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Socio-economic profile of groundnut growers and their relationship with their performance

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Abstract

India is one of the largest producers of agricultural crops globally and surpassed self reliant stage in spite it is importing vegetable oil. In order to bridge the demand supply gap it is important to concentrate on the production productivity of oil seed crops. The present study was conducted in Tumkur district of Karnataka in the year 2022-2023 to study the personal, socio-economic and psychological characteristics of groundnut crop growers and their relationship with performance with a total sample size of 120 growers. Ex-post facto research design was adopted. The study revealed that, more than half (65.84%) of the groundnut crop growers belonged to middle age. More than, one-third (38.33%) of the groundnut growers had high school education. More than two-third (65.00%) of groundnut growers belonged to medium family size. Half of the groundnut growers (50.00%) were small farmers. Whereas, majority (83.33%) of the growers belonged to medium level of annual income. Groundnut growers had a medium level of farming experience (38.33%), extension contact (51.67%), management orientation (45.00%), mass media exposure (44.17%), credit orientation (42.50%), achievement motivation (42.50%), economic motivation (41.66%), deferred gratification (40.83%), innovative proneness (37.50%) and low level of risk bearing ability (41.67). Further, education, annual income, extension contact and mass media exposure had positive and significant relationship with their performance at one percent level of significance. Whereas, land holding, farming experience, economic motivation, management orientation, credit orientation, deferred gratification, innovative proneness, risk bearing ability and achievement motivation had positive and significant relationship with their performance at five percent level of significance.

Keywords: Personal, socio-economic, psychological characteristics, performance, groundnut growers

Introduction

Agriculture stands as a crucial pillar of the Indian economy, serving as the primary livelihood for nearly two-thirds of the country's workforce. Spanning 43% of India's geographical area, the agricultural sector plays a vital role by contributing 13.9% to the nation's GDP. Despite a diminishing share in the overall GDP, agriculture continues to wield substantial influence on India's economic landscape. Farmers cultivate a variety of crops, encompassing food crops, commercial crops, and oilseeds. Among these, oilseed crops play a pivotal role in the agricultural economy, ranking second only to cereals in the field crops category. India, blessed with diverse agro-ecological conditions, provides an optimal environment for the cultivation of all nine annual oilseeds. These include seven edible oilseeds such as Groundnut, Rapeseed-Mustard, Sunflower, Sesame, Niger, Safflower, and Soybean, as well as non-edible oilseeds like Castor and Linseed. Over the years, oilseed production has witnessed a notable increase, surging from 108.3 lakh tonnes in 1985-86 to 365.65 lakh tonnes in 2020-21 (Anonymous, 2017) ^[1].

Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Uttar Pradesh, and West Bengal are the top oilseed producing states in India. Rajasthan, Gujarat, Madhya Pradesh, and Maharashtra are the major producers, accounting for approximately 20 percent, 20 percent, 19 percent, and 16 percent of total production, respectively. Groundnut is one of the important oil seed crops grown in India. Groundnut is a key oil seed crop in India, and it plays a significant part in bridging the country's vegetable oil deficit, since it is the primary source of edible oils in India, accounting for about half of total oilseeds production. Currently, India grows more than 6.0 million tons of groundnut (in shell) from an area of 7.5 million hectares (Patil *et al.*, 2009) ^[4]. More than 72% of the oilseed cultivation area was constrained to rainfed farming carried out by small-scale farmers, leading to diminished production. The adoption of advanced crop production technologies in our country has marked a significant breakthrough in enhancing oilseed production. Consequently, it becomes imperative to

examine the personal and socio-economic traits of farmers and their correlation with various behavioral aspects. This analysis provides a foundational and clear understanding of the farmers' backgrounds, aiding in the formulation of strategies to promote precision farming. Hence, the current study focuses on the specific objective of scrutinizing the personal, socio-economic, and psychological characteristics of groundnut growers and their relationship with performance.

Methodology

The study was conducted in Tumkur district of Karnataka in 2023. Out of ten taluks, Sira and Pavagada are purposively selected for the study since these taluks have major area under groundnut cultivation compared to other taluks. From each taluk, three groundnut growing potential villages were selected. Thus, the total sample size from these villages is 120. Ex-post facto research design was adopted. Data was collected by using pre-tested personnel interview method. Further, appropriate statistical tools were employed to analyze the collected data.

Results and Discussion

Personal, socio-economic and psychological characteristics of groundnut growers

Personal characteristics of groundnut growers

Age: It is evident from the Table 1 that, more than three-fifth (65.84%) of the groundnut growers belonged to middle age group followed by old (23.33%) and young (10.83%) age groups. This trend is observed due to farmers who are of middle age have more family responsibility and farming experience than the younger farmers. Further, they are more enthusiastic and possess better physical vigor and have more work efficiency than older. The results are in conformity with the results of Kumar (2012)^[2].

Education: It can be observed from the Table 1 that that nearly two-fifth (38.33%) of the groundnut growing farmers had high school education followed by primary school (29.17%), PUC (12.50%), illiterates (10.83%) and 9.17 percent were graduated. It is clear from the above results that most of the farmers practicing groundnut based cropping system were educated up to high school. This is primarily attributed to a lack of support from family members and a challenging economic status.

Family size: The keen observation of the Table 1 indicates that significant percent more than two-third (65.00%) of groundnut growing farmers had medium family size. This observation may be attributed to the fact that these growers were in the middle age bracket and possessed fundamental formal education. This education likely made them more aware of various family planning initiatives and the significance of adopting family planning measures.

Land holding: Table 12 revealed that half (50.00%) of the respondents were small farmers followed by big (31.67%) and marginal (18.33%) farmers. The likely explanation for these trends could be the subdivision of ancestral property or land into smaller fragments among family members.

Annual Income: The glance at Table 1 reveals that, majority (83.33%) of the respondents belonged to medium level of

annual income followed by high (11.67%) and low (5.00%) level of annual income. The likely factor contributing to the diverse income categories among groundnut growers could be linked to the size of their land holdings, the lack of adoption of improved practices, and engagement in subsidiary occupations by the respondents.

Farming experience: The data presented in Table 1 reveals that nearly two-fifths (38.33%) of the respondents fall into the medium category of farming experience. In contrast, one-third (33.33%) of respondents are in the low farming experience category, while those with high farming experience make up 28.33%.

Table 1: Personal characteristics of groundnut growers

Sl. No.	Characteristics	Category	Total n=120	
			No.	%
1	Age	Young (<35years)	13	10.83
		Middle (35-55years)	79	65.84
		Old (>55years)	28	23.33
2	Education	Illiterate	13	10.83
		Primary school	35	29.17
		High school	46	38.33
		PUC	15	12.50
		Graduation and above	11	09.17
3	Family size	Small (1-3 members)	35	29.17
		Medium (4-6 members)	78	65.00
		Large (>7 members)	07	5.83
4	Landholding	Marginal Farmers (<2.5 acres)	22	18.33
		Small farmers(2.5-5.0 acres)	60	50.00
		Big farmers (>5.0acres)	38	31.67
5	Annual income Mean=117396 SD=96663	Low (< Rs.69064.1)	06	05.00
		Medium (69064.1-165727.5)	100	83.33
		High (>Rs.165727.5)	14	11.67
6	Farming experience	Low (<10 years)	40	33.33
		Medium (10-20 years)	46	38.33
		High (>20 years)	34	28.34

Socio-economic and communication characteristics of groundnut growers

Extension contact: A look at Table 2 suggests that just over half (51.67%) of the respondents maintained a medium level of extension contact, with high-level contact at 26.66%, and low-level contact at 21.67%. The prevalence of farmers with a medium level of extension contact could be attributed to the establishment of an Agriculture Research Station in the research area, fostering rapport with scientists. Additionally, active participation in various extension educational activities has facilitated close connections with officials at Raitha Samparka Kendras of the agricultural department situated at the hobli level.

Economic motivation: It is observed from Table 2 that, about two-third (41.66%) of the groundnut growers had medium level of economic motivation followed by high (30.84%) and low (27.50%) level of economic motivation. It is tangible from the above results that farmers practicing groundnut based cropping system had medium to high economic motivation may be due the fact that farmers' endeavors to enhance resource use efficiency through the adoption of diverse farming technologies, aiming to increase profits and elevate their standard of living.

Management orientation: From the Table 2 it is found that, more than two-fifth of the groundnut growing farmers (45.00%) had medium level management orientation followed by low (31.67%) and high (23.33%) level management orientation respectively. The results are line with Shwetha (2016) [6].

Mass media exposure: The findings from the Table 2 indicates that, more than two-fifth (44.17%) of the respondents belonged to medium mass media exposure category, followed by low (30.83%) and high (25.00%) mass media exposure category. This might be due to the increased mobile density and connectivity in the rural areas and the majority of the growers and these factors facilitated easy use and access to various mass media and social media platforms, enabling them to acquire knowledge on various aspects. These findings align with the research conducted by Manjunath Patil (2023) [4].

Credit orientation: From Table 2 revealed that, more than two-fifth (42.50%) of them had medium level of credit orientation followed by high (37.50%) and low (20.00%) credit orientation, respectively. This trend is observed due to fact that, easy availability and accessibility of credit make the farmer financially stable.

Table 2: Socio-economic and communication characteristics of groundnut growers

Sl. No.	Characteristics	Category	Total n=120	
			No.	%
1	Extension contact Mean=2.68 SD=1.71	Low (<1.82)	26	21.67
		Medium (1.82-3.53)	62	51.67
		High (>3.53)	32	26.66
2	Economic motivation Mean=19.64 SD=3.21	Low (<18.03)	33	27.50
		Medium (18.03-21.25)	50	41.66
		High (> 21.25)	37	30.84
3	Management orientation Mean=44.72 SD=2.81	Low (< 43.31)	38	31.67
		Medium (43.31-46.13)	54	45.00
		High (>46.13)	28	23.33
4	Mass media exposure Mean=6.51 SD=2.00	Low < (5.49)	37	30.83
		Medium (5.49-7.50)	53	44.17
		High > (7.50)	30	25.00
5	Credit orientation Mean=3.72 SD=0.88	Low < (3.28)	24	20.00
		Medium (3.28-4.16)	51	42.50
		High > (4.16)	45	37.50

Psychological characteristics of groundnut growers

Innovative proneness: A glimpse of Table 3 showed that, 37.50 percent of the respondents belonged to medium level of innovative proneness followed by low (35.83%) and high (26.67%) level of innovative proneness. It might be because inventive proneness is a psychological characteristic that denotes a higher level of openness to try new things and adapt to change. Higher innovative proneness farmers constantly implement new ideas or innovations into their farms, which improves their standard of living. These farmers also regularly take part in training programs, interact with extension officers from line departments and the Agricultural Research Station, and attend demonstrations on a variety of related and agricultural topics. As a result, they now possess a higher degree of

knowledge and expertise, and as a result, they may be connected to or associated with the scientific community.

Risk bearing Ability: It is evident from Table 3 that, slightly more than two-fifth (41.67%) of the groundnut growers belonged to low level of risk bearing ability followed by medium (36.67%) and high (21.66%) level of risk bearing ability. The inclination towards low risk orientation can be explained by the prevailing bias among farmers who perceive agriculture as inherently less profitable, leading to a reluctance to take risks and innovate. This mindset may result in a partial willingness to take risks, thus indicating a low level of risk-bearing ability. These findings are consistent with the research conducted by Shwetha (2016) [6].

Table 3: Psychological characteristics of groundnut growers

Sl. No.	Characteristics	Category	Total n=120	
			No.	%
1	Innovative proneness Mean=14.43 SD=2.25	Low < (13.30)	43	35.83
		Medium (13.30-15.56)	45	37.50
		High > (15.56)	32	26.67
2	Risk bearing ability Mean=2.68 SD=1.07	Low < (2.14)	50	41.67
		Medium (2.14-3.22)	43	36.67
		High > (3.22)	26	21.66
3	Deferred gratification Mean=26.36 SD=2.37	Low < (25.17)	32	26.67
		Medium (25.17-27.55)	49	40.83
		High > (27.55)	39	32.50
4	Achievement motivation Mean=13.49 SD=1.93	Low < (12.53)	36	30.00
		Medium (12.53-14.46)	51	42.50
		High > (14.46)	33	27.50

Deferred gratification

From the Table 3, it could be seen that two-fifth (40.83%) of the respondents belonged medium level of deferred gratification followed by high (32.50%) and low (26.67%) level of deferred gratification. Deferred gratification aids in navigating unanticipated events such as price swings, market oversupply, disease outbreaks, and drought conditions. The majority of them may be in the medium deferred gratification stage because of their investment and savings habits. Among the farmers, there was a postponement of current satisfaction in anticipation of future gains. The results are line with Shwetha (2016) [6].

Achievement motivation: The data presented in Table 3 reveals the achievement motivation of the groundnut growers which indicated that 68.00 percent of respondents belongs to medium to high level of achievement motivation, whereas, one-third (30.00%) of them had low level of achievement motivation respectively. Farmers' medium accomplishment drive may be attributed to a number of factors, including their limited land holdings, primary school education, and social and economic circumstances, which may have prevented them from having a higher achievement orientation. The results are conformity with study conducted by Rajesh (2020) [5].

B. Relationship between personal, socio-economic and psychological characteristics of groundnut growers

The correlation was applied to measure the relationship between personal, socio-economic and psychological

characteristics of farmers with their performance, correlation test was applied and tested for statistical significance.

Education was found to be significantly related with performance of the farmers groundnut growers. The probable reason might be that Educated groundnut growers are also likely to have increased access to relevant literature and may be more receptive to novel ideas. Consequently, education plays a pivotal role in guiding individuals towards progress, fostering awareness about new technologies, and facilitating the adoption of improved practices in groundnut cultivation.

Annual income was found to be significantly related with performance of the groundnut growers. This could be due to the fact that higher income motivate to invest and adopt more crop cultivation practices in order to maximize their profits which directly influence the performance level of groundnut growers.

Land holding had a significant importance with the performance. An individual with high land holding is always capable to use new technologies compared to low land holder. Land is a primary source of livelihood and a critical factor that shapes the farming and cropping strategies and outcome.

Farming experience of groundnut growers was shown to be substantially correlated with their performance. The other probable reason might be that, those who involve more in farming activities, definitely help them to get more income, yield, status and recognition than less involved farmer irrespective of the age.

Table 4: Relationship between personal, socio-economic and psychological characteristics of groundnut growers with their performance

(n=120)

Sl. No	Independent variables	Total n=120
1	Age	0.178 ^{NS}
2	Education	0.787**
3	Family size	0.071 ^{NS}
4	Landholding	0.369*
5	Annual income	0.655**
6	Farming experience	0.394*
7	Extension contact	0.829**
8	Economic motivation	0.580*
9	Management orientation	0.431*
10	Mass media exposure	0.861**
11	Credit orientation	0.544*
12	Innovative proneness	0.437*
13	Risk bearing ability	0.652**
14	Achievement motivation	0.356*
15	Deferred gratification	0.387*

*Significant at 5 percent level of significance

**Significant at 1 percent level of significance

NS-Non significant

Extension contact had a significant importance with the performance of groundnut growers. This could be attributed to the fact that farmers with regular interactions with extension officers gained awareness about different cropping systems and their associated benefits, consequently enhancing their knowledge in this regard. The ongoing contact with extension officers also facilitated increased participation in various extension activities focused on

improved groundnut practices conducted by line departments, Raitha Samparka Kendras (RSK), and Agriculture Research Station (ARS) in Pavagada. This engagement resulted in the development of a harmonious relationship with officials and scientists, leading to frequent communication with extension agents. Such interactions became instrumental in acquiring information and discussing various aspects of groundnut cultivation, ultimately contributing to an enhanced understanding and motivation among farmers to adopt various improved production technologies, thereby influencing overall performance.

Economic motivation had a significant positive relation with the performance of groundnut growers. The probable reason might be that higher economic motivation creates desire and urge to gather or know more about production technologies for efficient utilization of resources to increase their productivity and earn more profits. The majority of farmers practiced subsistence farming and were looking for methods to increase their income through a variety of strategies, including other related activities.

Mass media exposure of the farmers growing groundnut had positive and significant relation with their performance level. There will be discussions on agriculture and market forecasting, as well as Krishi programs. These events will assist farmers have a thorough understanding of the current situation and the prospects for various marketing aspects in the media by offering information and market opportunities. Farmers' exposure to a wide range of mass media, including radio, television, newspapers, farm publications, and more, has aided in their learning of better agricultural techniques. More involvement in the mass media fosters innovation, risk-taking skills, drive, and high aspirations among farmers. They also attempt to learn more about the many marketing channels that are now in use, the prices that are competitive in the markets, and other marketing-related topics. The probable reason for this may be that in This in turn has influenced the over all performance of the farmers.

Management orientation had significant importance with performance of farmers growing groundnut. This may be because farmers play a significant managerial role in managing and making use of the resources that are available. As a result, they are able to implement the new technologies as well, which reduces the technological and yield gap and affects groundnut producers' productivity. Because of the always changing environment and people in their immediate surroundings, farmers frequently face novel and difficult scenarios that have little connection to past or present circumstances. As managers, farmers' main responsibility is to effectively manage and use the resources on their farm in order to achieve the intended outcomes.

Achievement motivation is significantly correlated with the performance of farmers growing groundnut. This is due to individuals with strong achievement motivation would be determined to reach their goal and would understand the significance of recommended practices, and this effort would lead to excellent farming performance. Achievement motivation is necessary for farmers to take up any activity, which helps farmers to decide and complete the tasks in certain direction. This in turn helps to achieve the desired crop yield.

Credit orientation had positive significant relation with the performance of farmers growing groundnut. The possible reason would be easy accessibility and availability of credit act as motivating and influencing factor in taking new innovative initiatives and adoption of improved technologies by full filling the financial requirements without involvement of money lenders.

Deferred gratification had relation the performance of groundnut farmers at five percent significance level. This is due to postponement of unwanted expenses by farmers helps to maintain the economic stability and controls the unnecessary expenditure and they utilized to purchase the inputs for next season and for other investment which brings reforms in the cultivation and meet the family expenses and needs in turn affect the performance level of individual.

Risk bearing ability had positive significant relation with the performance of farmers growing groundnut. The above tendency may be caused by farmers who are more willing to take risks trying to learn as much as they can from various sources about the most recent information about production to marketing, that is, how to grow and where to sell food. Because it allows them to reduce agricultural hazards, farmers with higher risk tolerance shown a favorable correlation with the performance of various cropping systems.

Innovative prones ability had positive relation with the performance of farmers growing groundnut. It could be due to the fact that innovative pronesness is a psychological trait which indicate a greater degree of willingness to change and try new ideas. Farmers possessing higher innovative pronesness always adopts new innovations or ideas in their farm as a result they will have better livelihood. The most important cause of innovative pronesness is an underlying willingness to change and to try new ideas. Thus, innovative pronesness has established positive and significant relationship with performance.

Conclusion

India, one of the world's top producers of agricultural products, possesses more than 155 million hectares of fertile land. Given the effects of climate change, resource depletion, and an impending food crisis, India needs to switch from aggressive farming to a precise farming system. India's rapidly changing socioeconomic landscape is opening up many possibilities for the use of innovative technologies in agriculture. Indian farmers should use sustainable technologies to increase productivity and farm income, taking into account their socioeconomic status. In order to feed the world's expanding population, it has the potential to cause a paradigm shift away from antiquated and harsh farming methods and toward digitally altered agricultural techniques.

Future Scope

The study focuses on only one district of Karnataka Thus; similar studies can be carried out in other agro climatic zones of the state and country in order to reach a more concrete conclusion.

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Conflict of interest

None

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