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Socio-economic and constraints analysis of growers and dealers of kharif green gram seeds in Banaskantha district of Gujarat

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Abstract

Pulses are the edible seed of plants in the legume family and these are consumed as dal. Pulses are important source of protein, grow quickly, generate good profits for growers and contribute to agricultural and environmental sustainability. Green Gram (*Vigna radiata*) is excellent source of high-quality protein. It is consumed as whole grains, sprouted form as well as dal in a variety of ways in homes. The present study was aimed to examine the socio-economic profile and constraints faced by the green gram seed growers and dealers. The study was conducted Vav and Tharad talukas of Banaskantha district, as both the talukas have higher area under kharif green gram cultivation. Total 120 green gram seed growers and 10 dealers were selected as sample respondents for the study. Multistage random sampling technique was adopted to select the districts, talukas, and villages. The study was mainly based on primary data, which were collected with the help of structured schedule through personal interview method. The overall finding of the study indicated that highest percentage of green gram seed growers belonged to middle age group and have primary education. Majority of the green gram seed growers belonged to semi-medium and small land holding groups and have annual income between Rs. 1,00,001 to Rs. 2,50,000 lakhs. Borewell was observed the main source of irrigation in the study area. Most of the green gram seed growers have more than 15-year experience in farming. The green gram seed growers were faced the major constraints as scarcity of particular brand followed by timely unavailability, high price and lack of knowledge, Whereas it was observed that dealers faced major constraints of less number of varieties available followed by lack of promotional scheme. The result of study also inferred that dealers' major expectations from the seed company were easy and timely availability of required brand seed followed by farmers satisfaction, more commission and good business relationship. It can be concluded that all the green gram seed producing companies should be focus on timely availability, with more green gram varieties choices and growers satisfaction to get more market coverage. As most of the green gram seed growers of the study area were having primary to higher secondary level education and doing agriculture through traditional ways. Hence, there is a need to aware the farmers about the modern agricultural technology through robust extension services.

Keywords: Green gram, constraints, kharif, growers, dealers and seed company

Introduction

Pulses are consumed as dal, which is a cheap source of plant protein. These are consumed because of body building properties having presence of various amino acids. Green Gram (*Vigna radiata*) is one of the most important and dominant pulse crops having a share of around 40 percent in the total production. It is growing in almost all parts of the country. It is consumed as whole grains, sprouted form as well as dal in a variety of ways in homes. India is the major producer of green gram in the world and grown in almost all the States and contributing 10 percent to the total pulses production. It is grown in the area about 4.5 million hectares with the total production of 2.5 million tonnes and productivity of 545 kg/ha during the year 2019-20. During the year 2020 - 21, there was steep decline in the area (0.15 million hectares) and production (0.11 million tonnes) of green gram, whereas yield (733 kg/ha) showed increasing trends.

The cultivation of Green Gram is mostly confined to the Rajasthan, Madhya Pradesh and Gujarat states. Rajasthan state ranked 1st in area under green gram (23265.20 ha), Madhya Pradesh ranked 1st in production (2477.90 tonnes) and Gujarat ranked 1st in green gram yield (771 kg/ha) in overall India during the year 2019-20. In Gujarat state Banaskantha, Surendranagar, Kutch, Patan, Jamnagar and Porbandar are the major green gram producing districts.

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Banaskantha district was selected purposively for conducting the study, as Banaskantha district ranks 1st in yield of kharif green gram in overall Gujarat and Banaskantha district ranks 2nd in case of area and production of green gram crop in overall Gujarat state. The study was conducted purposively in Banaskantha district as it ranks 1st in yield of kharif green gram in overall Gujarat and also Banaskantha district has 2nd rank in area and production of green gram crop in overall Gujarat State. Two talukas were selected in Banaskantha District. Tharad and Vav these two talukas have higher area under kharif green gram cultivation. Hence, these two talukas were selected purposively for the study. Constraints analysis is important, therefore keeping this in view, the present study was undertaken to study the socio-economic profile and constraints faced by the green gram seed growers and dealers.

Methodology

(i) The Database: The primary data were collected with the help of a structured schedule through personal interview method. The schedule was designed with closed ended question, which used to collect data from growers and dealers in the study area. The secondary sources of data collection are included *i.e.*, website of company and university library.

(ii) Analytical Tools: To study the socio-economic profile of green gram growers in Banaskantha district, Simple tabular analysis and percentage method was used and for performing constraints analysis garret’s ranking method was adopted for the present study.

Results and Discussion

1. Socio-economic profile of Green Gram seed growers of Banaskantha district

Distribution of Green Gram seed growers according to their age: The categorization of the green gram seed growers according to their age are presented in Table 1 and graphically presented in Figure 1. The green gram seed growers are categorized into three groups based on their age. The results indicated that 69.16 percent green gram seed growers were belonged to middle age group followed by old age group (17.50%) and only 13.34 percent green gram seed growers were belonged to young age group. Thus, it can be concluded that majority of the green gram seed growers were belonged to middle age group.

Table 1: Distribution of Green Gram seed growers according to their age (n=120).

Sr. No.	Age	Frequency	Percentage
1	Young (Less than 35 years)	16	13.34
2	Middle (35 to 50 years)	83	69.16
3	Old (More than 50 years)	21	17.50
Total		120	100.00

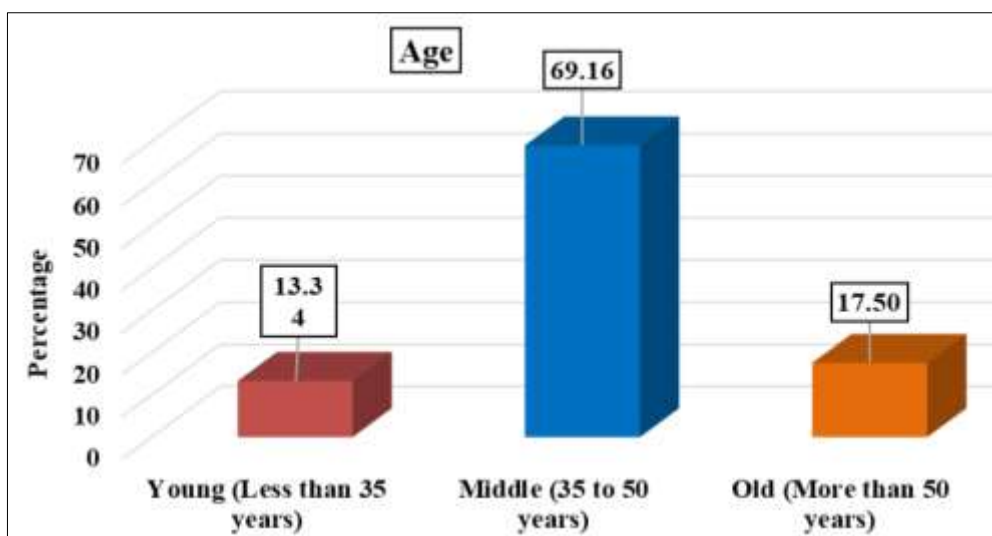


Fig 1: Distribution of Green Gram seed growers according to their age

Educational status of Green Gram growers

Educational level of farmer helps in adoption of technology at farm level. Improved seed variety is one of the important technology which determine the scope of green gram production. The Table 2 and Figure 2 showed that majority of green gram seed growers *i.e.*, 34.18 percent have studied up to primary level. Among these green gram growers 29.16

percent were reported illiterate followed by 17.60 percent studied up to secondary level whereas, 10.00 percent green gram seed growers have studied up to higher secondary level and 05.00 percent green gram seed growers have studied up to graduation level. Only 04.16 percent green gram seed growers have studied up to post-graduation level.

Table 2: Distribution of Green Gram seed growers according to their educational level (n=120)

Sr. No.	Education level	Frequency	Percentage
1	Illiterate	35	29.16
2	Primary level (1 to 8 Standard)	41	34.18
3	Secondary level (9 to 10 Standard)	21	17.60
4	Higher Secondary (11 to 12 Standard)	12	10.00
5	Graduation (UG)	06	05.00
6	Post-Graduation (PG)	05	04.16
Total :		120	100.00

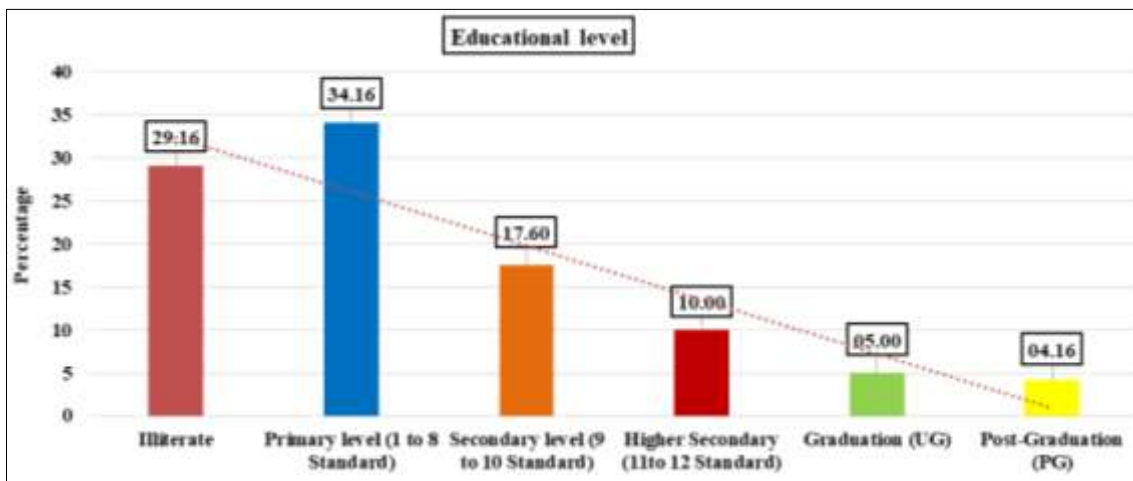


Fig 2: Distribution of Green Gram seed growers according to their educational level

Distribution of Green Gram seed growers according to their annual income

The data presented in Table 3 and Figure 3 revealed that 42.50 percent of the green gram seed growers have annual income of Rs. 1,00,001 to Rs. 2,50,000 while, 31.66 and 14.16 percent of the green gram seed growers were found

having annual income of between Rs. 2,50,001 to Rs. 5,00,000 and less than Rs. 1,00,000 respectively followed by 11.68 percent who have annual income of more than Rs. 5,00,000. It can be concluded that most of the green gram seed growers belonged to the income of Rs. 1,00,001 to Rs. 2,50,000.

Table 3: Distribution of Green Gram seed growers according to their annual income (n=120)

Sr. No.	Annual income	Frequency	Percentage
1	Less than ₹ 1,00,000	17	14.16
2	₹ 1,00,001 to ₹ 2,50,000	51	42.50
3	₹ 2,50,001 to ₹ 5,00,000	38	31.66
4	More than ₹ 5,00,000	14	11.68
Total		120	100.00

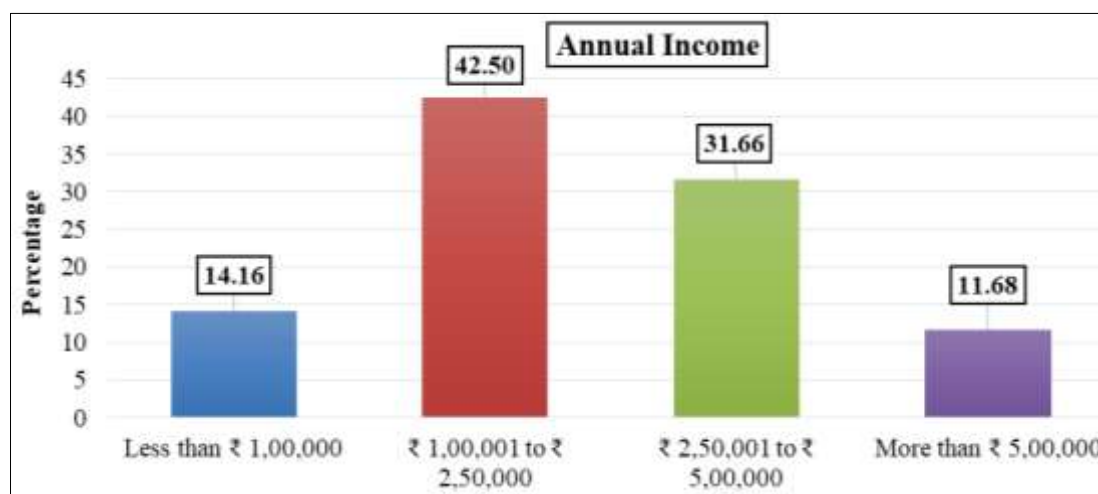


Fig 3: Distribution of Green Gram seed growers according to their annual income

Size of land holding possessed by the Green Gram seed growers

Land possessed by the farmer is an important socio-economic indicator. The land possessed by the sample green gram seed growers are presented in the Table 4 and Figure 4.

The green gram seed growers are categorized into five groups based on their land holding. Highest percentage (36.66 %) of green gram seed growers were belonged to semi medium land

holding category followed by small land holding category (34.16 %), marginal land holding category (12.50 %), medium land holding category (10.83 %) and only few of them belonged to large land holding category (05.85 %). This pattern of land holding distribution showed that majority of green gram seed growers belonged to the semi-medium and small land holding categories.

Table 4: Land holding pattern of Green Gram seed growers (n=120)

Sr. No.	Land holding	Frequency	Percentage
1	Marginal (up to 1.0 hectare)	15	12.50
2	Small (1.01 to 2.0 hectares)	41	34.16
3	Semi-medium (2.01 to 4.0 hectares)	44	36.66
4	Medium (4.01 to 10.0 hectares)	13	10.83
5	Large (more than 10 hectares)	07	05.85
Total		120	100.00

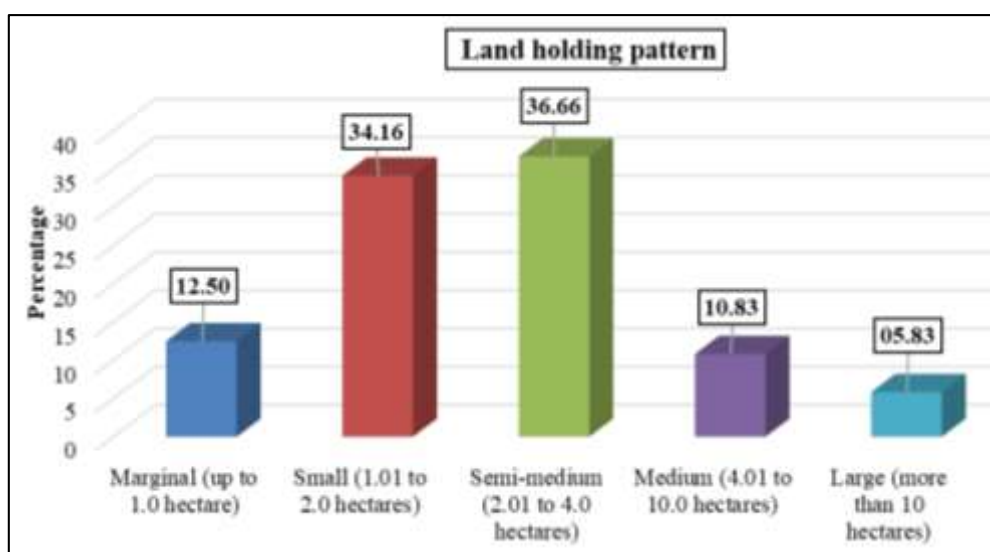


Fig 4: Land holding pattern of Green Gram seed growers

Source of irrigation facilities available with Green Gram seed growers

Different sources of irrigation facility available with the green gram seed growers of Vav and Tharad taluka are presented in Table 5 and Figure 5. The result showed that borewell was the main source of irrigation water for the green gram growers

i.e., 63.33 percent. Whereas another important irrigation source available with green gram seed growers was canal *i.e.*, 18.33 percent. Borewell is the more preferred source of irrigation in villages of Vav taluka, whereas in the villages of Tharad taluka canal irrigation source is more prominent because of good network of Narmada canal.

Table 5: Source of irrigation facilities available with Green Gram seed growers (n=120)

Sr. No.	Sources of Irrigation	Frequency	Percentage
1	Borewell	76	63.33
2	Canal	22	18.33
3	Open well	14	11.66
4	Others	08	06.68
Total		120	100.00

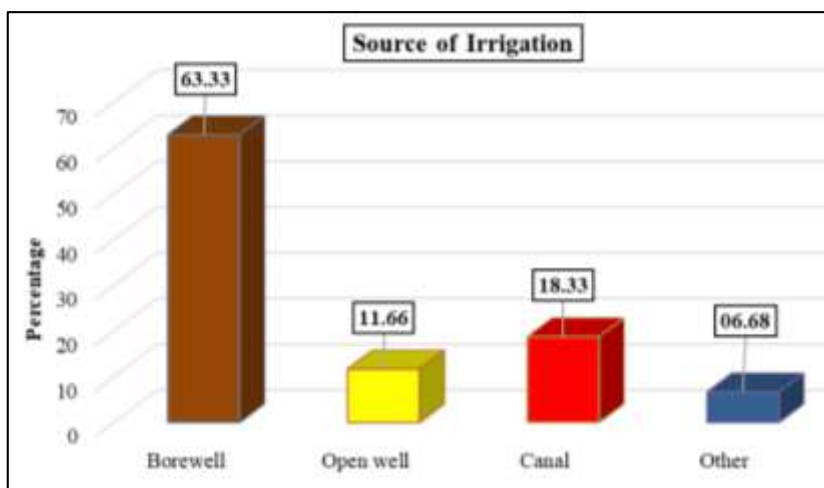


Fig 5: Source of irrigation facilities available with Green Gram seed growers

Distribution of Green Gram seed growers according to their farming experience

The result of the study revealed that highest percentage (47.50 %) of green gram seed growers have more than 15-years farming experience followed by 10 to 15-years farming

experience (45.00 %) and only 07.50 percent of farmers belonged to low level experience *i.e.*, 5 to 10 years. It was observed that majority of the farmers are having experience more than 10 years, which assures higher confidence level in following good farming practices.

Table 6: Distribution of Green Gram seed growers according to their farming experience (n=120)

Sr. No.	Particular	Frequency	Percentage
1	5 to 10 years	09	07.50
2	10 to 15 years	54	45.00
3	More than 15 years	57	47.50
Total		120	100.00

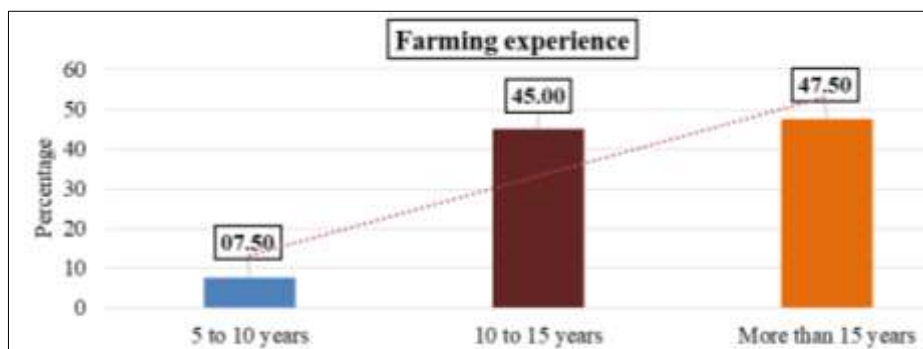


Fig 6: Distribution of Green Gram seed growers according to their farming experience

Table 7: Distribution of Green Gram seed growers according to their type of family (n=120)

Sr. No.	Particular	Frequency	Percentage
1	Joint	59	49.17
2	Nuclear	61	50.83
Total		120	100.00

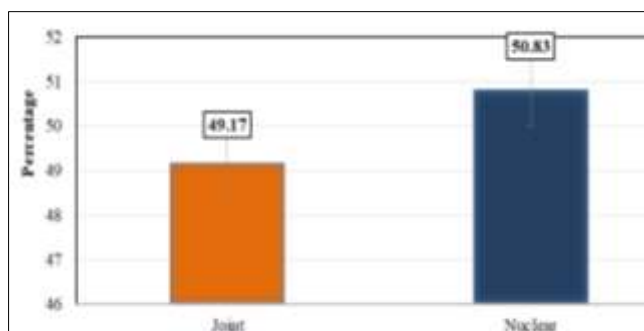


Fig 7: Distribution of Green Gram seed growers according to their type of family

2. Constraints faced by Green Gram seed growers and dealers

Constraints faced by Green Gram seed growers during purchasing of Green Gram seeds

Constraints analysis is important to overcome it, therefore this study point out the major constraints faced by growers and dealers. The results are presented in Table 8. The results of study showed that green gram seed growers faced the major constraints as unavailability on time followed by high price, scarcity of brand, lack of knowledge, more distance from the point of purchase and low yield.

Table 8: Constraints faced by growers during purchasing of Green Gram seeds (n=120)

Sr. No.	Constraints	Garret's score	Rank
1	Unavailability on time	58.52	1 st
2	High price	57.65	2 nd
3	Scarcity of particular brand	54.80	3 rd
4	Lack of knowledge	52.24	4 th
5	More distance from the point of purchase	42.50	5 th
6	Low yield	34.66	6 th

Constraints faced by dealers during selling Green Gram seeds

The data regarding constraints faced by the dealers in selling of green gram seeds are presented in Table 9. The result of study revealed that major constraints faced by dealers were less number of varieties available followed by lack of promotional scheme, lack of field staff, competition among dealers and high cost of advertisement.

Table 9: Constraints faced by dealers during selling Green Gram seeds (n=10)

Sr. No.	Constraints	Garret's score	Rank
1	Less number of varieties available	56.50	1 st
2	Lack of promotional scheme	55.00	2 nd
3	Lack of field staff	52.30	3 rd
4	Competition among dealers	50.20	4 th
5	High cost of advertisement	35.00	5 th

Dealers Expectations from the Green Gram seeds companies

The results related to dealers expectations from the seed companies are presented in Table 10. The result of study inferred that dealers major expectation from the seed company were observed easy access and on time availability of quality seed followed by growers satisfaction, good business relationship, more commission and bonus.

Table 10: Dealers Expectations from the Green Gram seeds companies (n=10)

Sr. No.	Expectations of dealers	Rank
1	Easy access and on time availability	1 st
2	Growers satisfaction	2 nd
3	Good business relationship	3 rd
4	More commission	4 th
5	Bonus	5 th

Conclusion

Based on the finding of the study it is concluded that, most of the green gram seed growers of the study area were having

primary to higher secondary level education and doing agriculture through traditional ways. Hence, there is a need to aware the farmers about the modern agricultural technology through robust extension services. On time unavailability of required brand of green gram seed is observed a major constraint for growers and it is also noted that maximum growers are buying green gram seeds from retailers at the time of sowing only. This is causing them to pay high prices and hence it is suggested that growers should plan advance purchases, to get better incentives and required variety seeds well in time. As green gram is a rich source of protein, essential amino acids, and less water intensive crop. Hence growers should prefer to allocate more area under green gram, to sustain the water table in the region as well as to improve the nutritional requirements of consumer group.

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