

“Socio-Economic Profile of Groundnut Growers in the Bundelkhand Region of Uttar Pradesh: An Empirical Analysis”

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Abstract

Groundnut (*Arachis hypogaea* L.) is one of the most important oilseed crops grown under diverse agro-climatic conditions and plays a vital role in enhancing farmers' income and livelihood security. The socio-economic characteristics of groundnut growers are important for designing effective extension interventions and policy measures for increasing productivity. The present study was conducted in the Bundelkhand region of Uttar Pradesh to study the socio-economic profile of groundnut growers. An ex-post facto research design was used in the study. Jhansi and Mahoba districts were purposively selected based on maximum area and production under groundnut cultivation. A multistage random sampling procedure was used to select 480 groundnut growers. Data were collected through a pre-tested structured interview schedule and analyzed by frequency, percentage, mean and standard deviation. The results indicated that most of the respondents (64.59%) were in the middle age group and 86.67 per cent were male respondents. A large proportion (97.29%) of the respondents were literate, 53.75 per cent were educated up to intermediate level, and 59.17 per cent were from Other Backwards Classes, and 89.58 per cent were Hindus. Small and marginal farmers together accounted for 71.46 per cent of the respondents. Agriculture was the main occupation of 89.38 per cent of the respondents, and 75.00 per cent of them lived in pucca houses. The study finds that groundnut cultivation in Bundelkhand is mainly done by middle-aged, literate, small and marginal farmers having high dependence on agriculture as their main source of livelihood. The findings provide useful insights to extension agencies, researchers and policy makers to develop location-specific strategies for improving groundnut productivity and enhancing farmers' livelihoods in the region.

Introduction:

Groundnut (*Arachis hypogaea* L.) is one of the nitrogen-fixing legume crops, and it is an important crop for nutritional and economical purpose in tropical and sub-tropical regions between 40° North and 40° South latitudes. It is a unique crop because its flowers are above ground and the nut develops underground. Worldwide

groundnut cultivates by more than 110 countries (Sendekie Y., 2022). The name *Arachis hypogaea* has been derived from two Greek words, “Arachis” meaning legume and “hypogaea” meaning below ground, referring to the formation of pods beneath the soil surface. It belongs to the family Leguminosae and sub-family

Papilionaceae. Groundnut is popularly known by various names such as peanut, monkey nut, wonder nut and poor man's almond. It is believed to have originated in South America, particularly in the regions of Brazil, Peru and Argentina, and was introduced into India during the first half of the sixteenth century.

In 2024, global groundnut production (groundnuts, excluding shelled) was estimated at approximately 57.6 million tonnes from nearly 33 million hectares, with an average productivity of about 1,740 kg per hectare. China remained the leading producer with about 19.6 million tonnes, followed by India with nearly 11.9 million tonnes, while Nigeria ranked third with around 4.3 million tonnes of production. In terms of cultivation area, both countries play a significant role, but the specific data on land area should reflect their substantial contributions to the global groundnut industry (FAOSTAT, 2024).

In area and production, India occupies an important position in global groundnut cultivation. This crop contributes significantly to the edible oil economy of the country and also helps as a major source of income and employment for rural people. In India, major groundnut-producing states include Gujarat, Rajasthan, Tamil Nadu, Andhra

Pradesh, Karnataka, and Uttar Pradesh. Despite large area coverage, the productivity of groundnut in many regions remains low due to various agro-climatic, technological, and socio-economic constraints (Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Government of India, 2024; FAOSTAT, 2024).

During 2024–25, Gujarat recorded the highest area under groundnut cultivation in India with 1.96 million hectares and produced 5.22 million tonnes with a productivity of 2657 kg per hectare. Rajasthan ranked second with 1.06 million hectares of area, producing 2.14 million tonnes with a yield of 2024 kg per hectare. Madhya Pradesh secured the third position with 0.70 million hectares under cultivation and a production of 1.55 million tonnes (Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare, Government of India, 2024)

In Uttar Pradesh, the Bundelkhand region is recognized as a major area for groundnut production under rainfed farming conditions. The region is characterized by low rainfall, frequent droughts, very poor irrigation facilities, lack of soil fertility and limited access to modern agricultural technologies. These

adverse conditions directly affect the productivity and profitability of groundnut cultivation and create challenges for the farming community. Therefore, improving groundnut production in Bundelkhand requires a proper understanding of farmers' characteristics and their farming behaviour.

The Bundelkhand region faces unique Agro-climatic challenges that need an in-depth understanding of the socio-economic profile of local farmers to enhance oilseed productivity (Sahoo *et al.*, 2024). By examining variables such as age, educational attainment, occupation, landholding size, extension contact and annual income, this research aims to identify the demographic determinants that influence the adoption of recommended cultivation practices Kumar *et al.*, 2026). Understanding the personal traits of groundnut growers is important for agricultural extension agencies, researchers, and policymakers. This knowledge helps them create effective strategies for sharing better technologies and rural development programs.

Research Methodology:

The present study was conducted in Bundelkhand region of Uttar Pradesh with Ex-post facto research design, as the

variables of the study had already occurred and were beyond the control of researcher. The region was purposely selected keeping in view the importance of groundnut cultivation in the Bundelkhand region and its potential to contribute significantly to increasing the groundnut productivity in the state. From the seven districts of Bundelkhand region, the Jhansi and Mahoba districts were purposely selected on the basis of their highest area and production under groundnut cultivation. Then, four blocks from each of the selected districts were selected by the simple random sampling method, thus identifying a total of eight blocks. From each selected block, four more villages were selected randomly. From each selected village, 15 respondents were selected by using a random sampling technique. Thus, the total sample consisted of 480 respondents.

Primary data were collected through personal interviews of the respondents by using a pre-tested, structured interview schedule specifically designed in accordance with the objectives of the study. The socio-economic profile of the respondents was assessed through selected variables, namely age, education, caste, religion, family type, family size, landholding, occupation, housing pattern, material possession, annual income,

extension contact, scientific orientation, economic motivation, social participation, cosmopolitan outlook and risk orientation. The socio-economic characteristics were measured by using standardized scales and procedures developed and used, and relevant Government classification norms with suitable modifications wherever required to suit the local conditions and objectives of the study.

Results and Discussion:

1. Age

Table- 1: Distribution of the respondents according to their age **n=480**

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	Young (Up to 40 years)	112	23.33
2.	Middle (41 to 63 years)	310	64.59
3.	Old (More than 63 Years)	058	12.08
	Total	480	100.00

Mean = 52.15, S.D. = 11.77, Min.=22, Max.=75, f=frequency, %=Percentage

The data presented in table-1 indicate that a majority of the respondents (64.59%) belonged to the middle age group (41 to 63 years), followed by 23.33 per cent in the young age group (up to 40 years), and 12.08 per cent were from the old age group (more than 63 years). This indicates that Groundnut cultivation is predominantly undertaken by middle-aged farmers who possess both experience and physical

The data collected were systematically classified, coded, tabulated and analysed using appropriate descriptive statistical tools like frequency, percentage, mean and standard deviation. These statistical measures were used to describe and interpret the socio-economic characteristics of the respondents in the study area.

capability, whereas participation from the younger generation remains limited due to their increasing inclination toward non-agricultural occupations and urban employment opportunities. Similar findings were also reported by Meghana *et al.* (2024), who observed that the majority of groundnut growers belonged to the middle-aged group.

2. Gender

Table-2: Distribution of the respondents according to their gender **n=480**

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	Male	416	86.67
2.	Female	064	13.33
	Total	480	100.00

f=frequency, %=Percentage

A perusal of the data incorporated in Table-2 reveals that the majority (86.67%) of the respondents belonged to the male category and 13.33% of the respondents belonged to the female category. This indicates that women's participation in Groundnut farming remains very limited, likely due to traditional gender roles and the perception of farming as a male-oriented occupation in rural areas.

Historically, agriculture in India has been perceived as a male-dominated profession due to deep-rooted cultural norms and traditional gender roles. Men are generally regarded as the primary earners and decision-makers in farming households, which leads to their greater visibility in agricultural activities. Furthermore, land ownership and inheritance practices in many regions

continue to favour males, resulting in limited control and participation of women in agricultural decision-making. Men also tend to have better access to critical agricultural resources such as land, credit, inputs, and extension services. These structural limitations often marginalise women's roles in crop production. However, the gender dynamics in agriculture are gradually evolving. Various government and non-government initiatives are now focusing on empowering women through enhanced land rights, training programmes, financial inclusion, and support networks. Although their participation is still limited, a slow but steady increase in women's involvement in agriculture is being observed across different parts of the country.

3. Education

Table- 3: Distribution of the respondents according to their education n=480

S. No.	Categories	Respondents	
		<i>f</i>	%
A.	Illiterate	013	02.71
B.	Literate	467	97.29
	Total	480	100.00
1.	Primary	038	07.92
2.	Middle	021	04.38
3.	High School	076	15.83
4.	Intermediate	258	53.75
5.	Graduate	062	12.92
6.	Post Graduation	012	02.50

f=frequency, %=Percentage

It is evident from table-3 that the overall analysis revealed that 97.29 per cent of the Groundnut growers were literate, with the largest share having education up to intermediate (53.75%), followed by 15.83 per cent at high school and 12.92 per cent at graduate levels, and 7.92 percent with primary education. Only 2.71 per cent of respondents were illiterate, indicating that the majority of farmers possess a basic to moderate level of education, which is favourable for the adoption of improved farming practices.

In rural areas of India, where agriculture remains the primary occupation, access to higher educational institutions such as colleges and universities is often

limited. This limitation poses a barrier to pursuing education beyond the school level. Moreover, many farming families prioritize early income generation over extended education due to financial constraints and the immediate demands of agricultural livelihoods. As a result, while a significant portion of farmers attain basic or intermediate education, the proportion of highly educated individuals remains relatively moderate. The present findings are supported by the findings of Ramapadmaja and Umamaheswararao (2019), who reported that most respondents had education up to secondary/high school level.

4. Caste

Table-4 Distribution of the respondents based on caste

n=480

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	General (UR)	096	20.00
2.	Other Backward Caste (OBC)	284	59.17
3.	Scheduled Caste (SC)	099	20.63
4.	Scheduled Tribe (ST)	001	0.21
	Total	480	100.00

f=frequency, %=Percentage

Table-4 revealed that the majority (59.17%) of the respondents belonged to the Other Backward Classes (OBC) category, followed by 20.63 per cent from the Scheduled Castes (SC) and 20.00 percent from the General category and only 0.21 per cent from Scheduled Tribes (ST). This indicates that Groundnut cultivation in the study area is predominantly practiced by OBC farmers. OBC communities have historically had relatively better access to agricultural land compared to UR and ST groups, though still often less than SC

communities. Landholding plays a critical role in determining one's participation in agriculture, particularly in regions like Uttar Pradesh where land remains a central economic asset. The widespread presence of OBC communities in agrarian regions like Jhansi and Mahoba contributes to their dominant share in groundnut cultivation. Additionally, socio-cultural and economic factors influence the concentration of various caste groups in farming, including historical patterns of land inheritance and state-level demographic composition.

5. Religion

Table-5 Distribution of the respondents according to their religion

n=480

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	Hindu	430	89.58
2.	Muslim	050	10.42
	Total	480	100.00

f=frequency, %=Percentage

The data presented in Table 5 revealed that the distribution of respondents based on their religion from both districts, the majority (89.58%) were Hindus, followed by Muslims (10.42%). This highlights the predominance of the Hindu community in Groundnut cultivation within the study area. This pattern may be attributed to several socio-cultural and economic factors prevalent in rural India. Hindu communities traditionally have a strong association with agriculture and rural

livelihoods. They often enjoy relatively better access to agricultural land, credit, inputs, and institutional support systems. Such factors contribute to a higher level of participation of Hindu respondents in agricultural practices and research studies related to farming. On the other hand, the lower representation of Muslims could be due to their engagement in alternative livelihoods, urban migration, or limited access to land and other agricultural resources.

6. Family Type

Table-6 Distribution of the respondents according to their family type n=480

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	Joint	383	79.79
2.	Nuclear	097	20.21
	Total	480	100.00

f=frequency, %=Percentage

The findings revealed from table-6 shows that distribution of respondents according to their family type. The analysis indicated that 79.79 per cent of the respondents belonged to joint families, whereas only 20.21 per cent were from nuclear families. This suggests a clear predominance of the joint family system among Groundnut growers in the study area. The dominance of joint families may

reflect ongoing social transformations in rural India; small family units are often perceived as more manageable, particularly when it comes to decision-making and financial independence in agricultural activities. Additionally, joint families may also respond more quickly to the adoption of new agricultural technologies and practices due to fewer intergenerational conflicts and faster communication flow.

7. Family size

Table-7 Distribution of respondents according to their family size n=480

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	Small Family (Up to 4 Members)	118	24.58
2.	Medium Family (5 to 8 Members)	326	67.92
3.	Large Family (More than 8 Members)	036	07.50
	Total	480	100.00

f=frequency, %=Percentage

Table 7 indicates the distribution of respondents according to family size in the study area. The overall distribution revealed that a majority of respondents (67.92%) belonged to medium-sized families (5 to 8 Members), followed by 24.58 per cent in small families (Up to 4 Members), while only 7.50 per cent were from large families (More than 8 Members). This suggests that medium-sized families are most common among Groundnut growers in the study area. The predominance of medium-sized families may reflect a balance between traditional joint living and the shift toward smaller nuclear units. These family sizes are often considered optimal in rural agricultural

settings, allowing sufficient manpower for farming activities while still being manageable in terms of household expenses. The moderate presence of small families could be attributed to factors such as increasing education levels, urban influence, and improved awareness of family planning. On the other hand, the relatively lower percentage of large families might be due to economic constraints and a gradual decline in the joint family system. The present findings are in agreement with the findings of Kumar and Rathod (2013) and Meghana *et al.* (2024), who reported that the majority of respondents belonged to the medium family size category.

8. Land Holding

Table 8: Distribution of respondents according to their land holding n=480

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	Marginal (below 1.0 ha)	155	32.29
2.	Small (1.00-2.00 ha)	188	39.17

3.	Semi-Medium (2.01-4.0 ha)	099	20.63
4.	Medium (4.01 ha -10.00 ha.)	028	05.83
5.	Large	010	02.08
	Total	480	100.00

f=frequency, %=Percentage

Table 8 presents the distribution of respondents according to their landholding size. The findings revealed that the majority of respondents (39.17%) belonged to the small farmer category, followed by 32.29 per cent marginal farmers, 20.63 per cent semi-medium farmers, 5.83 per cent medium farmers, and only 2.08 percent were large farmers. This indicates the predominance of small and marginal landholders in groundnut cultivation within the study area.

The data suggest that small landholders dominate the respondent group, which could have implications for access to resources, technology adoption, and farm-level decision-making. The present findings are supported by the findings of Mavani (2012), Reddy and Shenoy (2013), and Meghana *et al.* (2024), who observed that most farmers possessed small to medium land holdings.

9. Occupation

Table- 9 Distribution of respondents according to their Occupation

n=480

S. No.	Categories	Respondents			
		Main Occupation		Subsidiary Occupation	
		<i>f</i>	%	<i>f</i>	%
1.	Agril-based labour	000	0.00	39	8.13
2.	Caste-based occupation	051	10.62	00	0.00
3.	Service	000	0.00	00	0.00
4.	Agro-based enterprises	000	0.00	00	0.00
5.	Agriculture	429	89.38	04	0.83
6.	Business	000	0.00	00	0.00
7.	Other	000	0.00	14	2.92

	Total	480	100	57	11.88
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f=frequency, %=Percentage

The findings observed from Table 9 show the distribution of respondents based on their occupation. Results indicated that agriculture was the primary occupation of the majority of respondents (89.38%), making it the dominant source of livelihood in the study area, followed by caste-based occupation (10.62%). Regarding subsidiary occupations, respondents were engaged in agricultural labour (8.13%), other activities (2.92%), and agriculture (0.83%). This

occupational profile highlights that agriculture remains the cornerstone of livelihood for the majority of respondents, while subsidiary occupations indicate some level of diversification to support household income. Thus, the data reflect the traditional dependence on agriculture, while also indicating gradual diversification through subsidiary occupations in response to socio-economic needs.

10. Housing pattern

Table- 10 Distribution of respondents according to their housing pattern n=480

S. No.	Categories	Respondents	
		<i>f</i>	%
1.	Hut	005	01.04
2.	Kutch House	033	06.88
3.	Mixed	082	17.08
4.	Pucca House	360	75.00
	Total	480	100.00

f=frequency, %=Percentage

The data presented in the table-10 shows that the distribution of respondents based on their type of housing. The study found that the majority of the respondents (75.00%) lived in pucca houses, followed by 17.08 per cent residing in mixed houses, 6.88 per cent in kutch houses, and only

1.04 per cent in huts. This indicates a relatively high level of permanent housing among groundnut growers, reflecting a moderate level of economic stability in the study area. Thus, the predominance of pucca housing among the respondents in districts reflects progressive rural

development and access to housing support programs that contribute to improving rural livelihoods.

Conclusion:

The study gives a complete picture of the socio-economic profile of groundnut growers in the Bundelkhand region of Uttar Pradesh. The results reveal that groundnut cultivation is mainly carried out by middle-aged educated male farmers mostly belonging to Other Backwards Classes (OBC). Most of the respondents were living in joint families of medium family size, showing the continued relevance of family-based farming systems in the region. The small and marginal landholders dominate, which shows the limited resource base of the farming community and also highlights the need for specific interventions in improving farm productivity and income. The majority of the respondents were engaged in agriculture, which indicates their heavy dependence on farming for livelihood security. Also, the higher proportion of respondents living in pucca houses indicates a moderate level of socio-economic development in the groundnut-growing households.

Overall, the socio-economic characteristics documented in the study indicate a high potential for the dissemination and uptake of improved

groundnut production technologies. However, need-based extension services, capacity-building programmes, access to quality inputs, institutional credit, and market support mechanisms require special attention for small and marginal farmers. Strengthening of these interventions can be a pivotal factor to enhance groundnut productivity, farm incomes, and to bring sustainable agricultural development in the Bundelkhand region of Uttar Pradesh.

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