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Awareness and Knowledge of Potato Cultivation – A Study in Karnataka

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ABSTRACT

The study conducted on the awareness and knowledge level of potato cultivation practices by potato farmers in four villages of Dharwad taluka revealed that majority of potato growers were aware of kufri Chandramukhi (84%) followed by kufri Jyoti (47%). The study also revealed that 52 per cent potato farmers were having high knowledge level with 56.62 mean knowledge index and there was no significant association between knowledge level and the independent variables viz., education, landholding and mass media participation.

Potato (*Solanum tuberosum*) is one of the most important commercial food and vegetable crops in India. It produces more food per unit area as compared to cereals and also provides more returns in a much short time. Apart from being a bulk material, it also provides raw materials for an array of industrial products. It is because of these inherent qualities, a commercial crop like potato has received considerably an important place in Indian agriculture.

In Karnataka State, potato was grown in an area of 32493 acres during 1985–86 with an estimated production of 6,99,860 tonnes. The potato is primarily grown in Dharwad, Hassan, Kolar, Belgaum, Bangalore, Chikkamagalur and Tumkur districts of Karnataka State. The average yield of potato in Dharwad district is in the range of 2500 to 3000 kgs per acre. But research findings have, however, shown that potato yields could be reaped out in the range of 6000 to 6500 kgs per acre by adopting all the recommended practices for potato cultivation. This indicates, existance of a wide gap between the potential yields and the actual yields obtained by the farmers, which could, therefore, be narrowed down by adopting the recommended potato cultivation practices.

The adoption of new farm practices by the farmers is a type of decision making. But the decision making of the farmers regarding these farm practices depends on many factors such as awareness, knowledge, usefulness of innovation and also personal and socio-economic characteristics.

In recent past, the researchers have developed many improved varieties of potato and released for adoption.

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Sufficient knowledge is also being imparted through extension sector. But there is no objective information about awareness and knowledge aspect of potato cultivation among the farmers of Dharwad district though this being a district with highest area with 10,593 acres under potato cultivation during 1985-86 in the Karnataka State.

Keeping this in view, the present study was conducted during 1988 among the potato growers of Dharwad taluka, with the following specific objectives.

1. To identify the extent of awareness of improved potato varieties among potato farmers of Dharwad taluka.

2. To study the knowledge level of potato growers in relation to recommended package of practices of potato crop, and

3. To find out the influence of education, size of land holding and mass media participation on knowledge level of potato growers of Dharwad taluka.

MATERIAL AND METHODS

The present study was undertaken in Dharwad taluka of Dharwad district during the year 1988 comprising four villages viz., Narendra, Garag, Marewad and Yattinagudda. In all, one hundred potato growers who have taken up potato cultivation during *kharif* 1987 were selected from above four villages, randomly for the study. The information was elicited from the respondents through personal interview with the help of pretested structured schedule.

Quantification of independent variables :

Educational level : The quantification of these variables was arrived at depending upon the scores as suggested by Patel and Singh (1970). The respondents educational level score was made use of, directly to find out the correlation with dependent variables.

Landholding status : Data gathered on the number of acres possessed by each respondents. The size of land holding in terms of acres was determined on the basis of classification of land as standard vide Karnataka Land Reforms Act of 1966 (Part B) pp. 95-96. The numerical values of respondents landholding was used directly to find out the correlation with dependent variables.

Mass media participation : In order to assess the extent of participation by the respondents in mass media source, two major mass media sources viz., news paper and radio/T.V. were listed and respondents were asked to indicate their subscription / possession by Yes / No questions with the scores 1 and 0 respectively. The respondents mass media participation socre was used directly to find out correlation with dependent variable.

Quantification of dependent variables :

Awareness : For this study, awareness has been defined as the stage at which a farmer is just aware of the existance of three improved potato varieties, but does not know the details. This was measured by assigning a score of '1' for being aware and '0' for not being aware. This procedure was suggested by Singh and Singh (1976).

Knowledge level : Knowledge is the totality of understood information possessed by a person. The potato growing farmer's knowledge about selected improved practices for the cultivation of potato crop was measured on the basis of 'teacher made test' developed by Anastasi (1961). Accordingly, a knowledge test was constructed including nine knowledge items pertaining to potato cultivation.

The information was quantified, tabulated and analysed using frequencies and mean. The extent of correlation between the dependent and independent variables was ascertained by using correlation coefficient and test of significane for correlation coefficient.

RESULTS AND DISCUSSION

The findings are discussed under the following heads.

1. Extent of awareness of potato growers regarding the improved potato varieties.

2. Knowledge level of potato growers with respect to potato cultivation practices, and

3. Personal characteristics of the respondents and their association with knowledge level.

Extent of awareness of potato growers regarding the improved potato varieties : Table 1, delineates that 84 per cent and 47 per cent of potato growers were aware of the existence of kufri chandramukhi and kufri jyoti varieties of potato respectively whereas 78 per cent were not aware of the kufri badashah variety.

Table 1. Extent of awareness of potato growers regarding the improved potato cultivation practices

n = 100

Sl. No.	Variety	Awareness	
		Aware	Not aware
1.	Kufri Chandramukhi	84	16
2.	Kufri Joyti	47	53
3.	Kufri Badashah	22	78

Above finding clearly denotes that majority of the potato growers were aware of the kufri chandramukhi variety followed by kufri jyoti and majority of the growers were unaware of the kufri badashah. The plausible reason for the fact might be relativity in release time of the varieties and their existance on the farm. Kufri chandramukhi and kufri jyoti were released during 1968 and kufri badashah during 1979. But in the study area since beginning farmers were getting only kufri chandramukhi seed material and made more popular compared to kufri jyoti. Kufri badashah was released much later and mainly for northern states and seed materials were not made available to the study area. Only those farmers who were innovators and early adopters due to their cosmopolite nature and contact with agriculture college were aware of the kufri badashah variety.

Knowledge level of potato growers with respect to potato cultivation practices : Table 2 reveals that 51 per cent of the potato growers had high knowledge level with 56.82 mean knowledge index

Table 2. Knowledge level of potato growers with respect to potato cultivation practices

n = 100

Sl. No.	Category	No. of farmers	Average knowledge index
1.	Low	49	26.09
2.	High	51	56.82

whereas 49 per cent of the respondents had low knowledge level with 26.09 mean knowledge index.

The potato being a commercial crop adds to the economic status of the farmers. It is universal phenomenon that any individual is likely to take interest in gaining as much knowledge as possible if there is substantial remuneration. Secondly, due to the advantages viz., high yield, early maturity, availability of land for second crop and stable price by cultivating potato crop might have lead the farmers to collect more and more information regarding cultivation practices through different agencies and mass media to increase their knowledge and might have made them to fall in the higher side of the knowledge level.

The main constraints in the cultivation of potato crop were high seed cost and availability of genuine seed material. The failure in the crop yield due to availability of non-genuine seed material repeatedly, even after paying high cost might have lead to decrease in further knowledge gaining interest. Secondly, low educational level, localiteness non participation in educational activities and low mass media participation might be the plausible reason to fall under low knowledge level.

Characteristics of the respondents and their association with knowledge level : Table 3 of the study delineates the correlation between the independent variables namely, education, land holding, mass-media participation and the dependent variables such as knowledge level.

Table 3. Association of personal characteristics of respondents with knowledge level

Sl. No.	Personal characteristics	Knowledge 'r'	't'
1.	Education	0.1692	1.6997N.S.
2.	Landholding status	-0.07266	-0.72 N.S.
3.	Mass-meda participation	0.1229	1.2259N.S.

N.S. – Not significant

Education and knowledge level : Table 3 reveals that the education status of the respondents had no influence on the knowledge level regarding cultivation practices of potato crop.

The plausible reasons for the non association between education and knowledge level may be (i) all the farmers irrespective of their education have perceived the crop as profitable and practicable which has made them to develop interest to acquire knowledge, and (ii) The availibility of good market infrastructure might have motivated the farmers to acquire more knowledge.

Landholding status and knowledge level : A perusal of Table 3 brings to the focus that landholding status was found to have no significant association with the knowledge level.

Since potato is a commercial crop farmers with different sized landholdings gain similar income proportionately based on the land under potato. More over the farm management will be more intensive if the landholding is smaller. Thus, farmers with varied landholding have similar knowledge level.

Mass media participation and knowledge level : A perusal of Table 3 depicts the fact that mass-media participation of the potato growers had no significant association with knowledge level.

It could be inferred from the above findings that irrespective of their subscription to news papers and possession of radio or T. V. the potato farmers gathered the knowledge about the innovation. The plausible reason might be the higher economic remuneration out of the cultivation of potato crop. There is all possibility that the credibility on grass root level extension personnel of UAS, Dharwad, KSDA and private agencies might be high due to their intensive extension work as the villages under the study were in close proximity of UAS, Dharwad and district headquarter.

Conclusion and Implications

It could be concluded from the present study that majority farmers (84%) were aware of kufri chandramukhi variety and nearly half of the potato growers had higher knowledge of cultivation practices. Hence, there is need to have sufficient extension effort through training, demonstration and mass media to popularise other two varieties namely, kufri jyoti and kufri badashah and cultivation practices of potato crop by concerned agencies. Also, there is need to supply genuine seed material of all varieties at cheaper cost.

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