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Socio-economic traits of commercial vegetable growers in central part of Uttar Pradesh

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Abstract

The present study was conducted in 2023-24 to scrutinize the socio-economic traits of vegetable growers Uttar Pradesh state comprised of seventy-five districts, there are 21 districts in central Part of Uttar Pradesh out of these 4 district were selected by table randomly sampling. Etawah, Kanpur Nager, Unnao and Jhansi district were selected randomly for the study to understand the ground reality of commercial vegetable growers in these districts. Data for the study was collected from a sample of 400 vegetable growers. The findings of the study reveal that, majority of the respondents (53.25%) belonged to middle age group (37-61 years), majority of the respondents 87.25 percent were literate. 88.00 percent respondents were Hindu religion, majority of respondents (43.75%) belonged other backward caste category, majority of respondents (50.25%) belonged to medium category of those had 6-8 members in their families, 78.25% respondents belonged to nuclear families, maximum (66.25%) respondents were observed such who had their main occupation as agriculture, 64.5 percent of respondents were having less than 1 ha of land who belonged to marginal farmers category, majority(43.00%)of the respondent had Private tube-well electric as their main source of irrigation, 38.25 percent of the respondents were found having membership of one organization and maximum number of the respondents 48.00% belonged to the annual income of Rs. (56001/- to 2,79,999).The socio-economic status of the farmers can be improved by imparting technical knowledge/ training to vegetable farmers, increasing their education level and increasing their social participation.

Keywords: Socio-economic, vegetable growers, social participation, education

Introduction

In organic terms, "vegetable" designates members of the plant kingdom. The non-biological definition of a vegetable is largely based on culinary and cultural tradition. In culinary terms, a vegetable is an edible plant or its part, intended for cooking or eating raw.

Vegetables are a rich and comparatively cheaper source of vitamins. Consumption of these items provides taste, palatability, increases appetite and provides fiber for digestion to prevent constipation. They also play a key role in neutralizing the acids produced during the digestion of pretentious and fatty foods and provide valuable roughages which help in the movement of food in the intestine. It being a residence of wide variety of fruits and vegetables, holds a unique position in production figures among all the countries. The country has witnessed incredible progress in vegetables production, especially during the post green revolution period. Potato, tomato, onion, cabbage and cauliflower account for around 60% of the total vegetable production in the country. Per capita availability of vegetables in India is 400 gm/ person/day, which helps in fighting malnutrition Sahni and Kumari (2019) [17].

The total area and production of vegetables in India are 11374 thousand hectares and 209143 thousand metric tons. West Bengal, Uttar Pradesh, Maharashtra and Madhya Pradesh, are among the major vegetable producing states. West Bengal stands first with a total area of 1511.19 thousand hectares, followed by Uttar Pradesh with a total area of 1324.91 thousand hectares. Uttar Pradesh is the first largest producer of vegetables *viz*., 29584.06 thousand metric tonne followed by West Bengal with 28229.16 thousand metric tons. (National Horticulture Board 2021-22).

The pesticides are widely used in agriculture mainly to increase crop yields to cater huge supply of food products for increasing world population as well as to protect crops from pests and control insect-borne diseases. The increased use of pesticides results in contamination of the environment and the excess accumulation of pesticide residues in food products, which has always been a matter of serious concern. The pesticide residues in food and crops are directly related to the irrational application of pesticides to the growing crops. The accumulated pesticide residues in food products have been associated with a broad variety of human health hazards, ranging from short-term effects to long term toxic effects. The preventive measures for

pesticide residues in the developing countries are limited due to a shortage of funds and lack of defined government regulations. The impact of pesticide residues can be minimized by taking certain measures such as the rational use of pesticides, promoting organic farming, exploit natural and bio pesticides, and proper implementation and amendment of pesticide related laws. (Grewal *et. al.*, 2017) [5]. Among the different classes of pesticides used in India, the percent share of insecticides (60%) is the highest followed by the shares of fungicides (19%), herbicides (16%), biopesticides (3%) and others (3%). It is estimated that around 13-14% of the total pesticides used in the country is applied to fruits and vegetables, of which insecticides accounted for two-thirds of the total. Among different vegetable crops the maximum pesticide usage is in chilli (5.13 kg a.i./ha) followed by brinjal (4.60 kg a.i./ha), cole crops (3.73 kg a.i./ha) and okra (2-3 kg a.i./ha) (Kodandaram *et al*., 2013) [9]. The total pesticides consumption in India 52466 Metric tonnes in year 2022-23. The ratio for 2022-23 reveals that Uttar Pradesh consumed the highest quantity of pesticides 11824 Metric tonnes followed by Maharashtra (6814), Punjab (5130), Telangana (4920) and Haryana (4066) etc, Per hectare consumption of pesticides was highest in Punjab (0.74 kg), followed by Haryana (0.62 kg) and Maharashtra (0.57 kg) during 2016-17 (MoA&FW, 2021) [2]. (Industry reports, Analysis by Tata Strategic 2021-22). Source: States/UTs Zonal Conferences on inputs (Plant Protection) for Kharif& Rabi Seasons (2022-23).

Research Methodology

The present study was conducted in 2023-24 to scrutinize the socio-economic traits of vegetable growers Uttar Pradesh state comprised of seventy-five districts, there are 21 districts in central Part of Uttar Pradesh out of these 4 district were selected by table randomly sampling. Etawah, Kanpur Nager, Unnao and Jhanshi. district were selected randomly for the study to understand the ground reality of commercial vegetable growers in these districts. Data for the study was collected from a sample of 400 vegetable growers. Another consideration for selecting this district was the close familiarity of investigator with this area, people, official, non-official and local dialect which enabled investigator to carry out the work more efficiently. Eight blocks was selected through random sampling method. District Etawah is comprised of 8 community development blocks, Two community development block i.e. saifai and Basrehar was selected randomly. Out of 10 Community Development blocks in Kanpur nagar, Kakwan and shivrajpur blocks were selected randomly. Unnao district has total sixteen blocks, Out of these two blocks Safipur and Bangarmau were selected randomly .Jhansi district has eight blocks, out of these two Babina & chirgaon blocks were selected randomly for the investigation. Considering all the facts mentioned above five villages were selected from the each block. thus makes a total number of 40 villages. To select sample units, stratified random sampling method was adopted. The data was classified, tabulated and analyzed to make the findings meaningful for interpretation various statistical methods were used accordingly.

Results and Discussion

The findings and discussion of the study are being presented with respect to the variable of age, education, caste category, family type, family size, land holding, Occupation, social participation and annual income. The frequency and distribution of vegetables growers according to selected independent variables has been presented as under:

1. Age

Table 1: Distribution of vegetable farmers according to their age

S. No.	Categories (years)	Respondents	
		f	%
1	Young age (Up to 36)	53	13.25
2	Middle age (37-61)	213	53.25
3	Old age (63 and above)	134	33.50
	Total	400	100

f = Frequency, %= Percentage, Mean= 49.06, S.D. = 13.02, Min. =26, Max. = 78

The above Table 1 reveals that majority of the respondents (53.25%) belonged to middle age group (37-61 years) followed by (33.50%) of respondents belonged to old age group (63 and above) and only (13.25%) of respondents belonged to the young age group (Up to 36), respectively. The age of the selected respondents ranged from 26 to 78 years. The mean age of the respondents was observed to be 49.06 years. A similar finding was also reported that majority of the respondents was observed in the middle age category (Singh *et al.* 2023) [21].

The probable reason for such distribution might be that the majority of middle age group were enthusiastic and more dynamic in performing various socio-economic activities in general and chemical pesticides in commercial vegetable growers in specific.

2. Education

Table 2: Distribution of the respondents on the basis of education

S. No.	Categories	Respondents	
		f	%
A	Illiterate	51	12.75
B	Literate	349	87.25
1	Can read and write	65	16.25
2	Primary	52	13.00
3	Middle school	79	19.75
4	High school	82	20.50
5	Inter medium	41	10.25
6	Graduate/ Post graduate	30	07.50
	Total	400	100

f = Frequency, %= Percentage

The Table 2 reveals that the majority of the respondents 87.25 percent were literate and 12.75 percent illiterate. Further, the educational level was worked out and given in descending order as 20.50%, 19.75%, 16.25%, 13.00%, 10.25% and 07.50% high school, middle, can read and write only, primary, intermediate and graduate & post graduate, respectively.

Hence, it may be said that the educational standard of the respondents was considerably good in comparison to average literacy rate of the state and country as such. The similar findings were also reported by Singh *et al.*, (2022) [19].

3. Religion

On the basis of religion respondents were classified into two categories i.e., Hindu & Muslim.

Table 3: Distribution of the respondents on the basis of religion

S. No.	Categories	Respondents	
		f	%
1	Hindu	352	88.00
2	Muslim	48	12.00
	Total	400	100

f = Frequency, %= Percentage

Table 3 shows that out of 400 respondents 88.00 percent respondents were Hindu and rest 12.00 percent were Muslim.

4. Caste category

Table 4: Distribution of the respondents on the basis of caste

S. No.	Categories	Respondents	
		f	%
1	General caste	112	28.00
2	Other backward caste(OBC)	175	43.75
3	Scheduled Caste (SC)	101	25.25
4	Scheduled Caste (ST)	12	03.00
	Total	400	100

f=Frequency, %= Percentage

The Table 4 depicts that majority of respondents (43.75%) belonged other backward caste category, followed by general caste (28.00%), scheduled caste (25.25%), and scheduled tribes (03.00) respectively.

Thus, it may be concluded that the backward caste was found dominantly engaged in commercial vegetable growers in the area of study. The similar findings were also reported by Mishra and Ghadei (2015) [13].

5. Size of family

Table 5: Distribution of vegetable farmers according to their. Size of family

S. No.	Categories	Respondents	
		f	%
1	Small family (up to 5 members)	137	34.25
2	Medium family (6 to 8 members)	201	50.25
3	Large family (9 and above members)	62	15.50
	Total	400	100

f =Frequency, %= Percentage, Mean=6.39, SD= 1.54, Min=3, Max=13,

The Table 5 shows that majority of respondents (50.25%) belonged to medium category of those had 6-8 members in their families followed by 34.25 percent and 15.50 percent to the category of (up to 5) and (9 and above) members in their families, respectively.

The average size of family was observed to be 5 members with minimum and maximum in the range of 03 to 13 numbers of family members. It might be due to dominant nuclear family system existence in the study area. The similar findings were also reported by Maurya *et al.* (2017) [12].

6. Type of family

Table 6: Distribution of the respondents on the basis of family Type

S. No.	Category	Respondents	
		f	%
1	Joint family	87	21.75
2	Nuclear	313	78.25
	Total	400	100.00

f= Frequency, %= Percentage

The Table 6 shows that nuclear families were more in number than joint families. In terms of percent 78.25% respondents belonged to nuclear families, while, remaining 21.75% belonged to joint families.

7. Occupation

Table 7: Distribution of the respondents on the basis of occupation

S. No.	Categories	Respondents	
		Frequency	Percentage
1.	Agriculture	265	66.25
2.	Agriculture Caste based occupation	71	17.75.
3.	Agriculture Services + Business	64	16.00
	Total	400	100

f = frequency, %= percentages

It is evident from the Table 7 that the maximum (66.25%) respondents were observed such who had their main occupation as agriculture, followed by (17.75%) agriculture + caste based occupation, and (16.00 %) Agriculture Services + Business respectively. Hence, it may be noticed that a considerable number of the respondents had occupations other than agriculture for their livelihood.

8. Size of land holding

Table 8: Distribution of the respondents on the basis of land holding (hectares)

S. No.	Categories (ha.)	Respondents	
		f	%
1	Marginal (below 1 ha.)	258	64.50
2	Small (1.01 to 2.0 ha.)	97	24.25
3	Medium (2.01 to 3.0 ha.)	35	08.75
4	Large (above 3.0 ha)	10	02.50
	Total	400	100

f = Frequency, %= Percentage, Min= 0.67, Max= 4

The Table- 8 depicts that 64.5 percent of respondents were having less than 1 ha of land who belonged to marginal farmers category. Respondents belonged to small and medium categories were 24.25 percent and 08.75 percent, respectively. Data also shows that only 02.50 percent of respondents were having large land holding.

The average size of land holding was found to be 0.91 hectare with minimum of 0.67 and maximum of 4.0s hectares. Therefore, it may be said that the small and marginal farmers were mostly there in the study area. It might be due to fragmentation of the family. The similar findings were also reported by Ayanwale and Amusan (2014)

9. Irrigation facilities

Table 9: Distribution of the vegetable growers according to their irrigation facilities

S. No.	Categories	Respondents	
		f	%
1.	Canal	47	11.75
2	pond	36	09.00
2.	Govt. tube-well	56	14.00
3.	Private tube-well electric	172	43.00
4.	Private diesel engine	89	22.25
	Total	400	100

f = Frequency, %= Percentage

It was evident from the above table 9 indicated that the majority of the Private tube-well electric 43.00 percent were having own Private diesel engine, 22.25 percent vegetable growers having depending of on government tube well as sources for irrigation, only 14.00 percent vegetable growers were further using canal and pond were 11.75 percent and 9.00 percent, respectively irrigation in vegetable growers. It may be indicated from the above table majority of the respondents were using the Private tube-well electric as a source of irrigation in vegetable growers.

10. Social participation

Table 10: Distribution of the respondents on the basis of social participation

S. No.	Participation	Respondents	
		f	%
1.	No membership of any organization	162	40.50
2.	Membership of one organization	153	38.25
3.	Membership of two organization	52	13.00
4.	Membership of more than two organization	33	08.25

f = Frequency, %= Percentage

The Table 10 shows that the 38.25 percent of the respondents were found having membership of one organization, while 08.00% were the member of two organizations. In this way, 59.50% of respondents were associated with the organizations like panchayats, cooperatives, youthclub, religious and political organization. It can also be concluded that only 8.25% of respondents found having membership in more than two organizations/office bearer, while 40.50% of vegetable growers did No membership of any organization Less participation in social organization might be due to probable reason that respondents are found less social participation. The similar findings were also reported by Singh *et al.*, (2022) [19].

11. Annual Income

Table 11: Distribution of vegetable farmers according to annual family Income

S. No.	Category	Respondents	
		f	%
1.	Low (Up to Rs. 56,000/-)	156	39.00
2.	Medium (56001/- to 2,79,999/-)	192	48.00
3.	High (More than 2,80,000/-)	52	13.00
	Total	400	100

f = Frequency, %= Percentage min= 36,000. Max= 6,50,000. Mean =1.63. SD= 1.17

The Table 4.1.8 reveals that maximum number of the respondents were 48.00% belonged to the annual income of Rs. Medium (56001/- to 2,79,999)whereas, 39.00% and 13%, respondents were belong to income range from Rs. Low (Up to Rs. 56,000/-) and Rs. High (More than 2,80,000/-) respectively.

The maximum number of the respondents was found in the annual income range of Rs. 56000 to 2,79,999 with an average of Rs. 163501. The similar finding was also reported by Mishra and Ghadei (2015) [13].

Conclusion

Study focuses on socio-economic status of vegetable growers. The study indicated, that majority of farmers were middle aged and literate categories. Other Backward Caste farmers were found dominantly. Majority of nuclear family. that majority of respondents belonged to medium category of those had 6-8 members in their families. Maximum number of members were marginal farmers and their main occupation is agriculture. the majority of the Private tube-well electric. Members were found such who had medium annual income. They had annual income between Rs. 56001/- to 2,79,999. The majority of members were have participation in no organization.

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