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Profile characteristics of stakeholders of Groundnut value chain in Telangana state

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Abstract
Groundnut (*Arachis hypogea*) is one of the important commercial crop grown in India. Globally, India ranks first in groundnut cultivation area and second in production. Considering the importance of value chain in the agriculture the present study was conducted in erstwhile Mahaboob Nagar district of Telangana state to study the profile characteristics of stakeholders in the groundnut value chain. 90 farmers were selected from three major Groundnut cultivating mandals coupled by 30 other stakeholders making a total of 120 stakeholders. Majority of the farmers fell under middle age category (42.22%), had secondary education (30.00%), with small farm size (40.00%), medium farming experience (63.33%), medium annual income (45.56%), credit availability from formal sources (45.56%), extension contact with fellow farmers (26.67%), medium communication pattern between partners (56.66%), medium negotiation pattern between partners (53.34 %), low training received (67.78%), medium creative potential (43.34%), medium risk taking ability (48.88%), medium knowledge on value chain (45.56%), medium quality management (44.44%) and medium market orientation (46.67%). Majority of the other stakeholders fell under old age (63.34%), had intermediate education (46.43%), medium experience (50.00%), medium annual income (43.33%), credit availability from formal sources (50.00%), fellow stakeholders (35.73%), high communication pattern between partners (53.57%), high negotiation pattern between partners (50.00%), medium training received (46.43%), medium creative potential (42.85%), medium risk taking ability (46.44%), high knowledge on value chain (46.44%), high quality management (53.57%) and medium market orientation (53.57%). Trainings received were observed low among groundnut farmers hence there is a need to address this gap.

Keywords: Groundnut, value chain, stakeholder, Telangana

1. Introduction
Groundnut (*Arachis hypogea*) is an important oilseed crop grown in India. Globally, India ranks first in groundnut cultivation area and second in production. India accounts for 31 per cent of the total Groundnut area in the world (24.6 million hectares) and 22 per cent of the total production (35.7 million tons). In Telangana, Groundnut is one of the major crops of the state being cultivated in area of 1.11 lakh ha during 2019- 2020 with a production of 2.65 lakh tons and productivity of 2391 kg/ha. (Indiastat 2019-20 & PJTSAU Groundnut outlook 2021) [3]. Almost every part of the Groundnut is of commercial value and is a rich source of edible oil (43-55 %) and protein (25-28%). It is produced mainly for domestic consumption in the form of edible oil, paste, snacks etc., leaves, stem and roots are used as animal feed. However, recorded level of contribution to the world's area and production has not translated into commensurate increased economic returns to the farmers in India in general and Telangana in specific. The present study was conducted with the objective to study the profile characteristics of the groundnut farmers and the other stakeholders in the groundnut value chain. Studying the profile characteristics like extension contact, training received, communication pattern between partners and negotiation pattern between partners helps Department of Agriculture to identify the areas that need great emphasis and to intensify their efforts to enhance the effectiveness of value chain.

2. Materials and Methods
The major growing districts of the state include Nagar Kurnool, Wanaparthy, Mahaboobnagar and Narayanapet.

(Indiastat 2019 & PJTSAU Groundnut outlook 2021) [2], which are part of erstwhile Mahaboobnagar district. Hence, study was conducted in erstwhile Mahaboobnagar district of Telangana. A total of 9 villages from three major Groundnut cultivating Mandals i.e., Uppununthala, Achampet and Vangoor of erstwhile Mahaboobnagar district were selected for the study and from each village 10 farmers were selected randomly. Commission agent, wholesaler, village trader, decorticator, oil expeller, TSSDC and retailer were found to be the other stakeholders involved in groundnut value chain. Thus a total of 30 other stakeholders were selected for the study by adopting Snowball sampling method. TSSDC official and the cooperative employee were excluded in the study of the profile characteristics as they were not performing any value chain activity or directly involved in the value chain. The data was collected personally with help of an interview schedule.

3. Results and Discussion

The profile characteristics such as age, education, unit size, experience, annual income, credit availability, extension contact, communication pattern between partners, negotiation pattern between partners, training received, creative potential, risk taking ability, knowledge on value chain, quality management and market orientation of groundnut farmers and other stakeholders are presented in Table 1.

3.1 Age: It was operationally defined as the number of completed years as reported by respondents at the time of investigation. The Table 1 revealed that most (42.22%) of the groundnut farmers were belonged to middle age category followed by old age (37.78%) and young age (20.00%). Whereas majority (63.34%) of the other stakeholders belonged to the old age followed by middle age (33.33%) and young age (3.33%). The probable reason might be that young farmers preferred non-agricultural occupations like running own business and proper salaried jobs over agriculture, which constantly subjects to the climatic vagaries leading to less profitability. Majority of the other stakeholders were old aged as they had ample experience in the enterprise to predict the quality of the produce and market trends of the produce. The findings are in accordance with the studies conducted by Aneesh (2017) [1] and Sahana (2018) [9].

3.2 Education: It was operationalized as formal education sought by the groundnut farmers and other stakeholders in the value chain. The findings presented in Table 1 depicted that nearly one third (30.00%) of the groundnut farmers were having secondary school education followed by intermediate (20.00%), primary school (17.77%), functional illiterate (16.66%), illiterate (10.00%) and graduation (5.55%). With respect to other stakeholders of the value chain majority (46.42 %) were belonged to intermediate education, followed by secondary (28.57%) and graduation (25.00%). From the above findings, it can be observed that majority of the groundnut farmers and other stakeholders has secondary education, this might be due the efforts and initiatives taken up by the State and Central Governments about the importance of the formal education for leading a better standard of living in the society. The above findings were in line with the findings of Manu (2013) [5] and Thilakarathne *et al.* (2018) [14].

3.3 Unit size: It was operationally defined as number of acres owned by farmers for groundnut cultivation and quantity of product handled/processed/bought in a marketing season by other stakeholders. The results illustrated in Table 1 revealed that most (40.00%) of the groundnut farmers were small farmers followed by marginal farmers (34.44%), small medium (21.11%), medium farmers (4.45%) and none of them were large farmers (10 ha and above). The probable reason for this trend in results may be due to fragmentation of land holdings from generation to generation led to most of the big farmers into small-medium and small farmers. The other reason might be some of the farmers sold out their lands and settled in the cities. The results get support from the findings of Deepthi (2013).

3.4 Experience: It was operationalized as number of years of experience of the farmers in groundnut cultivation and other stakeholders in handling of groundnut. From the Table 1 it was found that more than half (63.33%) of the groundnut farmers fell under middle level of farming experience followed by low level (25.56%) and high level of experiences (11.11%). In case of other stakeholders half (50.00%) of them were under medium level of experience followed by high (32.15%) and low levels of experience (17.85%). The trend of medium experience dominated the sample of both the groundnut farmers and the other stakeholders. This trend might be attributed to their age. Results are in conformity with the findings of Naik and Deshmukh (2016) [7] and Somaiah (2016) [12].

3.5 Annual income: It was operationally defined as total income obtained in rupees from the main and subsidiary occupations of the value chain partners. The results depicted in Table 1 revealed that less than half (45.56%) of the groundnut farmers were belonged to medium income category followed by low income category (33.33%) and high-income categories (21.11%). With regard to other stakeholders less than half (43.33%) of them belonged to medium income category followed by high income category (30.00%) and low-income category (26.67%). This may be due to groundnut being a commercial crop fetches good market price as well as majority of the farmers were belonged to small and semi medium land holdings. This would have enabled them to cultivate more than one crop in a year. The trend of other stakeholders attributed to their scale of operation. The similar findings were reported by Snigdharani (2021) [11] and Somaiah (2016) [12].

3.6 Credit availability: It was operationalized as the degree to which groundnut farmers and other stakeholders in the value chain able to access credit to meet the cost of cultivaltion, pre and post-harvest operations of groundnut cultivation and for participation in the value chain activities. From the results prescribed in Table 1 it can be inferred that most (45.56%) of the groundnut farmers had availed credit from formal sources followed by informal sources (37.78%) and own resources (16.67%). In case of other stakeholders, half (50.00%) of them had availed credit from the formal resources followed by own resources (28.57%) and informal sources (21.43%). This trend may be attributed to fact that, majority of the farmers availed crop loans from nationalized banks and also depended on SHG’s where collateral security was not a mandatory. The probable reason for the findings of other stakeholders might be they were beneficiaries of credit through MSME’s and nationalized banks. Some of the stakeholders were using their own resources as they were operating at large scale and had savings from the previous season. The results were in consonance with the findings of Nadhika (2017) [6] and Sahana (2018) [9].

3.7 Extension contact: It was operationalized as source and interval of contact made by groundnut farmers with extension agencies/officials working locally or outside the village. From the results in Table 1 it can be observed that most (26.67%) of the groundnut farmers had contact with fellow farmers followed by input dealers (18.89%), progressive farmers (16.67%), AEO's (15.56%), AO's (13.33%) and KVK scientists (8.89%). In case of other stakeholders most (35.73%) of them had contact with fellow stakeholders followed by APMC officials (21.46%), AEO's (17.81%), AO's (14.27%) and KVK scientists (8.89%) level of extension contact. Farmers frequently contacted fellow farmers regarding the seed variety, pesticide application and market trends as they found them easily accessible and trustworthy. With respect to the other stakeholders contacted the fellow stakeholders regarding the seed varieties, quality standards and market price. The findings are in accordance with the findings of Nadhika (2017) [6].

3.8 Communication pattern between partners: It was operationally defined as the extent to which value chain partners interact with the other partners in the chain and sustain as a closely-knit group. The results noticed in Table 1 depicted that more than half (56.66%) of the groundnut farmers had medium level of communication pattern between partners followed by high (30.00%) and low level of communication pattern between partners (13.34%). In case of other stakeholders more than half (53.57%) of them had high communication pattern between partners followed by low (25.00%) and medium level of communication pattern (21.43%). Medium level of communication was found among both the groundnut farmers and other stakeholders and APMC had been the most important platform bringing farmers and other stakeholders together and facilitating the selling of the produce. Information like quality of the produce, commission charges and market price was shared among themselves. The results are in conformity with Parveen (2021) [8].

3.9 Negotiation pattern between partners: It was operationally defined as the degree to which value chain partners tend to discuss and reach an agreement with other partners in the chain and the ability to sustain in the chain. From the Table 1 it can be known that just more than half (53.34%) of the groundnut farmers had medium level of negotiation pattern between partners followed by high (32.22%) and low level of negotiation pattern between partners (14.44%). With regard to the other stakeholders, high level of negotiation was reported by half (50.00%) of them followed by medium (39.28%) and low level of negotiation pattern (10.72%). The probable reason might be farmers were involved in negotiating with the commission agents, village traders and wholesalers in the value chain on quality, quantity and prices. The results are in consonance with the findings of Parveen (2021) [8].

3.10 Training received: Training in groundnut production was operationalized as training received by the farmers and other stakeholders on different practices in groundnut value chain. From the Table 1 it could be observed that majority (67.77%) of the groundnut farmers fell under low trainings received category followed by medium (27.77%) and high trainings received category (4.44%). In case of other stakeholders nearly half (46.66%) of them received medium level of trainings, followed by low (33.33%) and high level of trainings (20.00%). The probable reason for low participation in trainings might be due to coincidence of the trainings schedule with critical seasonal activities and non suitability of location and topics. Hence, KVK's and Department of Agriculture should involve farmers and other stakeholders in preparation of training calendar and finalization of the training topics which will address the issues related to low participation. Further, they should also intensify their efforts to train respondents on value chain operations like quality standards, value addition, post-harvest handling etc., The results were in conformity with the findings of Sultana *et. al* (2015) [13].

3.11 Creative potential: This variable was operationally defined as the degree to which a respondent can engage in creative work with a set of his/her cognitive and conative abilities. An insight of the results in Table 1 clearly outlined that majority (43.34%) of the groundnut farmers had medium creative potential followed by low (40.00%) and high creative potential (16.66%). With regard to other stakeholders most (42.85%) of them had medium creative potential followed by high (32.15%) and low creative potential (25.00%). The medium category of creative potential dominated among the sample, the probable reason might be stakeholders were more inclined towards trying new ideas and ways in production and marketing activities of value chain, as groundnut is one of the important oilseed crops, fetches more profits.

3.12 Risk taking ability: It was operationally defined as the degree to which the respondent is willing to take risk and face uncertainty in his/her business operations. An overview of findings in Table 1 disclosed that nearly half (48.88%) of the groundnut farmers had medium level of risk taking ability followed by high (38.88%) and low level of risk taking ability (12.24%). In case of other stakeholders majority (46.44%) of them had medium level of risk taking ability followed by high (39.28%) and low level of risk taking ability (14.28%). The reason might be that, as both groundnut farmers and other stakeholders had medium experience in farming and enterprising activities tends to take a calculated risk to earn optimal returns to make the occupation profitable and successful. Hence, farmers need to be sensitized about the various factors associated with risks in ground nut value chain for efficient management of the same. The results were in line with the findings of Sirilakshmi (2022) [10].

3.13 Knowledge on value chain: It was operationalized as extent of understanding a value chain partner has in the aspects of value chain in groundnut which was acquired either through experience or education. The findings presented in Table 1 revealed that most (45.56%) of the groundnut farmers had high knowledge on value chain followed by medium (43.33%) and low knowledge on value chain (11.11%). In case of other stakeholders majority (46.44%) of them had high knowledge on value chain followed by medium (39.28%) and low knowledge on value chain (14.28%). Farmers had good extension contact, negotiation and communication pattern between partners contributed to have good knowledge on value chain. All the stakeholders of the value chain were more inclined to obtain better price and profits compelled the stakeholders to be updated with the value chain might be the reason for the trend in the results.

The results are in conformity with the findings of Naik and Deshmukh (2016) [7].

3.14 Quality management: It was operationalized as the degree to which an individual is aware of all the necessary requirements for maintaining quality. It was observed from the results presented in Table 1 that most (44.44%) of the groundnut farmers had medium level of quality management followed by medium (27.77%) and low level of quality management (27.77%). Most of the farmers ensured the adoption of GAP's, primary level of grading and sorting at the farm level might be the reason for the above trend in results. In case of other stakeholders just more than half (53.57%) of them had high level of quality management followed by medium (32.15%) and low level of quality management (14.28%). Majority of the other stakeholders'added value performing grading and sorting prevented the produce from deteriorating/contamination by aflatoxin through adoption of scientific storage methods and ensured that produce products as per the consumer preferences and market demand.

3.15 Market orientation: It was operationalized as the degree to which an individual is oriented towards market news/trends, market demand and consumer needs. The results presented in Table 1 revealed that most (46.66%) of the groundnut farmers had medium level of market orientation followed by low (31.11%) and high level of market orientation (21.11%). In case of other stakeholders just more than half (53.57%) of them had medium level of market orientation followed by high (28.57%) and low level of market orientation (17.86%). Farmer's allocated land based on the market trends of groundnut and had long term relation with the market functionaries might be the reason for the observed results. The results were in consonance with the findings of Lairenjam (2020) [4].

Table 1: Distribution of stakeholders of Groundnut value chain based on their profile characteristics (N=118)

S. No.	Profile Characteristic	Groundnut farmers (n=90)		Other stakeholders (n=28)	
		Frequency	**Percentage**	**Frequency**	**Percentage**
1	**Age (Years)**				
	Young age (Up to 35 years)	18	20.00	1	3.33
	Middle age (35-50)	38	42.22	10	33.33
	Old age (Above 50)	34	37.78	19	63.34
2	**Education**				
	Illiterate	9	10.00	0	0
	Functional literate	15	16.66	0	0
	Primary school	16	17.78	0	0
	Secondary school	27	30.00	8	28.57
	Intermediate	18	20.00	13	46.43
	Graduation	5	5.56	7	25.00
3	**Unit size**			**Other stakeholders**	**Average quantity handled in Qtls./year (Approx.)**
	Marginal	31	34.44	TSSDC	5000 – 10,000 quintals
	Small	36	40.00	Wholesaler	5000 – 10,000 quintals
	Small medium	19	21.11	Decorticator	7,500 – 45,000 quintals
	Medium	4	4.45	Retailer	1000 - 2,000 quintals
	Large	0	0	Oil expeller	3000 – 5000 quintals
				Village trader	3,000 – 5,000 quintals
				Commission agent	4,500 – 15,000 quintals
4	**Experience**				
	Low	10	25.56	5	17.85
	Medium	57	63.33	14	50.00
	High	23	11.11	9	32.15
5	**Annual income**				
	Low	30	33.33	8	26.67
	Medium	41	45.56	13	43.33
	High	19	21.11	9	30.00
6	**Credit availability**				
	Formal sources	41	45.56	14	50.00
	Informal sources	34	37.78	6	21.43
	Own resources	15	16.66	8	28.57
7	**Extension contact (farmers)**	**Frequency**		**Percentage**	
	KVK scientists	8		8.89	
	AEO's	14		15.56	
	AO's	12		13.33	
	Input dealers	17		18.89	
	Progressive farmers	15		16.67	
	Fellow farmers	24		26.67	
	Other stakeholders				
	KVK scientists	3		10.73	
	AEO's	5		17.82	
	AO's	4		14.27	
	APMC officials	6		21.46	
	Fellow stakeholders	10		35.73	
8	**Communication pattern between partners**				

	Low	12	13.34	7	25.00
	Medium	51	56.66	6	21.43
	High	27	30.00	15	53.57
9	**Negotiation pattern between partners**				
	Low	13	14.44	3	10.72
	Medium	48	53.34	11	39.28
	High	29	32.22	14	50.00
10	**Training received**				
	Low	61	67.78	9	32.14
	Medium	25	27.78	13	46.43
	High	4	4.44	6	21.43
11	**Creative potential**				
	Low	36	40.00	9	32.15
	Medium	39	43.34	13	42.85
	High	15	16.66	7	25.00
12	**Risk taking ability**				
	Low	11	12.24	4	14.28
	Medium	44	48.88	13	46.44
	High	35	38.88	11	39.28
13	**Knowledge on value chain**				
	Low	10	11.11	4	14.28
	Medium	41	45.56	11	39.28
	High	39	43.33	13	46.44
14	**Quality management**				
	Low	25	27.78	4	14.28
	Medium	45	44.44	9	32.15
	High	25	27.78	15	53.57
15	**Market orientation**				
	Low	28	31.11	5	17.86
	Medium	42	46.67	8	28.57
	High	20	22.22	15	53.57

4. Conclusion

Farmers of the study area fell under medium category in the most of the profile characteristics. But in the trainings received they fell under low category. Hence it is suggested to intensify the efforts to conduct proper trainings on the post-harvest management, value addition of groundnut and marketing of the produce. With respect to communication pattern between partners, negotiation pattern between partners and market orientation of other stakeholders of the groundnut value chain fell under high category indicating their attitude towards business/profit orientation.

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