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Causes of Technological Gap in Green Gram Cultivation in District Ramabai Nagar U.P.

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ABSTRACT

The study was carried out in district Ramabai Nagar of U.P. Two Blocks selected, four villages, two form each development blocks and 80 respondents were selected for the study. Most of the respondents belonged of the middle age group, 56.25 per cent respondents belonged to backward caste. The analysis of technology gap in green gram crop showed that highest gap was found about knowing the insect, pest disease and their control and the lowest gap was found about knowing of the sowing time. The findings revealed that wider technological gaps exist in the farmers about the production recommendation for green gram cultivation. This gap in most of the green gram growing operations needs to be reduced, if the green gram yields have to improve on the famers' field. Emphasis on green gram demonstration and farmer training for reducing the gaps is need of the hour.

Keywords: Demonstration, Production, Socio-economics, Technology

INTRODUCTION

Role of pulses in Indian agriculture needs hardly any emphasis. The pulses are an integral part of the cropping system of the farmers all over the country because these crops fit well in the crop rotation followed. 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 form atmosphere. The prices have increased considerably and the consumer is hard hit to buy his requirements. 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 is the most important pulse crop of India and contributes 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. It is used for human consumption as well as for feeding to animals. 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 Major moon moong production areas are situated in Madhya Pradesh, Rajasthan, Utter Pradesh, Haryana, Maharashtra and Punjab. It is inevitable to draw the empirical answers to the research question that why there is more yield gap of pulses and the levels and reasons for non-adoption of recommended practices in pulses especially the most important crop like moong. Many researchers like Chaudhary *et al.* (2009); Fournier *et al.* (2007 and Maghade *et al.* (2008) explored the technology gap as well as extension gap in various crops and reasons thereof. As observed by Kumbhare *et al.* (2014) that the technology gap in pulses was observed more than extension gap at farmers' field, hence, the potential

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extension interventions are needed to reduce the technological gap as well as extension gap in pulses. Similarly, Nain *et al*. (2015) suggested horizontal expansion through short duration pulse production, genetic enhancement, development of new types of inputs implements and machinery, development of varieties for intercropping system, introduction of INM, development of varieties resistant to *Helicoverpa* and wilt diseases as some of the research and development agenda to be addressed immediately. The present study aims to find out technology gap at micro level so that appropriate strategy may be suggested and implemented.

METHODOLOGY

The study was conducted in district Ramabai Nagar of U.P. Two Blocks were purposively selected, four villages, two from each development blocks were selected randomly for the study .The today number of respondents were 80. The data were collected with the help of personal interview method during. The data were analyzed tabulated and the results were drawn with the help of appropriate statistical methods including percent, mean and ranking.

RESULTS AND DISCUSSION

It was reveled that farmers were not aware about almost all production recommendation technological gap in green gram cultivation in District Ramabal Nagar. Table 1 indicates that the technological gaps in green gram cultivation ranged from 8.33 to 62.50 per cent. The highest gap was found about knowing of the disease control. The second major technological gap of 58.33 per cent was noticed in the seed treatment and 50 per cent in irrigation. A gap of 37.50 per cent was found in sowing methods and manure and fertilizer, 30 per cent was found in verities and 25 per cent gap was found in land preparation, for seed rate and intercultural operation 12.5 per cent gap was found whereas in harvesting 8.33 per cent gap was found in sowing time.

Causes responsible for the low production of green gram

The causes like technological, economic, supply and services and administrative reasons responsible for the low production of green gram were studied and causes wise result have been discussed.

For the technological causes, leaving the cases of undecided, percentage of 'Agreed' have been calculated compared by χ^2 test by the test the homogeneity among them. It is observed from the analysis of the data that the statements from I to VII were not homogeneous. (Chi-square = 56.76*). The Table 2 further reveals that the 87.5 per cent respondents were unaware about the insect, pest and disease control (VI), 81.01 per cent

Table 1: Technological gap at farmers' level in green gram cultivation

Practices of green gram cultivation	Max. attainable score	Mean score obtained	Gap in score	Gap in %	Rank
Selection of soil	3	2.5	0.5	11.66	VIII
Land Preparation	2	1.5	0.5	25.00	VI
Varieties	5	3.5	1.5	30.00	V
Sowing time	3	2.75	0.25	8.33	IX
Seed rate	3	2.25	0.75	25.00	VI
Seed Treatment	3	1.25	1.75	58.33	II
Sowing methods	2	1.25	0.75	37.50	IV
Manure and fertilizer	4	2.5	1.5	37.50	IV
Irrigation	2	1.00	1.00	50.00	III
Intercultural operation	2	1.5	0.5	25.00	VI
Disease Control	4	1.5	2.5	62.50	I
Harvesting	2	1.75	0.25	12.50	VII

Table 2: Technological causes

Causes	I	II	III	IV	V	VI	VII	Total	χ^2
Agree	(a_1) 48	64	33	32	48	70	20	(R_1)318	56.76*
Disagree	(b_1) 30	15	28	25	30	10	40	(R_2)178	
Total	(C_1)78	79	61	60	78	80	60	(N)496	
% of agreed	61.53	81.01	54.09	58.33	61.5	87.5	33.33	64.11	

*Significant

respondents were unaware about the seed treatment (III), 61.53 per cent respondent were unaware about the selection of seed (I), 58.33 per cent respondents were unaware about the irrigation (IV), 54.09 per cent respondents were unaware about the depth of sowing (III) and 33.33 per cent respondents were unaware about the harvesting technology. It is obvious from the table that the maximum number of respondents (87.5%) was unaware about the insect, pest and disease control.

For the economic causes, leaving the cases of 'undecided', percentage of 'Agreed' have been calculated compared by χ^2 test by the test the homogeneity among them. It was observed from the analysis of the data that the statements I to V were not homogeneous. (Chi-square = 21.20*). Table 3 further indicates that the 88.75 per cent respondents agreed to the statements of high cost of chemicals and equipments (II), 66.66 per cent respondents agreed of the statements of less risk bearing capacity of farmers.

For the supply and service causes, it was observed form the analysis of the data that the statement form I to III were not homogeneous. (Chi-square = 21.20*). The data in Table 4 further indicated that the 88.75 per cent respondents agreed to the statements of high cost of chemicals and equipments (II), 66.66 per cent respondents agreed of the statements of less risk wearing capacity of farmers respectively. Thus it is clear from the table that the maximum number of respondents (88.75%) agreed to the statement of high cost of chemical and equipments.

For the administrative causes, leaving the cases of 'Undecided' percentage of 'Agreed' have been calculated compared by χ^2 test by the test the homogeneity among them. It was observed form the analysis of the data in Table 5 that the statement form I to IV were not homogeneous. (Chi-square = 11.08*). The data further reveals that 77.27 per cent respondents agreed to the statement of barriers in the distribution of required varieties and seed (IV), 75.52 per cent

Table 3: Economic causes

Causes	I	II	III	IV	V	Total	χ^2
Agree	(a_1)70	71	40	50	40	(R_1)217	21.20*
Disagree	(b_1)10	9	30	25	15	(R_2)89	
Total	(C_1)80	80	60	75	65	(N)360	
% of agreed	87.5	88.75	66.66	66.66	61.53	75.27	

*Significant

Table 4: Supply and services cause

Causes	I	II	III	Total	χ^2
Agree	(a_1) 40	65	48	(R_1)153	17.18
Disagreed	(b_1) 20	15	23	(R_2)58	
Total	(C_1)60	80	66	(N)211	
% of agreed	66.66	81.25	72.72	72.31	

Table 5: Administrative causes

Causes	I	II	III	IV	Total	χ^2
Agree	(a_1) 33	48	50	51	(R_1)182	11.08*
Disagreed	(b_1) 30	30	18	15	(R_2)93	
Total	(C_1)63	78	68	66	(N)275	
% of agreed	52.38	61.53	73.52	77.27	66.18	

*Significant

respondents agreed to the statements of inefficient extension workers (III), 61.53 per cent respondents agreed to the statements of irregular visit of the staff during season (II) and 52.38 per cent respondents agreed to the statement of lack of technical knowhow of the staff (I). Thus it is found that the maximum number of respondents (77.27%) agreed to the statement of barriers in the distribution of required varieties and seed.

CONCLUSION

The findings reveal that wider technological gaps exist in the farmers about the production recommendation for green gram cultivation. These gaps in most of the green gram growing operations need to be reduced, if the green gram yields have to improve on the famer's field. Thus it emphasizes on green gram demonstration and farmer training for reducing for reducing the gaps. The causes like technological, economic, supply and service and administrative etc. existed in the study area due to which optimum yield from green gram cultivation was hurdles seriously to enhance production and productivity of green gram.

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