A STUDY ON ADOPTION BEHAVIOUR OF BLACK GRAM GROWERS AMONG TRIBAL FARMERS IN TORPA BLOCK OF KHUNTI DISTRICT IN JHARKHAND

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Abstract: *This study was undertaken in Torpa block of Khunti district in Jharkhand to ascertain the role of adoption behaviour of black gram growers in tribal areas. A total of 120 respondents were selected by simple random sampling method from six randomly selected villages. Pre-tested well structured interview schedule was used for collecting the relevant information's. The study inferred that majority of the respondents were of middle aged, belonged to joint family, illiterate, having low annual income(5,000-20,000) and farming with business as the main occupation. It was found that villagers do not get other pulses for their consumption, through black gram they at least filling this gap of complete diet, although they producing black gram at low level. Majority of the respondents reported that reasons of adoption of this crop due to black gram needs less hard work with high benefits like healthy diet and it is good for soil also.*

Key Words: Adoption behavior, Black gram growers, Tribal farmers.

1. INTRODUCTION:

India has always been the largest producer, consumer and importer of pulses. The same trends follow in the context of black gram *(Vigina mungo)* or urad. Black gram has been consumed widely in India since very long. It is one of the most important and highly prized pulses in India. The production of black gram is mostly confined to the Asian countries as their tropical climates and soil type suit the pulse's cultivation. The largest producer of this pulse is India followed by Myanmar and Thailand. But being the largest producer of black gram does not take India to a comfortable situation, as it is also the largest consumer of the black gram in the world and its total production is not able to fulfill its domestic consumption demand. India produces about 1.5 to 1.9 million tons of black gram annually from about 3.5 million hectares of area. India produced 1.46 million tonnes during 2007-08. Black gram output accounts for about 10% of India's total pulse production.

Adoption of any improved technology involves a process in which awareness is created, attitude is changed and favorable condition for adoption is provided. The adoption behaviour of the farmers depends on education, knowledge, attitude, risk orientation and innovation proneness (**Lerner HR, 1999**).Considering these factors, a study of adoption behaviour was carried out to determine the selected socio-economic, socio-psychological and communication characteristics of the farmers in relation to adoption of some selected practices, and the key variables that influence the adoption of improved practices.

Black gram is one of the rich sources of vegetable protein (20-25%) and some essential minerals and vitamins for the human body. Black gram is an important ingredient in most of the Indian snacks and fast food. The crop is resistant to adverse climatic conditions and is also a good source of fodder. It is concluded from the present study that Black Gram is an important diet in pluses and most of the tribal respondents use it.

2. OBJECTIVES:

- To ascertain the socio-economic characteristics of the respondents.
- To determine the extent of adoption of Black gram production technology of the respondents.

3. METHODOLOGY:

The present investigation was conducted in purposively selected Torpa block of Khunti district of Jharkhand covering six villages (Torpa, Guriya, Uyur, Korla, Dorma, Rirung) were selected purposively. From the selected each village 20 respondents were selected randomly, thus a total of 120 respondents were constituted the sample size for the investigation. A pre-structured interview schedule was prepared to collect data by personal interview method. Necessary information was also collected from secondary sources. The collected data were coded, tabulated, classified and further categorized for systematic statistical analysis. The relationship between the Extent of adoption and certain socio-economic variables was computed through correlation co-efficient.

4. RESULTS AND DISCUSSION:

Table1. Socio-economic characteristics of the respondents:

(N=120)

S. No.	Characteristics	Frequency	Percentage
1.	**Age**		
	Young (25-40years)	43	35.83
	Middle (41 - 55years)	53	44.17
	Old (Above 56 years)	24	20
2.	**Education**		
	Illiterate	29	24.17
	Literate	15	12.5
	Primary school	25	20.83
	Middle school	22	18.33
	High school	14	11.67
	Intermediate	7	5.83
	Graduate	8	6.67
3.	**Occupation**		
	Farming	44	36.67
	Farming + Labour	15	12.50
	Farming + Caste occupation	0	00.00
	Farming + Business	56	46.67
	Farming + Service	5	4.16
4.	**Income**		
	5,000-20,000	114	95
	21,000-35,000	2	1.67
	36,000-50,000	3	2.50
	Above 51,000	1	0.83
5.	**Religion**		
	Hindu	15	12.5
	Christian	105	87.5
6.	**Family type**		
	Up to 5	47	39.17
	Above 5	73	60.83
7.	**Land holding**		
	Less than 1 hac.	103	85.83
	1.1-2 hac.	12	10
	2.1-4 hac.	4	3.33
	Above 4 hac.	1	0.83
8.	**Membership with organizations**		
	None	112	93.33
	Membership with one organization	6	5
	Membership with two organizations	2	1.67
	Membership with more than two organizations	0	00
9.	**Mass media exposure**		
	Radio	57	47.5
	Radio + T.V.	33	27.5
	Radio + T.V.+ News Paper	18	15
	Radio + T.V.+ News Paper + Magazine	2	1.67
	Radio + News Paper	10	8.33
	Radio + Magazine	00	00
10.	**Source of information**		
	Neighbour/Friend	1	0.83
	Pradhan	33	27.5
	Block	81	676.50
	Gram Sabha	5	4.17

The study revealed that 44.17 per cent respondents were middle aged. Majority of the respondents were illiterate (24.17%).Regarding the type of family, majority of the respondents are having above 5 members (60.83%).About the occupation it was found that farming with business (46.67%) was the major occupation of the family.The study reported that majority (87.5%) respondents were Christian. The present study exhibited that 95 per cent of the families had low income (5,000-20,000) .The study revealed that 85.83 per cent respondents had less than 1 hectare landholding. It was also found that majority of the respondents (93.33%) were not participated in any social organization. The respondents who used only radio were (47.5%) followed by radio + T.V.(27.5%), radio + T.V. +news paper (15%), radio+ T.V. + news paper + magazine (1.67%), radio + news paper (8.33%) as mass media exposure. It was found that majority of the respondents (67.5%) were got information from block office followed by (27.5%) from gram sabha, 4.16 per cent from pradhan and only 0.83 per cent from neighbor / friend as sources of information .

Similar findings are also found by **Patel (2004) and Chikhale *et al.* (1996)**

Extent of Adoption of Black gram growers among tribal farmers:

The adoption behaviour of black gram growers was analyzed with respects to their cultivation practices of this crop. The study focused mainly on extent of adoption of black gram growers in 14 major activities of agriculture. The result are presented and discussed as below

Table 2. Distribution of the respondents based on extent of adoption of black gram growers:

(N=120)

S.no.	Practices	Fully Adopted	Partially Adopted	Not Adopted	Total	Rank (on the basis of high adoption)
1	Birsa Urd-1	80 (66.67%)	30 (25%)	10 (8.33%)	120 (100%)	VII
2	Pant U-19	3 (2.5%)	10 (8.33%)	107 (89.17%)	120 (100%)	XI
3	Red soil	90 (75.00%)	23 (19.17%)	7 (5.83%)	120 (100%)	VI
4	Broadcasting methods	116 (96.67%)	4 (3.33%)	0 (00)	120 (100%)	I
5	Sowing time	100 (83.33%)	15 (12.5%)	5 (4.17%)	120 (100%)	V
6	Seed rate	29 (24.16%)	72 (60%)	19 (15.83%)	120 (100%)	VIII
7	Fertilizer	5 (4.17%)	15 (12.5%)	100 (83.33%)	120 (100%)	X
8	Manures	114 (95%)	6 (5%)	0 (00)	120 (100%)	II
9	Soil Ph	0 (00)	3 (2.5%)	117 (97.5%)	120 (100%)	XIII
10	Irrigation schedule	109 (90.83%)	8 (6.67%)	3 (2.5%)	120 (100%)	III
11	Inter-culture operations	5 (4.17%)	8 (6.67%)	107 (89.16%)	120 (100%)	X
12	Plant protection measures	2 (1.67%)	10 (8.33%)	108 (90%)	120 (100%)	XII
13	Harvesting period	102 (85%)	16 (13.33%)	2 (1.67%)	120 (100%)	IV
14	Yield	23 (19.17%)	52 (43.33%)	45 (37.5%)	120 (100%)	IX

Figures in parentheses denote frequency and percentages.

The Table 2 depicted that extent of adoption of black gram growers among tribal was very low level. It was also found that the respondents actively involved in final decision mainly with broadcasting method for sowing (96.67%), manure as cow dung (95%) which was ranked first, second followed by irrigation schedule (90.83%), harvesting period (85%), sowing time (83.33%) and soil type (75%) which were ranked third, fourth, fifth and sixth respectively.

Similar findings are also found by **Sinha *et al.* (2008).**

Table. 3. Correlation between socio economic characteristics with extent of adoption of black gram growers.

Variables	Correlation coefficient (r)	(p) Value and Significance
Age of respondents	-0.025	0.789(NS)
Education	0.114	0.214(NS)
Occupation	0.188	0.040(*)
Annual income	0.335	0.001(**)
Family size	-0.434	0.001(**)
Land holding	0.432	0.001(**)
Membership with organization	0.391	0.001(**)
Mass media exposure	0.380	0.001(**)
Information sources	-0.290	0.001(**)

*** Significant at 0.01 level of probability*
**Significant at 0.05level of probability*
NS-Non significant

The table 3 shows that annual income, land holding, membership with organization, mass media exposure were positively correlated with extent of adoption which is significant at 0.01 %. Family size and information sources were negatively correlated with extent of adoption which is significant at 0.01 % .Occupation was positively correlated with extent of adoption which is significant at 0.5 % level of significance.
Similar findings are also found by **Johanson *et al*. (2000)** and **Arulnathana (2013)**

5. CONCLUSION:

It is concluded that majority of the respondents were found having low socio-economic status and medium level of adoption was found and majority of them living at below poverty line based on their annual income. The respondents were also actively involved broadcasting method for sowing, cow dung was mainly used as manures, irrigation depends on rain etc. In this study revealed that education, occupation, annual income, land holding, membership with organization, mass media exposure and information sources were found positive and significant relationship with extent of adoption of black gram growers among tribal framers in agriculture, it means higher education maximum involvement in extent of adoption of black gram, similarly more annual income more adoption of black gram. Whereas age of the respondents has not significant relationship in adoption process, it shows older age maximum adoption process of black gram. They have to be motivated and need to be trained for effective transfer of technology based on scientific recommendations for better prospect of agricultural development.

REFERENCES:

1. Lerner HR, 1999 “Introduction to the response of plants to environmental stresses,” in Plant Responses to Environmental Stresses, pp. 1–26, CRC Press, 1st edition,. View at Google Scholar.
2. Patel, A.J. and M.A. Tunver 2004 Evaluation of front line demonstration on groundnut. *Gujrat J. Extn. Edun.* 15 (1):77-79.
3. Chikhale, N. J., Deshpande, P. V. And Thakre, P. V. 1996 Factors influencing adoption of orange production technology by growers.*Maharashtra Journal of Extension education,* 15: 176-180.
4. Sinha A.K., Sinha B.K 2008 Journal of Research, Birsa Agriculture University. Vol .20 No. 1 pp 67-76.
5. Johanson C, Ali M, Gowda CLI, Ramakrishna A, Nigam SN and Chauhan YS,2000 Regional Opportinities for warm season grain legumes in the Indo-gangetic-Plain. Pages185-199in legumes in rice and wheat cropping system of Indo-Gangetic- Plain-Constraints and oppurtinities.Patancheru 502324, Andhra Pradesh ,India: International Crop Reaserch institute for the Semi Arid Tropics ;and Itaca, New York,USA:Cornell University.
6. Arulnathan N., Murugan M, and Balakrishnan V. 2013 Effects of Treatments on the Total Tannins in Black Gram Husk (Vigna mungo). *International Journal of Livestock Research*, 3 (3), 31-34.