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A study on knowledge and adoption of betel vine cultivation practices followed by the farmers of Davanagere district of Karnataka

Subhash V[1], Basavaraj Beernnavar[2], TS Ganesh Prasad[3], Nagarajappa Adivappar[4], Mallikarjuna HB[5]
[1] Research Scholar, Department of Agricultural Extension, College of Agriculture, Shivamogga, UAHS, Shivamogga, Karnataka, India
[2] Associate Professor, Department of Agricultural Extension, College of Agriculture, Shivamogga, UAHS, Shivamogga, Karnataka, India
[3] Assistant Professor, Department of Agricultural Extension, College of Forestry, Ponnampet, UAHS, Shivamogga, Karnataka, India
[4] Assiatant Professor, Department of Horticulture, College of agriculture, Shivamogga, UAHS, Shivamogga, Karnataka, India
[5] Assistant Professor, Department of Agriculture Statistics, College of Agriculture, Shivamogga, UAHS, Shivamogga, Karnataka, India

Abstract
The study was conducted in Davanagere district of Karnataka state during the year 2019-20 to study the knowledge and adoption of Betel vine cultivation practices followed by the farmers. A total of 120 respondents were randomly selected based on betel vine cultivation area. Farmers are interviewed using a pre-tested interview schedule. Majority of the betel vine farmers had medium (76.67%) to low (15.83%) knowledge level. More than half of respondents had medium (65.00%) to high (18.33%) adoption level with respect to betel vine cultivation practices. Hence, there is a need to provide training programmes through KVKs and Agricultural department to enhance the level of knowledge and adoption of betel vine production technology.

Keywords: Knowledge level of betel vine farmers.

Introduction
Betel vine is an important plantation crop in India, as it is being cultivated on about 55,000 Hectares of land (Guha, 1997) and also it generates about 20 million employment opportunities directly or indirectly from production, processing, handling, transportation and marketing of betel vine leaves (Biswas, 2019). In Karnataka also betel vine is cultivating in considerable area about 70000 ha with average production of 130115 lakh leaves. In Karnataka it is being cultivated in Haveri, Davanagere, Tumkur, Bangalore Rural, Mysore, Dharwad, Shimoga, Chikmagalur, North Canara, Belgaum and Vijayapura. Haveri district is leading in Betel vine production followed by Davanagere, Tumkur and Ramanagara during the last 3 years. Betel vine leaves are having more importance in Hindu religion as no ceremony will be completed with absence of betel vine leaves and also it is having good health benefits by consuming the betel vine leaves. In recent years betel vine growing farmers are facing lot of problems in cultivation like diseases, pest, lower yield, and more technical problems as the farmers are not aware of the recommended cultivation practices of betel vine crop this may be due to many constraints in adopting the recommended cultivation practices. Farmers can get higher yield and income if they have knowledge and adopt the recommended cultivation practices, so there is a need to educate the farmers to acquire the knowledge about the recommended cultivation practices and help them to purchase needed inputs at lower rates so that the farmers can try and adopt the new technologies in their field.

Methodology
The study was conducted in Davanagere district. Two taluks are selected based on highest area on betel vine cultivation. From each taluk four villages were selected based on the highest area under betel vine cultivation. From each village 15 betel vine farmers were randomly selected. Thus, from eight villages, a total of 120 respondents were selected.

Objectives
To study the knowledge level of Betel vine growers on cultivation practices.

Knowledge
Knowledge refers to information possessed by an individual. It also refers to those behaviours and test situations that emphasize the remembering of some phenomenon or material by an individual either by recognition or by the recall of ideas. The knowledge level in the present study has been operationalized as the extent to which an individual possesses understanding and comprehension of various betel vine cultivation practices.
The knowledge test was constructed based on the package of practices and discussion with subject matter specialties, extension personnel of the University.
A list of 30 items was selected for the purpose and each was administered in a question form to the respondents to obtain the response. The questions and answers about the knowledge test were carefully designed in consultation with members of the advisory committee. The answers to questions were quantified by giving one score to the correct answer and zero scores to the incorrect one. As a result, the maximum score that one could get was 30 and the minimum was zero. The total knowledge score for each respondent was calculated by summing up the number of items correctly answered by an individual respondent. The

knowledge level was quantified by using frequency and per cent. Based on the total score, the respondents were classified into three categories namely, 'low', 'medium', and 'high' using mean (X) and standard deviation (SD) as a measure of the check.

Results and discussion

The results of present research study have been presented on the basis of analysis of data using suitable statistical tools and techniques and in relation to the specific objective of the research study.

Overall knowledge level of betel vine growers and Practice wise knowledge level of the respondents regarding recommended cultivation practices of Betel vine crop

With respect to overall knowledge of the respondents regarding betel vine cultivation practices, Table 1 indicates that majority of the respondents belonged to the medium level (76.67 %) of knowledge whereas 15.83 per cent of the respondents belonged to low level of the knowledge and 7.50 per cent of the respondents belonged to the high level of knowledge. It was observed from the Table 2 that 100.00 per cent of the respondents have knowledge about Irrigation and Harvest, 93.75 per cent of the farmers have knowledge about land preparation, 76.67 per cent of the farmers are aware about Transplanting, 72.50 per cent and 72.22 per cent of the farmers have knowledge about soil requirement and nursery preparation, whereas 79.16 per cent and 66.67 per cent of the farmers have knowledge about Lowering of the vines and plant protection measures, whereas only 49.72 per cent and 40.83 per cent of the farmers have knowledge about recommended nutrient application and spacing practices. It is due to majority of the respondents belongs to the middle and young age group and the respondents have medium level of education and also the respondents have good extension contact with Techno promoters, scientist from AHRS Kathalagere, UAHS, NGO's and Horticulture officer. The majority respondents have medium level of mass media participation, Information seeking behaviour, Farming experience in betel vine cultivation and the majority of the respondents are belonged to medium level of Innovativeness might have influenced the knowledge level of the respondents. These findings are in line with Venkateshwarlu *et al*. (1992).

Table 1: Overall Knowledge level of the respondents (#)

Sl. No.	Category	Criteria	Frequency	Percentage
1	Low	Less than (Mean-SD)	19	15.83
2	Medium	Between (Mean±SD)	92	76.67
3	High	More than (Mean+SD)	9	7.50
Mean=21.32 SD=2.76				

= Number of respondents is 120

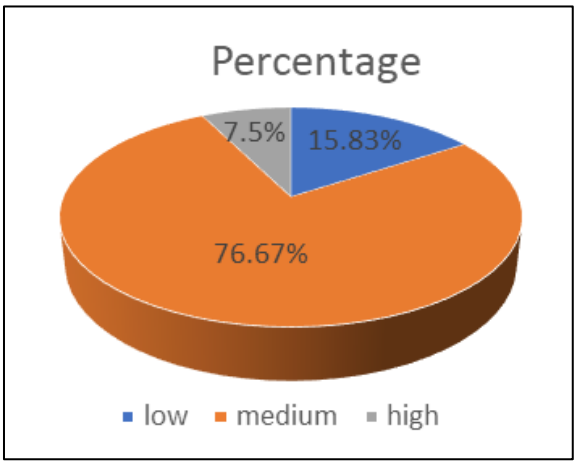

Fig 1: Pictorial representation of overall knowledge level of betel vine growers.

Table 2: Practice wise distribution of the respondents (#) according to their knowledge level

Sl. No	Cultivation Practices	Frequency	Percentage
1	Soil Requirement	87.00	72.50
2	Land Preparation	112.00	93.75
3	Nursery Preparation	87.00	72.22
4	Spacing	49.00	40.83
5	Nutrient application	60.00	49.72
6	Transplanting	92.00	76.67
7	Irrigation	120.00	100.00
8	Lowering of Vines	95.00	79.16
9	Plant Protection	80.00	66.67
10	Harvest	120.00	100.00

= Number of respondents is 12

Conclusion

The majority of the farmers are small farmers having medium level of knowledge about recommended cultivation practices of betel vine crop. Concerned authorities like KVKs and Agricultural department should sensitize the farmers by disseminating relevant information to the farmers at right time to enhance their level of knowledge on betel vine cultivation practices through appropriate extension methods.The farmers are having medium level of adoption regarding recommended cultivation practices of betel vine crop. There is a scope to increase the level of adoption by conducting demonstration, organizing Exhibitions, Field days and bringing changes in the attitude of the farmers.

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