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Socio-economic profile of onion growers in Chitradurga district of Karnataka

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Abstract

Socio-economic status is an economic and sociological combined measure of a person's work experience and of an individual's or family's economic and social position in relation to others. The study was conducted in the year 2020-21 in Chitradurga district of Karnataka state. The total sample size of 120 farmers cultivating onion were considered as sample for the study by using simple random sampling method. The results of the study revealed that the majority (37.50%) of them belonged to middle age group, 32.50 per cent of them had high school education, 44.17 per cent of them had landholding between 5.1 to 10 acres, 60.83 per cent of them had high farming experience, 42.50 per cent of them had low extension participation, 40.83 per cent of them had annual income between Rs. 3,00,000 to 6,00,000, 38.33 per cent of them had low risk orientation, 39.17 per cent of them had low economic motivation, 38.33 per cent of them had medium decision making ability, 49.17 per cent of them had medium innovative proneness, 67.50 per cent of them had medium dependency on various sources of information and 50.84 per cent of them had medium market orientation. The correlation analysis between production knowledge and independent variables viz., age, education, landholding, farming experience, annual income and innovative proneness had showed positive and significant relationship with production knowledge. Whereas, correlation analysis between marketing knowledge and independent variables viz., age, education, landholding, farming experience and annual income had a positive and significant relationship with marketing knowledge of onion growers.

Keywords: Education, knowledge, onion growers and farming experience

Introduction

Onion is a popular commercial vegetable. Onion was grown on 5.04 million hectares around the world, producing 96.77 metric tonnes with a yield of 19.20 quintals per hectare. India, behind China, is the world's second-largest onion producer, with 26 million tonnes produced over 1.43 million hectares and a productivity of 13.66 tonnes per hectare. Maharashtra is the leading producer in India, with 7.105 million tonnes produced in 2019-20, accounting for 43.31 percent of overall output in the country.

Dharwad is the main onion producer in Karnataka, followed by Chitradurga with a production of 3,33,888 tonnes and an area under onion cultivation of 12,368 hectares with a productivity of 19.89 tonnes per hectare. Growing demand for onions, fueled by rising income and changing consumption habits, as well as declining agricultural income due to rising expenses and stagnant food grain production, has prompted Chitradurga district farmers to diversify to high-value crops in recent years. Aside from increased income, this high-value crop has the potential to create more job opportunities in farming due to its labour-intensive character (Weinberger and Lumpkin, 2006) ^[11]. Diversification from grain crops to high-value crops like onion vegetables has evolved as an essential strategy for agricultural growth to boost revenue, create gainful employment, and protect natural resources from further deterioration (Sekhon and Kaur, 2004) ^[6].

Methodology

The study was conducted during the year 2020-21 in Chitradurga district of Karnataka state, 120 onion growers who growing onion for the last five years were selected randomly. Chitradurga, Challakere and Hiriyur taluks were selected for the study as they had the highest onion production in the district. From these taluks, four villages from each taluk with the highest area under onion cultivation were selected for the study. The data was collected by personal interview method with the help of interview schedule developed for this purpose. The collected data were scored, tabulated and analyzed by using suitable statistical tools like frequency, percentage, mean, standard deviation and correlation test.

Results and Discussion

Socio-economic profile is an economic and sociological combined total measure of a person's work experience and of an individual's or family's economic access to resources and social position in relation to others. Twelve variables viz., age, education, landholding, farming experience, extension participation, annual income, risk orientation, economic motivation, decision-making ability, innovative proneness, source of information and market orientation have been selected for the study and the results obtained from the study are presented below.

1. Socio-economic profile of onion growing farmers

1.1 Age

It is recognised from Table 1 that the majority (37.50%) of the respondents belonged to the middle age group, followed by 34.17 per cent of respondents in the old age group and 28.33 per cent of respondents in the young age group. The probable reason for this may be that middle-aged farmers are enthusiastic and have more work efficiency in cultivating onion. Further, individuals in the middle age group have physical vigour and more responsibility towards family than the younger ones. As they become middle aged, they will be more responsible towards the family. The outcome is in line with the findings of Raut (2018)^[5] and Yewatkar (2018)^[12].

1.2 Education

The data presented in Table 1 shows that 32.50 per cent of respondents had high school education, 30.00 per cent of the onion growers had completed PUC, and 14.17 per cent of farmers had middle school education. Further, 8.33 per cent, 7.50 per cent, 4.17 per cent, 3.33 per cent of onion growers had primary school, graduate, illiterate and post-graduate levels of education, respectively. From the above results, it was noticeable that most farmers had high school and PUC level of education, which proves that most of the farmers were literates and had basic formal education. In present days central and state governments policy on mandatory education for all citizens was made to perceive education up to high school. Even people are also showing interest in rural areas to educate their children, which makes them acquire knowledge and skills for better living. This finding is in line with the findings of Wadekar (2016)^[9].

1.3 Landholding

The data in the Table 1 revealed that the majority (44.17%) of respondents belonged to the medium farmer category while 30.83 per cent of them were big farmer category, followed by small (19.17%) and marginal (5.83%) landholding categories, respectively. The probable reason for this result was maybe that the study area was plain land and, in such areas, medium to large holdings are common, unlike in hilly and coastal regions. This reason for possession of medium landholding is because of the separation of families. The finding is in line with the findings of Anita Bare (2017)^[2].

1.4 Farming experience

It is evident from Table 1 that more than half of the respondents (60.83%) belonged to the high farming experience category, followed by the medium (32.50%) and low (6.67%) farming experience category, respectively. Farming experience depends upon the age of the farmer. The majority of onion growers belonged to middle age and old age categories and they might have started farming at an early age. In rural areas, the predominant occupation is agriculture and allied activities, where most people are occupied as agriculturists for a longer time. Therefore, the majority of respondents had high farming experience.

1.5 Extension participation

It is observed from Table 1 that the majority (42.50%) of the onion growers had low extension participation. Whereas 34.17 per cent of the onion growers had high extension

participation and 23.33 per cent had medium extension participation. The probable reasons for low extension participation may be due to dependency on traditional methods of farming and lack of interest in participation in extension programmes. Another reason may be a lack of awareness about extension programmes.

1.6 Annual income

From Table 1, it was revealed that 40.83 per cent of the respondents belonged to the medium category of annual income ranges from Rs. 3,00,000 to 6,00,000, followed by 39.17 per cent of the respondents were from the low annual income category ranging up to 3,00,000. Whereas 20.00 per cent of the respondents were from the high annual income category, i.e., more than 6,00,000. The reason for medium annual income may be that adoption of unscientific production practices, heavy usage of fertilizers and inputs resulting in the increase of production cost, low productivity and inefficient market services, farmers might not get good profit to their produce. Hence, the majority of the farmers were in medium income group category. The finding is in line with the findings of Raut (2018)^[5].

1.7 Risk orientation

It is revealed from Table 1 that 38.33 per cent of the respondents had low-level risk orientation while 36.67 per cent of the respondents had a medium level of risk orientation. Whereas 25.00 per cent of the respondents belonged to the high level of risk orientation category. Risk orientation depends on personal and socio-economic characteristics. Risk involvement and management differ from one another. Even it differs from time to time and the severity of the risk also varies. In this background, the risk orientation of the respondents was low. The majority of the respondents possess low and medium levels of risk orientation.

1.8 Economic motivation

It is apparent from Table 1 that 39.17 per cent of the farmers had a low level of economic motivation, while 32.50 per cent of farmers had medium economic motivation, and 28.33 per cent of the respondents had high economic motivation. The notable reason could be that though the farmers expect a good yield and return to their produce. The apparent crop loss will occur. It led farmers to either low or average returns. It resulted in farmers getting unexpectedly low returns and profit. In turn, poor orientation on economic motivation was observed. These findings are in accordance with the studies conducted by Howal *et al.* (2009)^[3].

1.9 Decision-making ability

From Table 1, it is evident that the majority (38.33%) of the respondents had a medium level of decision-making ability, followed by 33.34 and 28.33 per cent of respondents had low and high levels of decision-making ability, respectively. The possible reason may be that majority of the respondents had a moderate level of education; most of the respondents might depend on others. Further, the decisions were taken both independently and in consultation with others. Probably all these factors contributed to the medium level decision making ability of the respondents. The finding is in line with the findings of Thakare (2008)^[8], Wadekar (2016)^[9] and

Raut (2018) ^[5].

1.10 Innovative proneness

The data presented in Table 1 shows that almost half (49.17%) of the respondents belonged to the medium innovative proneness category, followed by 27.50 and 23.33 per cent of respondents belonged to high and low innovative proneness categories, respectively. This could be attributed to the medium level of education of onion growers that help them to acquire new technology in their fields. Further, respondents might visit nearby places to attend extension programmes and had cosmopolitan behaviour to acquire new outcomes about agriculture and allied areas. This might be the reason the majority of the respondents had medium level of Innovative proneness. Even with a medium level of experience on market information about onion, there might be few interested onion growers were adopt new ideas of onion cultivation. This finding is in conformity with the findings as reported by Solanki (2009) ^[7] and Agarwal (2013) ^[1].

1.11 Source of information

The results shown in the Table 1 revealed that the majority

(67.50%) of the respondents had a medium level of exposure to various sources of information, few of the farmers were found to be both keeping high (17.50%) and the low (15.00%) with various information sources. This could be attributed to the medium level of education of the respondents. This education did not help them acquire high information about new technologies and skills and practice them in their fields. This finding is similar to the finding of Walke (2008) ^[10].

1.12 Market orientation

It is evident from Table 1 that more than half of the respondents (50.84%) had a medium level of market orientation, while 25.83 per cent and 23.33 per cent of the respondents belonged to low and high levels of market orientation, respectively. The reason for the result might be that the marketing aspects for onion are unorganized. It found that a medium level of information sources may also be the reason for the medium level of market orientation on onion. Thus, there is a need for information about marketing mechanisms and types of market. These findings are in accordance with the studies conducted by Khandvi *et al.* (2013) ^[4].

Table 1: Distribution of Onion Growers according to their Profile Characteristics

Category	Frequency	Percentage
Age		
Young	34	28.33
Middle	45	37.50
Old	41	34.17
Education		
Illiterate	5	4.17
Primary school	10	8.33
Middle school	17	14.17
High school	39	32.50
PUC	36	30.00
Graduate	9	7.50
Post-graduate	4	3.33
Landholding (acres)		
Marginal farmers (up to 2.5)	7	5.83
Small farmers (2.6 to 5)	23	19.17
Medium farmers (5.1 to 10)	53	44.17
Big farmers (>10)	37	30.83
Farming Experience		
Low (up to 8 years)	8	6.67
Medium (8.1-16 years)	39	32.50
High (16.1 and above)	73	60.83
Extension participation		
Low <(Mean – 0.5 SD)	51	42.50
Medium (Mean ± 0.5 SD)	28	23.33
High >(Mean + 0.5 SD)	41	34.17
Annual Income		
Low <(Mean – 0.5 SD)	47	39.17
Medium (Mean ± 0.5 SD)	49	40.83
High >(Mean + 0.5 SD)	24	20.00
Risk orientation		
Low <(Mean – 0.5 SD)	46	38.33
Medium (Mean ± 0.5 SD)	44	36.67
High >(Mean + 0.5 SD)	30	25.00
Economic motivation		
Low <(Mean – 0.5 SD)	47	39.17
Medium (Mean ± 0.5 SD)	39	32.50
High >(Mean + 0.5 SD)	34	28.33
Decision-making ability		
Low <(Mean – 0.5 SD)	40	33.34

Medium (Mean $\pm$ 0.5 SD)	46	38.33
High >(Mean + 0.5 SD)	34	28.33
Innovative proneness		
Low <(Mean – 0.5 SD)	28	23.33
Medium (Mean $\pm$ 0.5 SD)	59	49.17
High >(Mean + 0.5 SD)	33	27.50
Source of information		
Low <(Mean – 0.5 SD)	18	15.00
Medium (Mean $\pm$ 0.5 SD)	81	67.50
High >(Mean + 0.5 SD)	21	17.50
Market orientation		
Low <(Mean – 0.5 SD)	31	25.83
Medium (Mean $\pm$ 0.5SD)	61	50.84
High >(Mean + 0.5 SD)	28	23.33

2. Relationship between selected independent variables and with the knowledge level of onion growers

Finding of correlation analysis depicted in Table 2 clearly reveals that out of twelve selected characteristics of onion growers, few variables viz., age, education, landholding, farming experience, annual income and innovative proneness had showed positive and significant relationship with production knowledge of onion growers at one per cent level of significance. In contrast, risk orientation had a positive and significant relationship with production knowledge of onion growers at five per cent level of significance. The remaining variables, such as extension participation, economic motivation, decision-making ability, source of information and market orientation, did not establish any significant relationship with the production knowledge of onion growers.

Regarding the age of onion growers, it was found to have positive and significant relationship with onion production knowledge. Age is a factor, which determines the zeal, attitude and collective experience. Medium and old aged farmers are more oriented towards production than young ones deviating to other occupations. This might be the reason for positive relationship between age and production knowledge.

Regarding education with their knowledge level on onion cultivation, it was found to have a positive and significant relationship with production knowledge. Education helps the farmer get information from various sources and develop more access to extension agencies and developmental organizations. Thus, these factors also help in better planning and production. Hence, education might influence on production knowledge of onion growers.

Landholding and annual income were found to have positive and significant relationship with onion production knowledge. Landholding and annual income are interrelated factors that reflect the socio-economic status of an individual. Farmers with more landholding will have an increased annual income and they will be in need more of production knowledge to increase their income level with new and improved practices of production. Farmers with more annual income will have more purchasing power and they can bear risk and uncertainty. These are the notable reasons for positive relationship between landholding, annual income and production knowledge.

Farming experience had positive and significant relationship with production knowledge. The probable reason for this may be that farmers with more farming experience accumulate more knowledge regarding onion production practices. They

will be familiar with both traditional and modern production technologies.

Regarding innovative proneness and risk orientation, it was found to have a positive and significant relationship with production knowledge. Farmers who are more oriented towards innovations are likely to be in need of knowledge regarding new production practices so that they can try out new ideas. Higher landholding and annual income motivate farmers to seek new technologies and also, they can generally bear risk and uncertainty in adopting new ideas. This may be the reason for the above results.

Extension participation, economic motivation, decision making ability, source of information and market orientation were showed non-significant relationship with respondents' onion production knowledge. This probable reason may be due to lack of awareness about extension programmes, average earnings of the farmers, dependency on others for any sort of decisions regarding production practices, medium level of education of farmers and unorganized marketing sector. These reasons may cause for non-significant relationship of above mentioned characters with production knowledge.

Table 2: Relationship of independent variables with the knowledge level of onion growers regarding onion production

Independent Variables	Correlation (r)
Age	0.578**
Education	0.643**
Land Holding	0.566**
Farming Experience	0.431**
Extension participation	0.075 ^{NS}
Annual income	0.517**
Risk orientation	0.187*
Economic motivation	0.142 ^{NS}
Decision-making ability	0.162 ^{NS}
Innovative proneness	0.324**
Source of information	0.145 ^{NS}
Market orientation	0.153 ^{NS}

r - Correlation coefficient, *Significant at 5%, ** Significant at 1%, NS - Non significant

3. Relationship of independent variables with the knowledge level of onion growers regarding onion marketing

It was observed from Table 3 that, out of twelve independent variables, five independent variables viz., age, education, landholding, farming experience and annual income had a positive and significant relationship with marketing knowledge of onion growers at one per cent level of

significance. In comparison, innovative proneness had a positive and significant relationship with marketing knowledge of onion growers at five per cent level of significance.

The remaining variables, such as extension participation, risk orientation, economic motivation, decision-making ability, source of information and market orientation, did not establish any significant relationship with the marketing knowledge of onion growers.

The study found that there was positive and significant relationship between age and marketing knowledge of onion growers. The probable reason for this may be that middle aged and old aged farmers were dependent on traditional markets where they needed the latest updated information to sell their produce. Due to high dependency and continuous contact with various sources to get market information, the respondents might have well established contacts with markets, which led to advanced aged people getting sufficient information and knowledge about onion markets. Even frequent visits to the markets have resulted in an increase in the marketing knowledge of these farmers.

With respect to education, it was found that education and onion marketing knowledge had positive and significant relationship. It was noticeable that the majority of the farmers had high school and PUC level education. This says most of them had basic formal education and most of them knew about marketing operations, prices prevailing in the market. This might be the reason for positive and significant relationship between education and marketing knowledge of onion growers.

The study revealed that there was a positive and significant relationship between landholding, annual income and marketing knowledge. Landholding and annual income are interrelated factors reflecting the socio-economic status of an individual. Most of the farmers belonged to medium landholding and annual income categories. These farmers had a considerable level of marketing knowledge so that they could market their produce at preferred markets at profitable prices. These are the notable reasons for positive and significant relationship between landholding, annual income and marketing knowledge.

It was found that there was a positive and significant relationship between farming experience and marketing knowledge. The notable reason for this may be that the respondents were involved years of farming experience and marketing of onion has resulted in the increase of marketing knowledge. And most of them marketed their produce in the nearby markets. They assume that these markets have good marketing procedures, so continuous cultivation of onion and established market availability led to the respondent's knowledge regarding the marketing aspects of onion. This may be the reason for the above results.

Innovative proneness had positive and significant relationship with marketing knowledge. The probable reason may be that most farmers had medium innovative proneness and medium land holding, which led to average adoption of onion cultivation and even medium level of acquiring innovative marketing information. Thus, the more innovative proneness required a considerable level of onion marketing knowledge to market their produce at a reasonable price and avoid the risk of loss. These are the reasons for positive and significant relationship of innovative proneness with

marketing knowledge.

The variables viz., Extension participation, risk orientation, economic motivation, decision-making ability, source of information and market orientation did not establish any significant relationship with the marketing knowledge of onion growers. The reasons for this may be lack of awareness of extension programmes, limited extension reach out to rural areas, lack of risk bearing ability, average earnings of the farmers, dependency on others for decisions regarding onion marketing practices, medium level of education of farmers and unorganized marketing sector. These are reasons that might influence for non-significant relationship of above mentioned characters with respondents' onion marketing knowledge.

Table 3: Relationship of independent variables with the knowledge level of onion growers regarding onion marketing

Independent Variables	Correlation (r)
Age	0.466**
Education	0.499**
Land Holding	0.394**
Farming Experience	0.339**
Extension participation	0.051 ^{NS}
Annual income	0.376**
Risk orientation	0.135 ^{NS}
Economic motivation	0.091 ^{NS}
Decision-making ability	0.159 ^{NS}
Innovative proneness	0.193*
Source of information	0.016 ^{NS}
Market orientation	0.174 ^{NS}

r - Correlation coefficient, *Significant at 5%, ** Significant at 1%, NS - Non significant

Conclusion

It can be concluded from the study that majority of the onion growers belonged to medium category of various socio-economic profile characteristics viz., age, education, landholding, annual income, decision making ability, innovative proneness, source of information and market orientation. Whereas, most of them had low extension participation, risk orientation and economic motivation. In contrast, majority of the respondents had high farming experience. This shows that there is a need for providing necessary training regarding production and marketing practices of onion cultivars, provide awareness regarding various latest technological aspects in onion production, marketing and processing aspects through training programmes. Necessary inputs and facilities are needed to be provided to the farmers so that more number of farmers can cultivate onion to cater the needs of the consumers. The government should provide a minimum support price and also credit facilities to the onion growers so that the farmers will not shift to grow other crops than onion in traditional onion growing areas.

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