AATCC Review

06 November 2022: Received
11 March 2023: Revised
21 May 2023: Accepted
23 June 2023: Available Online

www.aatcc.peerjournals.net

Research Article Open Access

Suggestions for Overcoming Obstacles in Betelvine Cultivation of Davanagere District, Karnataka

Padma, S.R.*, Sree Madhumitha, G. and Anupam, H. H

Department of Agricultural Extension and Rural Sociology, Tamil Nadu Agricultural University, Coimbatore, India

ABSTRACT

Like every other occupation, agriculture has its own constraints. In such a way, this article portrays the various constraints/ barriers experienced by the Davanagere district betelvine growers involved in betelvine cultivation. Harihara and Honnali taluks of the Davanagere district were purposively selected as it holds the highest area under betelvine cultivation. Twenty-five betelvine growers were selected from each of the six selected villages of two taluks of the Davanagere district of Karnataka. The selected betelvine growers were enquired about the difficulties experienced in betelvine cultivation using a three-point continuum and analyzed using Constraint Faced Index (CFI). Based on the study, it was found that yield loss due to inconsistent climatic conditions, high cost of labour, high cost of chemicals and fluctuation in market price were the prominent technical, labour, economic and marketing constraints experienced by the betelvine growers of Davanagere district respectively. Encouraging value-added products was the highly suggested measure followed by a provision of good quality inputs and providing credit facilities were the key suggestions put forward by the betelvine growers to overcome the constraints.

Keywords: *Constraints, Betelvine growers, Betelvine cultivation, Davanagere, Suggestive measures, Constraint Faced Index, Barriers, market price fluctuation*

INTRODUCTION

Betelvine (Piper betel L.) is a Malaysian native perennial creeper. India has 40 variants of betelvine out of the 100 variants found in the world. It has several regional names, 'Paan' (Hindi), 'Taambula' (Sanskrit), 'Villyadale' (Kannada), 'Vetrilai' (Tamil), 'Nagarbel' (Gujarati), 'Tamalapaku' (Telugu), 'Vettilakkoti' (Malayalam), 'Videch-pan' (Marathi) and 'Pan' (Bengali). According to traditional medical practices of South India, chewing betelvine eases various ailments and injuries because of the components present in it. Ray[9] (2008) commented that, betelvine is one of the important commercial crops cultivated by small and marginal farmers in the States of Andhra Pradesh, Assam, Bihar, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, Uttar Pradesh and West Bengal.

Karnataka is one of the populous states where betelvine is cultivated by most of the small and marginal farmers. Out of 10 districts, Davanagere is one of the leading betelvine producing districts next to Haveri. In the Davanagere district, betelvine is cultivated for more than 150-200 years. Betelvine is cultivated under an area of 1,170 ha on average with a production of 23,000 lakh leaves in the Davanagere district. Among the 6 taluks which cultivate betelvine in the Davanagere district, Harihara holds the top position, followed by [1] enlisted the various obstacles encountered by the betelvine growers while selling their produce in a formal market place. It includes lack of suitable technical assistance, packaging and processing facilities; lack of capacity to enter into new markets for agriculture. Thus, they suggested that enhancing the infrastructure facilities, promoting direct marketing strategies and expanding into new areas boost the marketing system of betelvine.

Similar studies also pointed out the constraints faced by the betelvine growers, which were problems in marketing and fluctuating market crisis, the severity of pests and diseases [4]; occurrence of drought [8]; inappropriate management of fertilizers and pesticides [5]; severe rain and winds [7]; non-availability of skilled labour [11] and lack of credible source of knowledge and information (Vivekanand, 2021) [12] were the prominent constraints encountered by them. Meanwhile, it was suggested to provide training to labours [2]; increase awareness on the management of pest and diseases (Jana, 2016) [3]; issue of crop loans at the nominal rate of interest through formal credit institutions (Sahoo & Sahoo, 2017) [10] and adoption of proper preservation practices to reduce post-harvest loss (Pandey et al., 2018) [6].

Statement of the problem

Since the betelvine is recognized as one of the important commercial crops and can be cultivated throughout the year, most farmers are involved in betelvine cultivation. In this

**Corresponding Author: : Padma S.R*
Email Address: padmasr@tnau.ac.in

DOI: https://doi.org/10.58321/AATCCReview.2023.11.03.241

scenario, understanding the various constraints experienced by the betelvine growers facilitates the State and Central Government, policy makers, Agricultural universities, scientists, other researchers and farmers to formulate effective policies and programmes to increase betelvine production; thereby it directly or indirectly improves the livelihood of the betelvine growers. Keeping this context in mind, the following objectives of the study have been formulated;

- To identify the constraints experienced by betelvine growers in betelvine cultivation
- To suggest measures to overcome the constraints

MATERIALS AND METHOD

Davanagere district of Karnataka was purposively selected as it holds the highest area and production of betelvine. In Davanagare, the two taluks i.e. Harihara (811 ha) and Honnali (130 ha) taluks were purposively selected as they hold the highest area under betelvine cultivation among the other taluks. By gathering information from the State Department of Horticulture, the villages that hold the maximum area under betelvine cultivation were selected. They were Hanagavadi, Belludi and Banahalli from Harihara taluk and Anaji, Guddadamadapura and Kulagatte from Honnali taluk. From each of the selected villages, 25 respondents were selected for the study; which accounts for the total 150 betelvine growers of the study. Based on the previous literature, the constraints involved in betelvine cultivation were documented and the growers were asked to indicate their response in a three-point continuum as 'very much problem' (3), 'somewhat problem' (2) and 'not at all problem' (1). The data gathered was tabulated and analyzed using Constraint Faced Index (CFI).

$$CFI = No.of\ betelvine\ growers\ opted\ constraint\ as\ (very\ much\ problem * 3 + some\ what\ problem * 2 + not\ at\ all\ problem * 1)$$

FINDINGS AND DISCUSSION

The various constraints experienced by the betelvine growers in betelvine cultivation under various dimensions such as technical constraints, labour constraints, economic constraints and marketing constraints were identified and presented in table.1.

Table.1. Constraints encountered by betelvine growers in betelvine cultivation (n=150)

S. No.	Constraints	Very much problem (3)	Somewhat problem (2)	Not at all problem (1)	Constraint Faced Index (CFI)	Rank
A	**Technical constraints**					
1.	Yield loss due to inconsistent climatic condition	97	27	26	371	I
2.	Lack of availability of specific crop protection recommendations	51	28	73	282	II
3.	Due to scarcity of water - irrigation at critical stage	38	31	81	257	III
4.	Lack of information about suitable intercrop	21	40	89	232	IV
5.	Lack of adequate training	18	34	98	220	V
6.	Lack of extension contact	19	25	106	213	VI
7.	Lack of availability of good planting material	9	25	116	193	VII
B	**Labour constraints**					
1.	High cost of labour	88	43	19	369	I
2.	Non availability of labour during the time of harvesting	67	40	43	324	II

C	**Economic constraints**					
1.	High cost for chemicals	67	45	38	329	I
2.	Unavailability of credit	56	43	51	305	II
3.	Lack of price policy	53	31	66	287	III
D	**Marketing constraints**					
1.	Fluctuation in market prices	74	45	31	343	I
2.	High involvement of middlemen	69	40	41	328	II
3.	Lack of export options	64	36	50	314	III

By observing the table.1, it could be understood that, among the various technical constraints, yield loss due to inconsistent climatic conditions was the prominent constraint experienced by the betelvine growers (CFI - 371), followed by a lack of availability of specific crop protection recommendations (282), due to scarcity of irrigation water at a critical stage (257), lack of information about suitable intercrop (232), lack of adequate training (220), lack of extension contact (213) and lack of availability of good planting material (193) were the other technical experienced by them. Similarly, regarding the labour constraints, the high cost of labour was the first and foremost constraint with a CFI of 369, followed by the non-availability of labour during the time of harvesting (324).
Meanwhile, the high cost of chemicals was the topmost economic constraint (329), followed by the unavailability of credit (305) and lack of price policy (287) as the subsequent economic constraints encountered by the betelvine growers. Among the marketing constraints, fluctuation in market price was the serious constraint (343), followed by the high involvement of middlemen (328) and lack of export options (314) were the other marketing constraints.
The study conducted in Bhagalpur confirmed that lack of reputable sources of knowledge and information, shortage of plant material, Protection measures and a lack of interest on the part of extension personnel, lack of storage facilities were the constraints experienced by the betelvine growers [12].
Every occupation has its own constraints, agriculture is not an exception. Though farmers were forced to face the climatic consequences, the increased pest and diseases, lack of technical knowledge, fluctuation of price and involvement of more middlemen in marketing, increased marketing cost and commission charges decrease the profitability of betelvine cultivation as expressed by the respondents.

Table.2. Suggestive measures to overcome the constraints experienced by the betelvine growers (n=150)

S. No.	Suggestions	Number	Per cent	Rank
1.	Providing remunerative price to farmers	81	54.00	X
2.	Reducing the cost of marketing	112	74.67	IV
3.	Reducing the commission charges	107	71.33	V
4.	Establishing storage units	90	60.00	VIII
5.	Providing credit facilities	121	80.67	III
6.	Reduce monopoly	90	60.00	VIII
7.	Providing relevant and timely market information	105	70.00	VI
8.	Provision of good quality inputs	126	84.00	II
9.	Encouraging value-added products	135	90.00	I
10.	High negotiation power to farmers by establishing farmer co-operative	93	62.00	VII

Table.2 depicts the various suggestive measures recommended by the betelvine growers to overcome the constraints experienced by them. Among them, encouraging value-added products was the highly suggested measure (90%), followed by a provision of good quality inputs (84%), providing credit facilities (80.67%), reducing the cost of marketing (74.67%), reducing the commission charges (71.33%), providing relevant and timely market information (70%), high negotiation power to farmers by establishing farmer co-operative (62%), establishing storage units (60%), reduce monopoly (60%) and providing remunerative price to farmers (54%) were the other suggestions put forward by the betelvine growers to overcome the constraints.

CONCLUSION

Since, the betelvine is one of the important commercial crops and can be cultivated all around the year; constraints involved in it should be eliminated to promote its production and to improve the livelihood of the betelvine growers. For that, separate marketing channels should be established, middlemen or the commission agents should be eliminated, relevant market information should be given in a timely manner, appropriate training should be given to increase the knowledge level, cold storage facilities for perseveration and processing facilities should be developed and the farmer should be made aware of it. Despite being a commercial crop, betelvine also possess good nutritional composition of minerals and vitamins, eases various ailments and injuries, and has social, religious & cultural value. Hence, Government and agricultural institutions should make interventions to preserve and process betelvine as most of the betelvine gets spoiled because of their short life span and perishable nature.

FUTURE SCOPE OF THE STUDY

Large-scale field trials might be undertaken to persuade farmers of the potential yield realizations using present technology. In order to establish an effective production strategy for the betel vine crop, detailed study in other areas is required, as well as concrete recommendations to planners and policymakers.

CONFLICT OF INTEREST

The authors have declared that no conflict of interest exists.

ACKNOWLEDGEMENT

The cooperation of the betel vine growers during data collecting is gratefully welcomed. The intellectual contribution of coauthors to the research content is highly appreciated.

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