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Profile characteristics of turmeric farmers in Mahabubabad district of Telangana state, India

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Abstract

The present investigation, entitled “Profile characteristics of turmeric farmers in Mahabubabad district of Telangana state, India” was carried out with the objective to find turmeric farmers of Mahabubabad. For this study, we have collected the turmeric area of different mandals of the district. Based on mandal-wise data, we have selected two mandals, namely Kesamudrum and Nellikuduru mandals, which have the highest area in the district. A total of 120 farmers were selected randomly with 60 number from each mandal. The structural schedule was prepared based on the objective and data collected personally. The collected data from the farmers were analysed with an Expost research design. The study findings indicates that, in terms of profile characteristics majority of the farmers were in middle aged (65.00%) and had completed primary school education (28.34%), were exposure to mass media (55.83%) and contact with extension to (50.00%), and had medium level to low level of innovativeness (45.00%), and social participation (48.34%) respectively. The study clearly indicates that a majority of turmeric farmers fall within the medium category across several socioeconomic and psychological dimensions. This uniform pattern underscores the need for designing customized developmental programs that cater specifically to this dominant group. Strengthening extension support systems, improving access to institutional credit, ensuring timely technical guidance, and promoting farmer group approaches could help in transforming medium-performing farmers into progressive cultivators.

Keywords: Profile characteristics, turmeric farmers, medium level of extension contact, Mahabubabad

1. Introduction

Turmeric (*Curcuma longa* L.) is known as “Indian Saffron” and is referred to as the “Golden Spice of India”. India primarily grows it during the *kharif* season. The “Golden spice” is a necessary spice that has been made in India since ancient times. It is known to Indian people as “The land of spices and flavours” (Gayathri *et al.*, 2025) [3]. Turmeric is an important commercial crop of tropical and sub-tropical regions and has long been recognised for culinary, therapeutic and industrial significance. The increasing demand for natural health products and processed for has further enhanced the economic importance of turmeric cultivation in recent times (Spice board 2023) [9]. India occupies a dominant position in the global turmeric sector in terms of area, production, consumption and export. The crop is grown across diverse agro-ecological regions, with major production concentrated in states such as Maharashtra, Tamil Nadu, Karnataka, Telangana and Odisha (NHB, 2024) [8].

In Telangana, favourable climatic conditions, expanding market opportunities and institutional support have encouraged farmers to adopt turmeric as a remunerative enterprise under diversified farming systems (Government of Telangana, 2023) [4]. India occupies a dominant position in the global turmeric sector in terms of area, production, consumption and export. The crop is grown across diverse agro-ecological regions, with major production concentrated in states such as Maharashtra, Tamil Nadu, Karnataka, Telangana and Odisha (NHB, 2024) [8]. In Telangana, favourable climatic conditions, expanding market opportunities and institutional support have encouraged farmers to adopt turmeric as a remunerative enterprise under diversified farming systems (Government of Telangana, 2023) [4]. Within the state, turmeric cultivation is traditionally confined to a few major districts; however, its expansion into non-traditional areas such as Mahabubabad has been observed in recent years.

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Farmers are increasingly shifting towards high-value horticultural crops in response to price incentives, income instability in field crops and the need for better livelihood security. The promotion of horticulture and spice crops has been recognized as an important strategy for enhancing farm profitability and agricultural growth (Birthal *et al.*, 2015) ^[1].

The success of any crop enterprise depends not only on improved technologies but also on the characteristics of the farming community. Farmers' personal, socio-economic and psychological attributes influence their decision-making behaviour, resource use efficiency and level of adoption of recommended practices. Variables such as age, education, landholding, farming experience, income, social participation, extension contact, risk orientation and market exposure play a crucial role in shaping technology adoption and farm performance (Narendar *et al.*, 2025) ^[7]. India is the largest producer, consumer and exporter of turmeric, contributing nearly 75-80 per cent of the world's total production. The crop is cultivated across diverse agro-climatic regions of the country, with major producing states including Maharashtra, Telangana, Karnataka, Tamil Nadu, Odisha and Andhra Pradesh. Turmeric plays a significant role in the spice economy of India and serves as an important source of income for small and marginal farmers (NHB, 2024; Spices Board, 2023) ^[8,9].

In Telangana, turmeric has emerged as one of the major commercial spice crops due to favourable soil and climatic conditions, well-established markets and government support for horticultural diversification. The crop is mainly cultivated in districts such as Nizamabad, Jagtial, Nirmal, Warangal and adjoining regions. Expansion of turmeric cultivation in the state is largely driven by its higher profitability compared to traditional field crops and its potential to enhance farm income and livelihood security (Government of Telangana, 2023) ^[4]. Despite the growing importance of turmeric cultivation in emerging areas, systematic information on the socio-economic and communication profile of turmeric growers in Mahabubabad district is limited. Understanding the background characteristics of farmers in this region is essential for identifying existing gaps and constraints, and for formulating appropriate interventions to improve productivity, profitability and sustainability. Therefore, the present investigation was undertaken to analyse the profile characteristics of turmeric farmers in Mahabubabad district of Telangana state.

1.1 Objectives of the study

To Study profile characteristics of farmers of Turmeric farmers in Mahabubabd district.

1.2 Scope of the study

The study was carried out to examine the profile characteristics of turmeric growers in Mahabubabad district of Telangana under an ex-post facto research framework. It aimed to analyse the personal, socio-economic and psychological attributes of farmers and their association with the level of involvement in turmeric cultivation. The investigation intends to document the existing socio-economic conditions and behavioural tendencies of growers in the region. The information generated will be useful for researchers, planners and extension functionaries to understand field-level realities. The findings may assist in identifying critical limitations and in developing location-specific training programmes, improved extension approaches and appropriate interventions for enhancing productivity, income and long-term sustainability of turmeric farming.

2. Research Methodology

2.1. Research Design

The present investigation was carried out using an ex-post facto research design along with an exploratory approach. This design was considered suitable because the variables related to farmers' characteristics and their farming situation already existed and could not be manipulated by the researcher. The study aimed to analyse the existing conditions and relationships among selected variables as they naturally occurred in the field.

2.2. Sampling Design

2.2.1. Study area

The study was conducted in Mahabubabad district of Telangana state. The district was purposively selected due to the increasing cultivation of turmeric and its growing importance as a commercial crop in the region. The researcher's familiarity with the local area and proficiency in the regional language helped in establishing better communication with respondents, which facilitated accurate data collection and a more detailed understanding of the field situation.

2.2.2. Selection District

The study area, Mahabubabad district of Telangana state, was purposively chosen since the investigator is associated with Krishi Vigyan Kendra, Malyal, situated in the district, enabling better field accessibility and coordination during data collection.

2.2.3. Selection of Mandals

Among the sixteen mandals in Mahabubabad district, two mandals, namely Kesamudram and Neelikkuduru, were purposively selected based on their larger area under turmeric cultivation.

2.2.4. Selection of villages and respondents

Each Mandal two villages, each village thirty farmers thus a total of 120 farmers selected for the study.

2.2.5 Data and analytical procedures

Primary data were collected using a pre-structured interview schedule containing open-ended items to obtain information on the profile characteristics of turmeric farmers. The responses obtained from the respondents were carefully compiled, classified, and coded for analysis. The data were then summarized and interpreted using appropriate statistical tools such as frequency and percentage distribution.

3. Results and Discussion

3.1. Profile of the selected Turmeric cultivated farmers

3.1.1 Age

Table clearly shows that the majority (65.00%) turmeric farmers were belonged to middle age followed by young (18.34%) and old (16.66%) age. This indicates that middle aged farmers actively involved in turmeric cultivation due to their high farming experience and decision-making ability followed by young farmers less engaged in rational crops and explore alternative occupations or migration opportunities. This result was consistent with what Gangadhar (2009) ^[2] found.

Table 1: Distribution of respondents according to their age

S. No.	Category	Turmeric farmers (n=120)	
		Frequency	Percentage
1.	Young age (up to 35)	22	18.34
2.	Middle age (36-55)	78	65.00
3.	Old age (>55years)	20	16.66

3.2 Education

Table 2 shows that the majority of turmeric farmers had only completed primary school (28.34%), followed by illiteracy (23.34%), high school (21.66%), intermediate (15.00%), undergrad (10.00%), and postgraduate (1.66%), in that order. The majority of turmeric farmers had only completed primary school (28.34%), with the next lowest levels of education being illiterate (23.34%), high school (21.66%), intermediate (15.00%), undergrad (10.00%), and postgraduate (1.66%), in that order.

Table 2: Respondent Distribution based on educational attainment

S. No.	Education Level	Turmeric farmers (n=120)	
		Frequency	Percentage
1.	Illiterate	28	23.34
2.	Primary School	34	28.34
3.	High school	26	21.66
4.	Intermediate	18	15.00
5.	Under graduate	12	10.00
6.	Post graduate	02	1.66

The turmeric farmers low level of formal education, Limited educational access may affect their ability to access, interpret, and adopt modern farming technologies, scientific cultivation practices, and market information effectively. Small proportion of farmers with higher educational qualifications indicates gradual shift towards educator's involvement agriculture. Strengthen extension service, training programmes and field demonstrations could help farmers with lower education levels improve their knowledge base and enhance productivity.

3.3 Mass media exposure

Table 3 showed that the majority of farmers who grew turmeric (55.83%) had a medium degree of mass media exposure, followed by high (31.66%) and low (12.51%), in that order. Medium mass media exposure plays a crucial role in disseminating knowledge on improved cultivation practices, pest management, and market trends. The moderate level of exposure suggests that while farmers are aware of mass media and utilization. (Gayathri *et al.*, 2025) [3].

Table 3: Respondent distribution based on exposure to the media

S. No.	Category	Turmeric farmers		
		Low (7-14)	Medium (15-21)	High (22-28)
1	Frequency	16	66	38
2	Percentage	12.51	55.83	31.66

4. Extension contact

The majority of farmers (50.00%) reported medium levels of extension contact, followed by high (28.34%) and low (21.66%), as shown in table 4. These results are consistent with those of Maratha *et al.* (2017) [6]. Turmeric farmers have a medium level of extension contact to high level, which suggests that there is room for better institutional assistance and connection with progressive farmers, input merchants, and agricultural officers. Farmers with low extension contact might face difficulties accessing timely guidance related to pest management, seed selection, and marketing.

Table 4: Respondent distribution based on their contact to extension

S. No.	Category	Turmeric farmers (n=120)		
		Low (11-17)	Medium (18-25)	High (26-33)
1	Frequency	26	60	34
2	Percentage	21.66	50.0	28.34

5. Innovativeness

Table 5 showed that the majority of farmers (45.00%) had low levels of innovation, followed by medium levels (35.0%) and low levels (20.00%). Almost half of farmers prefer conventional methods and wait for results before experimenting with new technology or practices.

This group often needs strong evidence, peer examples, and repeated extension efforts before adopting innovations and highly innovative farmers can be used as "lead" or "progressive" farmers for front-line demonstrations, farmer-to-farmer training, and social proof, helping to pull medium and low categories toward high innovativeness

Table 5: Distribution of respondents according to their innovativeness

S. No.	Category	Turmeric farmers (n=120)		
		Low (6-8)	Medium (9-10)	High (11-12)
1.	Frequency	54	42	24
2.	Percentage	45.00	35.0	20.00

6. Social participation

Table 6 revealed that the majority of farmers (48.34%) had a medium degree of social participation, followed by high (35.00%) and low (16.66%), in that order. Although they participate in certain community groups (such as cooperatives, SHGs, farmer clubs, or village meetings), the majority of farmers with medium social participation (48.34%) say they are not actively involved or in leadership positions. This group is accessible for collective activities but may still need motivation and facilitation to become more actively. Efforts such as home visits, inclusive meeting timings, and special awareness campaigns are needed to bring low-participation farmers into mainstream organizations, ensuring that extension services reach all categories.

Table 6: Respondents Distribution according to their social participation

S. No.	Category	Turmeric farmers (n=120)		
		Low (10-16)	Medium (17-23)	High (24-30)
1.	Frequency	20	58	42
2.	Percentage	16.66	48.34	35.00

7. Risk preference: Table 7 revealed that the majority of farmers (45.00%) preferred a medium level of risk, followed by low (36.66%) and high (18.34%), in that order. To eliminate perceived ambiguity, extension tactics should prioritize realistic demonstrations, gradual adoption (e.g., trial on prioritise realistic demonstrations, gradual adoption (e.g., trial on a small area), and unambiguous proof of advantages for farmers who support policies like crop insurance, minimum support price assurance, timely credit, and input subsidies.

Table 7: Respondents' distribution according to their risk preference

S. No.	Category	Turmeric farmers (n=120)		
		Low (4-6)	Medium (7-9)	High (10-12)
1	Frequency	44	54	22
2	Percentage	36.66	45.00	18.34

8. Economic orientations

Table 8 showed that the majority of farmers (48.33%) had a medium level of economic orientation, followed by low (13.33%) and high (38.34%), in that order. Traditional, subsistence farming is the main focus of low economic orientation, with little attention paid to market interaction or profit maximization.

38.34% had high economic orientation leads to demonstrate a stronger profit motive and are more responsive to market signals. They are likely to adopt modern technologies, diversify their crops, and engage in value addition or marketing activities, strengthening access to extension services, training, credit, and market information could help more farmers shift from low to higher levels of economic orientation, thereby enhancing rural incomes and agricultural sustainability.

Table 8: Respondents distribution according to their economic orientation

S. No.	Category	Turmeric farmers		
		Low (6-9)	Medium (10-13)	High (14-18)
1	Frequency	46	58	16
2	Percentage	38.34	48.33	13.33

9. Conclusion

The results revealed that Majority of the turmeric farmers belonged to Middle age group, indicating that the active and productive segment of the rural population continues to play a vital role in turmeric cultivation. This demographic feature reflects both physical capability and maturity in managing farm operations effectively. Moreover, the finding that most respondents possessed less than 2.5 acres under turmeric cultivation highlights the prevalence of small and marginal landholdings, which is a typical characteristic of Indian agriculture. Such limited land resources may constrain the scale of production and restrict opportunities for adopting advanced technologies or mechanization, hence emphasizing the need for targeted interventions.

The medium level of farming experience reported among the respondents suggests that the farmers have accumulated a reasonable amount of practical knowledge about turmeric cultivation but may still benefit from technical guidance to enhance productivity and profitability. Their educational qualification, predominantly up to high school level, reflects a moderate ability to comprehend and adopt scientific farming practices, though additional capacity-building efforts through training and extension education could further strengthen their knowledge base.

Social participation revealed that most farmers belonged to a medium social participation category, indicating a moderate to high in social participation those actively involved in community organizations, cooperatives, and group activities. These farmers typically join farmer clubs, self-help groups (SHGs), Panchayat meetings, or agricultural cooperatives to share knowledge and access benefits. Similarly, medium levels of extension contact and economic orientation signify that farmers have some exposure to advisory services and a fair motivation toward improving their economic condition, yet there remains scope to intensify their interaction with extension agencies and to promote entrepreneurial attitudes.

The study clearly indicates that a majority of turmeric farmers fall within the medium category across several socioeconomic and psychological dimensions. This uniform pattern underscores the need for designing customized developmental programs that cater specifically to this dominant group. Strengthening

extension support systems, improving access to institutional credit, ensuring timely technical guidance, and promoting farmer group approaches could help in transforming medium-performing farmers into progressive cultivators. Therefore, policy planners and extension agencies should concentrate on enhancing the knowledge, skills, and economic resources of this group to achieve sustainable turmeric production and improved livelihood outcomes (Kishore *et al* 2025) ^[5].

10. Acknowledgement

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11. Conflict of Interest

The authors declare they do not have any conflict of interest.

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