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Personal, socio-economic and psychological characteristics of onion growers in Chitradurga district of Karnataka

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Abstract

Horticultural crops play a significant role in Indian economy by creating jobs, supplying raw materials to multiple food processing companies and enhancing farm profitability through increased production and foreign exchange from exports. At global level, India stands second in the production of potato, onion, cauliflower, brinjal and cabbage. Within the realm of vegetables, onion stand out as the foremost bulb crop and most favoured vegetable crop. In this backdrop, the present study was conducted in Chitradurga district of Karnataka in the year 2022-2023 to study the personal, socio-economic and psychological characteristics of onion growers with a total sample size of 120 growers. Ex-post facto research design was adopted. Data was collected by using pre-tested personal interview method. Further, appropriate statistical tools were employed to analyse the collected data. The study revealed that, nearly three fifth (59.16%) of onion growers were middle aged, two-fifth of respondents were educated up to high school, Majority of onion growers were had medium level family size (67.50%), farming experience (35.00%), annual income (45.00%), risk orientation (45.84%), innovative proneness (40.00%), scientific orientation (50.00%), market orientation (45.00%), extension contact (40.84%), mass media exposure (45.00%) and significant number (38.34%) of onion growers belonged to medium level of extension participation.

Keywords: Onion growers, personal, socio-economic and psychological characteristics

Introduction

The onion (*Allium cepa* L.), belonging to the Alliaceae family, is known by various names such as Earulli, Ullagaddi, Piyaz, Palandu, Kanda, etc. It thrives in diverse climates throughout the country. This versatile vegetable is utilized in both its green and mature stages, adding flavour to salads, as well as serving as a spice in a range of culinary delights and soups. The flavour and pungency of onions are valued because of the volatile oil "allyl propyl disulphide," an organic molecule rich in sulphur. Minerals including phosphate, calcium, and carbohydrates are abundant in onions. Additionally, it has vitamin C and protein. Onion has a large domestic market since they are an essential vegetable and condiment in every kitchen. The green leaves and young and old bulbs are used to season dishes, make soups and sauces, or consumed raw. Onion ranks second in area and third in production out of all vegetables globally. China produces 38.9 million metric tons of onions annually; India secured second place in terms of production with 26.6 million metric tons. India exported 21.8 lakh tons of fresh onions for a total of Rs. 3468.83 crores during the 2018–19

fiscal year. Maharashtra, Karnataka, Andhra Pradesh, and Tamil Nadu are the states that produce big onions, which are exported to the Middle East, Malaysia, Singapore, Bangladesh, Sri Lanka, and other countries.

In India, the onion cultivation covers an extensive area of 19.41 million hectares, yielding a production of 31.68 million metric tons. During the 2021–22 growing season, Maharashtra took the lead among all states in both onion cultivation area and production and Karnataka stood second with total area of 2.31 lakh hectares, resulting in a production of 27.79 lakh tons and an average productivity of 11.99 tons per hectare followed by Madhya Pradesh, Rajasthan and Gujarat. The demand for onion bulbs is steady throughout the year due to the all-round spread of onion consumption. Onion production appears to vary from year to year with fluctuation in production. The consumers become unhappy as a result of the price increase due to low production, while middlemen abuse this situation and take advantage of both producers and consumers. Therefore, it is crucial to examine the personal and socio-economic characteristics of farmers and their relation with different

behavioural aspects. This analysis provides a fundamental and transparent understanding of the farmers' backgrounds, aiding in the development of strategies to promote Precision crop management. In this backdrop, the present study was carried out with the following specific objectives: To study the personal, socio-economic and psychological characteristics of onion growers.

Methodology

The study was conducted in Chitradurga district of Karnataka in 2023. It is one of the leading producers of onion in Karnataka. Chitradurga district has six taluks, out of which Challakere and Hiriyur taluks were selected purposively considering the highest area and production. From each taluk, six onion growing potential villages were selected. Thus, the total sample size from these villages is 120. Ex-post facto research design was adopted. The data were collected by personal interview method through structured interview schedule of analysed by employing suitable statistical tools like arithmetic mean, standard deviation, frequencies & percentage. The findings were meaningfully interpreted and relevant conclusion were drawn.

Results and Discussion

1. Personal, socio-economic and psychological characteristics of onion growers

1.1 Personal characteristics of onion growers

Age: The data presented in Table 1 shows that nearly three fifth (59.16%) of the onion growers comes under middle age category followed by old age category (21.67%) and young age category (19.17%), respectively. The probable reasons for the above trend might be that individuals in their middle age have typically taken up their parental occupation, and as they grow older, they may find it physically challenging to continue agricultural practices. Meanwhile, younger individuals may not yet possess the necessary capabilities or experience to assume these responsibilities effectively. This finding was supported by the findings of Laxmi (2017) [7].

Education: The data in Table 1 showed that, two-fifth (40.00%) of onion growers were educated up to high school, followed by 27.50 percent, 16.66 percent and 8.34 percent of them had PUC, Graduation and above level and primary school, respectively and only 7.50 percent of them were illiterate. This is due to existence of educational institutions in rural regions has increased alongside a heightened recognition of the significance of education in fostering overall personal growth. The results of this investigation were in line with findings of Khating *et al.* (2018) [6].

Family size: It was elucidated from table 1 that, more than three-fifth (67.50%) of onion growers had medium size family followed by large family size (18.34%) and small size family (14.16%). A medium family size provides the flexibility to take calculated risks in development activities while encourage effective division of labor and the exchange of ideas. Larger families may struggle with resource allocation for investments, while smaller families may face limitations due to resource scarcity. Therefore, a medium- sized family is seen as optimal for fostering growth. The present findings supported by Shashidhar

(2018) [10].

Farming experience: It was found from table 1 that, more than one-third (35.00%) of the onion growers belonged to moderate farming experience category followed by more experience (33.33%) and less experience category (31.67%). This is due to substantial proportion of both small and large farm growers fall within the medium age group and have pursued farming after discontinuing their education. Additionally, a significant number of respondents fall into the category of more farming experience, mainly because of farmers are depend on agriculture and they growing onion every year. These findings are supported by Khandvi *et al.* (2013) [5].

Annual income: The data in Table 1 showed that, more than two-fifth (45.00%) of the onion growers belonged to medium income category. Whereas, 37.50 percent and 17.50 percent falls under low and high income category, respectively. The probable reasons for this trend could include factors such as average productivity levels, the need to sell their produce immediately to obtain price, lower prices received for their agricultural products, and the presence of medium-sized land holdings. The findings of current study were supported by the result of Tavhare (2016) [11].

Table 1: Personal characteristics of onion growers

Sl. No.	Characteristics	Category	(n=120)	
			Total n=120	
			No.	%
1.	Age	Young (< 35 years)	23	19.17
		Middle (35 to 50 years)	71	59.16
		Old (>50 years)	26	21.67
2.	Education	Illiterate	09	7.50
		Primary school	10	8.34
		High school	48	40.00
		PUC	33	27.50
		Graduation and above	20	16.66
3.	Family size	Small (1-3 members)	17	14.16
		Medium (4-6 members)	81	67.50
		Large (> 7 members)	22	18.34
4.	Farming experience	Less (upto 14 years)	38	31.67
		Moderate (15-30 years)	42	35.00
		More (>30 years)	40	33.33
5.	Annual income Mean = 248050 SD = 80955	Low (< 207572.5)	45	37.50
		Medium (207572.5-288527.5)	54	45.00
		High (> 288527.5)	21	17.50

1.2 Socio-economic and communication characteristics of onion growers

Market orientation: Table 2 indicated that, more than two-fifth (45.00%) of onion growers had medium market orientation followed by 29.16 percent, 25.84 percent had high and low market orientation, respectively. This is due to medium level of extension contact, extension participation and mass media exposure of onion growers. The results were supported by the finding of Shashidhar (2018) [10].

Extension contact: From the Table 2 it could be seen that, more than two fifth (40.84%) of onion growers were having medium level of extension contact, followed by low (36.66%) and high (22.50%) level of extension contact. This

keen interest in extension activities plays a major role in enabling farmers to access up-to-date information about the latest innovations and technologies. Consequently, they can seek guidance from extension experts and subject matter specialists, which significantly enhances their knowledge and encourages the adoption of these practices. These findings are in accordance with the findings of Sanjota (2014) [8].

Mass media exposure: It is found from Table 2 that, more than two fifth (45.00%) of onion growers had medium level of mass media exposure, whereas 27.50 percent of respondents had high and low mass media exposure equally. This is due to that, they heavily relied on mass media not only for news and information but also for entertainment and leisure and it is contributed to raising awareness levels among the farming population, facilitating access to the latest developments, which is indicative of the respondents' interest in staying informed. The results are in conformity with the findings of Beemudada (2015) [4].

Extension participation: It is clear from Table 2 that, significant number (38.34%) of onion growers belonged to medium level of extension participation, followed by low (35.00%) and high (26.66%) level of extension participation, respectively. The probable reason for this situation could be the reduced interest among onion growers, primarily stemming from their limited availability of time to engage in extension activities. Consequently, this could result in a medium level of extension contact. Another contributing factor might be the insufficient promotion or publicity surrounding these extension activities, which could further deter participation. These findings are supported by Shashidhar (2018) [10].

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

Sl. No.	Characteristics	Category	Total n=120	
			No.	%
1	Market orientation Mean = 16.20 SD = 1.01	Low (<15.70)	31	25.84
		Medium (15.70-16.70)	54	45.00
		High (>16.70)	35	29.16
2	Extension contact Mean = 7.92 SD = 3.04	Low (<6.40)	44	36.66
		Medium (6.40-9.44)	49	40.84
		High (>9.44)	27	22.50
3	Mass media exposure Mean = 5.51 SD = 2.05	Low (<4.48)	33	27.50
		Medium (4.48-6.53)	54	45.00
		High (>6.53)	33	27.50
4	Extension participation Mean = 7.00 SD = 3.00	Low (<5.50)	42	35.00
		Medium (5.50-8.50)	46	38.34
		High (>8.50)	32	26.66

1.3 Psychological characteristics of onion growers

Risk orientation: It is evident from the data reported in Table 3 that, more than two-fifth (45.84%) of the onion growers had medium level of risk orientation, whereas 30.83 percent and 23.33 percent of the respondents had low and high level of risk orientation, respectively. The medium level of risk among respondents may be due to their poor economic conditions, uncertainties surrounding both crop yield and market prices for their agricultural produce and onion growers who were having readiness to make much

economic earning from small unit. They were prepared to take risks. The results of this investigation were in line with findings of Khating *et al.* (2018) [6].

Innovative proneness: Table 3 indicated that, two-fifth (40.00%) of onion growers had medium innovative proneness followed by 33.34 percent, 26.66 percent had low and high innovative proneness, respectively. medium innovative proneness is due to medium participation of onion farmers in extension related activities, medium education and old aged farmers does not accept the innovations. However, low innovativeness of onion growers might be due to the fact that they wait for other members in their social system to adopt recent and improved innovation and succeed. Also, their financial status might have prevented them from adopting innovations. which goes in hand with the results of Bare (2017) [3].

Scientific orientation: It is apparent from Table 3 that, half (50.00%) of the onion growers had medium scientific orientation followed by low (26.66%) and high (23.34%) scientific orientation, respectively. Possible reasons for respondents moderate scientific orientation include their higher education level, risk tolerance, farming experience, media participation, participation in extension programmes and extension contact. However, majority of the respondents did so with interest and good knowledge. Above things might have influenced their significant interest towards the scientific side of farming. The results of the current study are in conformity with those from Sharma *et al.* (2014) [9].

Table 3: Psychological characteristics of onion growers

Sl. No.	Characteristics	Category	Total n=120	
			No.	%
1	Risk Orientation Mean = 2.99 SD = 0.86	Low (<2.56)	37	30.83
		Medium (2.56-3.42)	55	45.84
		High (>3.42)	28	23.33
2	Innovative proneness Mean = 4.07 SD = 1.10	Low (<3.52)	40	33.34
		Medium (3.52-4.62)	48	40.00
		High (>4.62)	32	26.66
3	Scientific orientation Mean = 8.30 SD = 1.81	Less (<7.39)	32	26.66
		Medium (7.39-9.20)	60	50.00
		More (>9.20)	28	23.34

Conclusion

The findings underscore the significance of understanding the unique characteristics of onion growers, providing valuable insights for agricultural policymakers and stakeholders. Recognizing the diverse backgrounds and motivations of onion growers is essential for tailoring effective interventions and support systems. Understanding how to grow onion is an essential requirement because it encourages the use of technology. The acceptability of any advances depends on personal growth, and current technological innovation in agriculture is the main focus for increasing crop production. It is normally noticed that not all farmers adopt recommended techniques. It is anticipated that information on the knowledge level and adoption in onion crop cultivation in relation to farmer profiles and reasons for the same would form a vital component in current society.

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