

RESEARCH ARTICLE :

Profile characteristics of cabbage growers in north Karnataka

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SUMMARY : The study was conducted in Belagavi and Haveri districts of Northern Karnataka during the year 2015-16 to know the profile of cabbage growers and to find out relationship of characteristics of cabbage growers with adoption of cabbage production technology. It was found from the study that majority of the cabbage growers belonged to middle age, educated up to high school, medium level of land holding, medium farming experience, medium annual income, medium extension contact, medium mass media participation, medium economic motivation, medium risk orientation and medium achievement motivation. The variables like education, land holding, farming experience, annual income, extension contact, mass media participation, economic motivation, risk orientation and achievement motivation were positively and significantly related with the adoption of cabbage production technology. While, age did not establish any significant relationship with their adoption of recommended practices.

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KEY WORDS:

Cabbage, Adoption, Mass media participation, Extension contact, Risk orientation

BACKGROUND AND OBJECTIVES

Horticultural crops play vital role in India's economy by improving the income of the rural people. Cultivation of these crops is labour intensive and as such they generate lot of employment opportunities for the rural population. India is the second largest producer of vegetables in the world (ranks next to China) and accounts for about 15 per cent of the world's production of vegetables. Currently per capita consumption of vegetable is 175 g per capita per day, which is far below recommended dose of 300 g (Indian Council of Medical Research).

Cole crops which include cabbage,

cauliflower, knoll-khol etc. are the most abundantly consumed vegetables all over the world. Cabbage (*Brassica oleracea* L. var. *capitata*) is one of the most important group of vegetable crops and commonly cultivated in winter. The major cabbage producing states are Uttar Pradesh, Odissa, Bihar, Assam, West Bengal, Maharashtra and Karnataka. The Karnataka produces about 2.4 per cent of the total production of cabbage in the country. The production of cabbage in the state is 0.21 million tones from an area of 0.010 million hectares having productivity of 21.2 tones/ha.

The vegetable cultivation has an increasingly important commercial role,

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especially for low income households. It has great potentiality and scope for improving socio-economic condition of small and marginal farmers since it provides higher yield and high economic return in short time as compared to food grains. It has more income per unit area and employment generation in short span of time and thereby have attracted the farmers of the state. These crops have proved to be the boon to the small and marginal farmers of the state who accounts for more than 90 per cent holding of the state.

Adoption is not only dependent on the practical realization of the superiority of an innovation. There are some latent variables inside the human which largely affects his/her adoption behaviour. These variables are mass media participation, extension contact, risk bearing ability, economic motivation etc. These variables are often guided by one's socio-economic status. It not only influences the adoption behaviour but also influences the factors which affect the adoption behaviour. The findings of this study provide valuable information to all public and private extension agents, researchers and policy makers to orient their efforts for greater diffusion and adoption of cabbage cultivation practices on a large scale.

Keeping all these in view, an attempt was made to know the profile of cabbage growers and to find out relationship of characteristics of cabbage growers with adoption of cabbage production technology.

RESOURCES AND METHODS

The research study was carried out in purposefully selected Bailahongal, Gokak taluks of Belagavi and Hirekerur, Byadgi taluks of Haveri district based on highest area and production of cabbage crop in North Karnataka. From the each taluk three villages were selected, from each village the list of educated farmers were collected from horticulture department, from the list ten educated cabbage farmers were selected by using simple random sampling technique. Thus, making a total of 120 respondents for the study.

In this study adoption level refers to the level of adoption of recommended cultivation practices of cabbage by the respondents. For measuring the adoption, ten recommended practices were included in the package of practices in cabbage cultivation. The score one was assigned to non adoption, two for partial adoption and three for full adoption. The maximum possible score were 30 and the minimum possible score were ten. The

independent variable like age, education level, land holding, farming experience, annual income, extension contact, mass media participation, risk orientation, economic motivation and achievement motivation were the main items of investigation. The data were collected by using pre-structured interview schedule prepared in consultation with scientists of University, KVK and State Department of Horticulture. The data were analyzed by using suitable statistical tools like frequency, percentage and correlation co-efficient.

OBSERVATIONS AND ANALYSIS

The findings of the present study as well as relevant discussion have been summarized under following heads:

Profile characteristics of cabbage growers :

Age :

It could be noticed from the Table 1 that, majority of the respondents (58.33%) were found in the middle age group followed by 28.33 per cent in young age group and 13.34 per cent in old age group. The probable reason for this may be that, most of middle age farmers were the key generators of income which occupy the main work force in different occupations and they have more family responsibility.

Education :

It was noticed that, nearly half of the respondents (44.17%) had education up to high school followed by 20.83 per cent of the respondents have studied up to middle school education, 20.00 per cent studied up to PUC and 10.00 per cent of them studied up to graduation, and least of 5.00 per cent of them have studied up to primary level. This might be due to the fact that, most of the villagers in the study area had educational facilities for education up to secondary level.

Land holding :

It was observed that, two-fifth (44.17%) of the respondents belonged to medium land holding category followed by semi-medium (24.17%) and big (20.83%) farmers, respectively. A meager percentage of the farmers were small (8.33%) and marginal (2.50%) farmers. The important reason for this may be that application of conversion factor of one acre of irrigated land equivalent to three acres of dry land, many would belong to medium land holding category.

Table 1 : Profile characteristics of cabbage growers			(n=120)
Sr. No.	Category	Frequency	Percentage
1.	Age		
	Young age (<30years)	34	28.33
	Middle age (31-50 years)	70	58.33
	Old age (>50 years)	16	13.34
2.	Education level		
	Primary school (1 st -4 th)	6	5.00
	Middle school (5 th -7 th)	25	20.83
	High school (8 th -10 th)	53	44.17
	PUC (11 th -12 th)	24	20.00
	Graduate	12	10.00
3.	Land holding		
	Marginal farmers (<2.5 acres)	3	2.50
	Small farmers (2.51 to 5.00 acres)	10	8.33
	Semi medium (5.01 to 10.00 acres)	29	24.17
	Medium farmers (10.01 to 25.00 acres)	53	44.17
	Big farmers (>25.00 acres)	25	20.83
4.	Farming experience		
	Low (up to10 years)	30	25.00
	Medium (11 to 20 years)	52	43.33
	High (21 and above)	38	31.67
5.	Annual income		
	Low income (<Rs 75,000)	18	15.00
	Medium income (Rs 75,001 to 2,00,000)	57	47.50
	High income (>Rs 2,00,001)	45	37.50
6.	Extension contact		
	Low	36	30.00
	Medium	56	46.67
	High	28	23.33
7.	Mass media participation		
	Low	34	28.33
	Medium	48	40.00
	High	38	31.67
8.	Economic motivation		
	Low (6-9)	30	25.00
	Medium (10-13)	52	43.33
	High (14-18)	38	31.67
9.	Risk orientation		
	Low (6-9)	17	14.17
	Medium (10-13)	54	45.00
	High (14-18)	49	40.83
10.	Achievement motivation		
	Low (8-12)	19	15.83
	Medium (13-18)	60	50.00
	High (19-24)	41	34.17

Farming experience :

It is clear that, 43.33 per cent of the respondents had the medium level experience in farming followed by 31.67 per cent of the respondents had the high experience in farming, whereas least of 25.00 per cent of the respondents had low experience in farming. The tendency of farmers towards non-farming sectors might be the reason for the situation.

Annual income :

It was revealed that, maximum of 47.50 per cent of respondents belonged to medium income category ranging from (Rs. 75,000 to 2,00,000) followed by high income category 37.50 per cent ranged from (> Rs. 2,00,001) and low of 15.00 per cent (< Rs. 75,000) respondents have low income category in cabbage cultivation. In light of this fact, horticulture is being promoted to meet the need of the country's people, as well as, a source of diversification. This has led to a rise in the income of the farmers as horticulture crops are high fetching crops.

Extension contact :

It is visible that, 46.67 per cent of the farmers had medium level of extension contact, while 30.00 per cent and 23.33 per cent of them had low and high levels of extension contact, respectively. The predominance of respondents having medium level of source of extension contact may be due to the reason that, the study areas were near to the institutions like Universities and KVKs. Also may be due to heterogeneity of the respondents in age and education.

Mass media participation :

It is reported that, 40.00 per cent of the farmers

had medium level of mass media participation, while 31.67 per cent and 28.33 per cent of them had high and low levels of mass media participation, respectively. The more inclination towards audio-visual type of programmes and possession of television sets by majority of the respondents might be the reasons for the situation.

Economic motivation :

It was noticed that, 43.33 per cent of the respondents had medium level of economic motivation, whereas nearly two-fourth (31.67%) of them had high level of economic motivation and one fourth (25.00%) of them had low level of economic motivation. This may be due to their main motive was to harvest good quality produce and more income from their available land by utilizing recommended practices.

Risk orientation :

It was observed that, maximum of 45.00 per cent of the respondents had medium level of risk orientation, followed by high (40.83%) and low (14.17%) levels of risk orientation. Risk taking behaviour was essential for the adoption of recommended practices in cabbage cultivation. Farmers had to spend more on inputs for getting more output and take certain amount of risks in cultivating cabbage. All these factors contributed in medium to high level of risk orientation.

Achievement motivation :

It was revealed that, exactly half (50.00%) of the respondents had medium level of achievement motivation followed by high (34.17%) and low (15.83%) level of achievement motivation. The inclination of the respondents to take up successful cabbage cultivation

Table 2 : Relationship between independent variables with adoption of cabbage growers

Sr. No.	Independent variables	Adoption 'r'
1.	Age	0.072 NS
2.	Education	0.218*
3.	Land holding	0.461**
4.	Farming experience	0.223*
5.	Annual income	0.215*
6.	Mass media participation	0.308**
7.	Extension contact	0.439**
8.	Economic motivation	0.341**
9.	Risk orientation	0.333**
10.	Achievement motivation	0.260**

r = Correlation co-efficient

NS = Non-significant

* and ** indicate significance of values at P=0.05 and 0.01, respectively

with the available facilities might have favoured for this situation. The findings are in accordance with the findings of Khandvi *et al.* (2013); Pawal *et al.* (2014) and Rituraj *et al.* (2015).

Relationship between independent variables with adoption of cabbage growers :

The co-efficient of correlation of each of the socio-personal and economic characteristics with adoption of recommended cultivation practices of cabbage have been reported in Table 2.

It is evident from the Table 2 that among ten independent variables of adoption about recommended practices, six variables namely, land holding, mass media participation, extension contact, economic motivation, risk orientation, achievement motivation showed positive and significant relationship at 0.01 level of probability, where as education, experience in farming and annual income showed positive and significant relationship at 0.05 level of probability with their adoption of recommended practices of cabbage. The remaining only one variable *i.e.* age did not establish any significant relationship with their adoption of recommended practices. Similar findings were reported by Vijay kumar (2012), Devi *et al.* (2013) and Kiranmayi *et al.* (2016).

Conclusion :

The extension strategy should be of targeted approach towards the young farmers who had high adoption rate of cabbage cultivation technology and old age group farmers should be educated regarding new innovations. Extension agency contact should be strengthened for higher adoption of cabbage cultivation technologies among growers by using the mass media

services like Television, News Papers, Radio, *etc.* Further, education, land holding, farming experience, annual income, mass media participation, extension contact, economic motivation, risk orientation and achievement motivation were observed to be valuable socio-psychological variables with reference to adoption of cabbage cultivation.

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