled labour" (35%) at the ranks twelfth and "Lack of storage facilities" 30% at the ranks thirteen, respectively. The results are in line of conformity with the finding of Burman *et al.* (2010) [1] and Singh *et al.* (2001). Majority of the respondents were not convinced about the merits of production technologies and did not adopt them.

Table 2: The Constraints in Green gram cultivation perceived by the respondents, (N=100)

S. No.	Problems/Constraints	Respondents		Ranks
		No.	Per cent	
1.	Lack of knowledge about high yielding varieties.	89	89.00	II
2.	Lack of proper information.	76	76.00	V
3.	High cost of different varieties of seed	47	47.00	XI
4.	Lack of interest viewing the new practices.	66	66.00	VII
5.	Lack of Education.	58	58.00	X
6.	High cost of chemical fertilizers.	92	92.00	I
7.	Lack of post-harvest management.	78	78.00	IV
8.	Lack of knowledge about Insect/Pest.	65	65.00	VIII
9.	Lack of knowledge about disease.	60	60.00	IX
10.	Lack of skilled labour.	35	35.00	XII
11.	High labour cost.	79	79.00	III
12.	High transportation cost.	71	71.00	VI
13.	Lack of storage facilities.	30	30.00	XIII

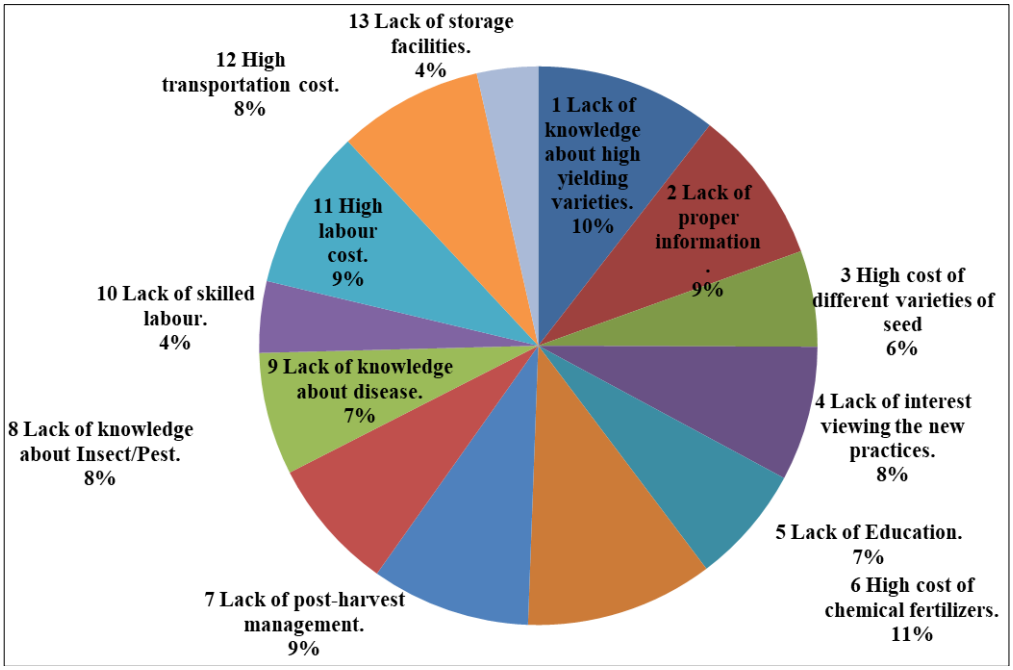

Fig 1: Constraints in Green gram cultivation perceived by the respondents

Conclusion

The study revealed that out of 11 common technological practices of green gram cultivation. And find out the Technological gap with them. The maximum number of the respondents 82% with adopt a rank of first were agreed with the statements that "treatment the green gram seed with thiram culture" is the main technological gap, followed by "treatment the green gram seed with rhizobium culture" 80% at ranks second, "control the insect/Pest" 65% at rank third and "high yielding varieties" 64% respectively.

The data further out of 13 common problems the maximum number of the respondents 92% with adopt a rank of first were agreed with the statements that "high cost of chemical fertilizers" is the common problem, followed by "lack of knowledge about high yielding varieties" 89% at ranks second, "high labour cost" 79% at rank third, respectively. It is recommended that efforts should be intensified to create awareness and enhance knowledge.

References

1. Burman RR, Singh SK, Singh AK. Gap in adoption of improved pulse production technologies in Uttar Pradesh. Indian Res. J Ext. Edu. 2010; 10(1):99-104.
2. Das JK, Pal PK. Technological gap in kharif paddy in Cooch Behar District of West Bengal. Environment and Ecology. 2003; 21(1):92-94.
3. Dalvi ST, Mahajan BS, Wakle PK, Shinde SV, Sukase KA, Kadam AS. Constraints faced by farmers in adoption of improved cultivation of soybean in Marathwada Region. Journal of Soils and Crops. 2004; 14(1):55-57.
4. Nirmala B. Yield gaps and constraints in low land rice ecology of Eastern Uttar Pradesh. International Journal of Plant Animal and Environmental Sciences. 2014; 4(3):683-687.
5. Prakash V, Singh HC, Mishra B. Technological gap and its constraints in rice production. Farm Science, 2003.