

## Study of Adoption of Improved Technologies in Black Gram Crop

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www.jrasb.com || Vol. 3 No. 1 (2024): February Issue

Received: 28-02-2024

Revised: 29-02-2024

Accepted: 02-03-2024

### ABSTRACT

India is largest producer of pulses in world with 25 per cent share in global production. Chickpea, Pigeon Pea. MungBean, UradBean, lentil and Field Pea are important pulses crop contributing 39.00 per cent, 21.00 per cent, 11.00 per cent, 7.00 per cent and 5.00 per cent to the total production of pulses in the country. The total production was estimated 14.56 million tones and an area of 23.63 million hectares with average productivity 625kg/ha. (www agro pedia. Nic in.2015) Over 75% of the total of Black gram is generally known as dal milling or, dehulling. Milling means removal of the outer husk and splitting the grain into two equal halves. Dalmilling is one of the major food processing industries in the country, next only to rice milling. Black gram used as daal and as ingredient in snacks like idly, dosa, vada and papad etc. Adoption of Improved practice is the more essential part of increasing the production, because the population is increase day to day and holding size is decrease, so dal price is highly explosion The first week of October 2015 noted of cost of Black Gram dal 150- 180 Rupees per kg in the retails just before one year the cost October 2014 was 75-85 Rupees per kg (sources individual market survey 2015 ). We need the more production of pulses, we solve this problems by the applied more technologies in their field.

**Keywords-** Black Gram. Improved Practice, Agriculture.

## I. INTRODUCTION

No doubt India lives in the villages and about 50 per cent of the 6.41 lac villages of the country are situated in different terrain characterized by poor socio-economic condition. Even a casual glimpse at the sub continent of India is sufficient to convince that ours is a land of villages. Good majorities of her people i.e. nearly 68.84 per cent lives in villages and are occupied in the agriculture. According to the latest census figures, there are only 7936 towns in India; whereas the numbers of villages are 6.41 Lac.

India is largest producer of pulses in world with 25 per cent share in global production. Chickpea, Pigeon Pea. MungBean, UradBean, lentil and Field Pea are important pulses crop contributing 39.00 per cent, 21.00 per cent, 11.00 per cent, 7.00 per cent and 5.00 per cent to the total production of pulses in the country. The total production was estimated 14.56 million tones and an area of 23.63 million hectares with average productivity 625kg/ha. (www agro pedia. Nic

in.2015) Over 75% of the total of Black gram is generally known as dal milling or, dehulling. Milling means removal of the outer husk and splitting the grain into two equal halves. Dalmilling is one of the major food processing industries in the country, next only to rice milling. Black gram used as daal and as ingredient in snacks like idly, dosa, vada and papad etc. Rhyzobium bacteria are present on the root nodules of Black gram. The Black- Gram crop fixes atmospheric nitrogen in symbiotic association with Rhyzobium bacteria and maintains the soil fertility Black gram is a member of the Asiatic Vigna crop group. It is an annual pulse grown mostly as a fallow crop in rotation with rice. Similar to the other pulses, black gram, being a legume, enriches soil nitrogen content and has relatively short (90-120 days) duration of maturity.

## II. MATERIALS AND METHODS

Research methodology is of paramount importance in any scientific study as the validity and reliability of the facts depend upon the system of

investigation. It provides the details of the various aspects concerning the research methodology. The scientific steps required to carry out the research are being discussed below in depth.

**A. Selection of the state:**

In 1947, when India gained independence, the state of United Provinces was renamed as Uttar Pradesh. Uttar Pradesh is the biggest of 31 States in India. Uttar Pradesh is now divided into seventy five districts under eighteen divisions.

**B. Selection of the district:**

There are 75 districts in the state of U.P. The Research was conducted in the District of Baghpat (U.P.). The District of Baghpat was purposively selected.

**C. Selection of the block:**

Baghpat District has the privilege of having six blocks namely Baghpat, Baraut, Binauli, Chaprauli, Khekra and Pilana. Out of six blocks, Baraut blocks were

selected purposively keeping in view of the nature of study.

**D. Selection of the village:**

There were 54 villages in the C.D. block Baraut, but the the five villages were selected by randomly the selected villages are 1 Malakpur, Sinoli, Hilwari, Baoli and Lohari.

**E. Selection of the respondents:**

From each Villages 30 farmers were finally selected for the study. Who had adopted improved farm practices of Black-Gram. The total 150 respondents to be interviewed under the study.

**III. RESULTS AND DISCUSSION**

The finding of the research of investigation is presented in the following table.

**Table: Adoption of Improved Agricultural Practice by the Black Gram growers.**

S.No	Practice	Numbe rs	Per cent (%)
1	<b>Knowledge about Improved variety.</b>	<b>122</b>	<b>81.33</b>
2	<b>Sowing of Improved Variety</b> Type-9, Pusa-1&Pant-19.	102	68.00
3	<b>Field Preparation</b> (I) By Scientific methods.- Summer Plowing, Leveling, 2-Plowing of harrows & 2-4 Plowing of Cultivators. (II) By traditions methods.	68 82	45.33 54.64
4	<b>Sowing time</b> (I) Early Time-(February-march) (II) Timely-(May-June)	86 64	57.33 42.66
5	<b>Soil treatment</b> (I) <b>Weed control</b> -At the time of field preparation and before the germination of seed. Spray 1.00kg Basaline add 1000 liter water. (II) <b>Nutrient test</b> - NO <sub>2</sub> ,P <sub>2</sub> O <sub>5</sub> ,Ca, Mg ,etc (III) <b>Insect treatment</b> 5% Aldrin dust @-25 kg to add in the soil at the time of field preparation, to control the eggs and pupa of insects.	35 22 55	23.33 14.66 36.66
6	<b>Seed rate</b> (I) Correct- 10-12 kg/ha. (II) In Correct 12-16kg/ha.	65 85	43.33 56.66
7	<b>Seed treatment Practice</b> (I) Sowing treated seed(packets seed) (II) Sowing Un treated seed	110 40	73.33 26.66
8	<b>Methods of sowing</b> (I) Sowing in the line (furrow method) (II) Traditions method By broad casting	58 92	38.66 61.33
9	<b>Irrigation</b> (I) Spring season 2-3 Irrigation apply (II) Rainy season 1-2 Irrigation apply	85 68	58.66 45.33
10	<b>Fertilizers</b> (I) 20-30 Kg Nitrogen (II) 40-50 Kg Phosphorus (III) 30-40 Kg potash	90 55 34	60.00 36.66 22.66
11	<b>Crop Protection</b>		

	<b>(A) Weed Control</b> (I) Physical methods (by hands) (II) Chemical methods (by herbicides) <b>(B) Insect Control</b> (I) To control Bihar hairy Cutter Pillar and Aphid to spray Indosulphan 35 EC@0.15% and 800 liter water two spray to interval of 8-10days.	135 15 57	90.00 10.00 38.00
<b>12</b>	<b>Harvesting of Crop</b> (I) Maturity of pod -75-85% (II) Maturity of pod 85-95%	64 86	42.66 57.33
<b>13</b>	<b>Threshing of Crop</b> (I) By threshing machine (II) By Bullocks and men's	65 85	43.33 56.66

Above table reveal that 81.00 per cent respondents have well awareness of about improved varieties of black, but only 68.00 per cent farmers finally apply of improved varieties on their field. In case of field preparation 54.64 per cent farmers are use of tradition methods and 45.33 per cent respondents have apply scientific methods in their field preparation of Black Gram. While the 36.66 per cent, 23.33 and 14.66 per cent respondents have apply soil treatment practice under the Insect treatment, weed control, and Nutrient test in their field before the sowing. In case of seed rate and seed treatment majority i e 56.66 per cent , 73.33 per cent respondents have adopted correct seed rate and sowing treated seed available in the market and other seed stores. Only 38.66 per cent respondents have applied scientific methods of sowing of black Gram crop, majority of respondents do not apply the scientific recommendation of sowing methods. In case of irrigation practice 58.66 per cent and 45.33 per cent respondents provide irrigation facilities their crop 2-3 irrigation in spring season and 1-2 irrigation in rainy season in lack of rain. While 60.00 per cent, 36.66 per cent 22.66 per cent respondents have applied 20-30kg Nitrogen, 40-50 kg Phosphorus and 30-40 Kg Potash in their field. The very low amount of respondents is 22.66 per cent to have applied Potashic fertilizer in their crops of Black Gram. 90.00 per cent respondents have applied physical methods ( by hands) to control weed their won standing crops and 38.00 per cent respondents have applied chemical methods recommended by the scientist to control hairy cutter pillar or aphid . While in case of harvesting and threshing of crop the majorities of i.e. 57.33 per cent respondents harvest our crops when the 85-95 per cent pod mature, and 42.66 per cent respondents have harvest won crop when the pod mature is 75-85 per cent, majorities of respondents 56.66 per cent have thresh their crop by the men's power and Bullock and 43.33 per cent respondents are applied threshing machine in duration threshing of our crops in case of Black Gram.

#### IV. CONCLUSION

Overall majorities i.e. 81.00 per cent, respondents have knowledge about Improved

varieties, 68.00 per cent respondents have applied Improved varieties wne their field, 57.00 per cent and 57.00 per cent, respondents adopted Early sowing and incorrect seed rate of Black –Gram, 73.00 per cent and 61.00 per cent, respondents have sowing the treated seed, and were used traditional methods at the time of sowing, 60.00 per cent, and 90.00 per cent, grower apply the recommended dose of Nitrogen fertilizer and farmers control of weeds in our crop by hands helps by the Khurpy, (weeding tools) 57.00 per cent respondents harvesting of their crop when the pod mature 85-95 per cent and threshing of their crop by men hands , Bullock and tractors.

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