



A Study on Betel Vine Cultivation and Market Crisis in Karur District

KEYWORDS

Piper betel, betel leaf, betel vine, creeper

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ABSTRACT *The deep green heart shaped leaves of betel vine are popularly known as Paan in India. The scientific name of betel vine is (Piper – betel Linn). It belongs to the family of piperaceae i.e. the black pepper family. It is cultivated intensively for the sake of its leaves, which are consumed by about 15-20 million people in the country. Betel vine leaves are commonly known as Vetrilai in Tamil. Betel vine leaf is used as, medicine for certain diseases and also used as an antiseptic. During cultivation betel vine is very much affected by diseases and insects that result in great loss for the farmers. It occurs in a very virulent form and if not controlled, causes widespread damage and even total destruction of the entire betel vine plantations. Attempts have been made to study the betel leaves market constraints, factors limiting betel vine cultivation and suggest measures for the promotion of betel vine cultivation of economic importance.*

INTRODUCTION

The deep green heart shaped leaves of betel vine are popularly known as Paan in India. The scientific name of betel vine is (Piper – betel Linn). It belongs to the family of piperaceae i.e. the black pepper family. It is cultivated intensively for the sake of its leaves, which are consumed by about 15-20 million people in the country. There are about 100 varieties of betel vine in the world, of which about 40 are found in India and 30 in West Bengal. Betel vine is an important medicinal and recreational plant in South East Asia. The most probable place of origin of betel vine is Malaysia but today the plants are also cultivated in India, Sri Lanka, Burma and Nepal. Chewing of betel leaves is an ancient habit of the people residing in the subtropical countries. It is used in a number of traditional remedies for the treatment of stomach ailments, infections and as a general tonic. It is often chewed in combination with the betel nut as a stimulatory. Some evidence suggests betel leaves have immune boosting properties as well as anti-cancer properties. Betel vine plays a significant role in the social and cultural aspects of India. Betel is cultivated on about 55000 hector with an annual production worth about Rs .9000 million. These leaves are also in great demand in several other countries of the world. Consequently leaves worth about Rs.30-40 million are exported to the other countries, thus it is most promising commercial leafy crop capable of attracting substantial amount of foreign exchange to the country. Revenue generated would exceed if agronomic practices are scientifically explored.

IMPORTANCE OF THE STUDY

Betel vine leaves are commonly known as vetrilai in Tamil. Betel vine leaf is used as medicine for certain diseases and also used as an antiseptic. The leaves are the most valued plant part and in the past were routinely used as a chewing agent. Betel leaves are the most important plant part and are of medicinal, religious and ceremonial value in South East Asia. In India it is customary to serve betel leaf on various social, cultural and religious occasions and is also offered to guests as a mark of respect. The names of betel vine leaf in various South East Asian languages are enlisted in Table – 1.

TABLE – 1
NAME OF BETEL IN VARIOUS LANGUAGES

INDIAN LANGUAGES	NAMES
Sanskrit	Nagavalli, Nagavallari, Nagini
Hindi, Bengal, Gujraji, Urdu	Paan
Kannada	Vilya, Veeleya, Villayadel
Konkani	Phodi Paan

Malayalam	Vettila, Vettillakkoti
Marathi	Vidyache pan
Tamil	Vetrilai
Telugu	Tamalapaku

The plant is much more popular in India than in any other country of the world since the antiquity. This would be evident from the numerous citations laid down in the ancient literature, particularly the Indian Scriptures. In these citations, significance of the leaves has been explained to every sphere of human life including social, cultural, religious and even day-to-day life, which is very much relevant even these days. The betel leaves are very nutritive and contain substantial amount of vitamins and minerals and therefore, six leaves with a little bit of slaked lime is said to be comparable to about 300ml of cow milk particularly for the vitamin and mineral nutrition.

BETEL VINE CULTIVATION

The betel leaf is cultivated in most South and Southeast Asia. Since it is a creeper, it needs a compatible tree or a long pole for support. Fertile soil is best for betel vine cultivation. The farm yard is fenced with bamboo sticks and coconut leaves. The creeper cuttings are planted after proper dressing in the months of May and June, at the beginning of the monsoon season. The plants are neatly arranged in parallel rows about two feet apart, and the saplings are twined around upright sticks of split bamboo and reeds. Proper shade and irrigation are essential for the successful cultivation of this crop. The plants are regularly watered in the hot months. The leaves of the plant become ready for plucking after one year of planting and the production lasts for several years from the date of planting. Betel needs constantly moist soil, but there should not be excessive moisture. Hence, frequent light irrigations are given. The quantity of irrigation water should be such that the standing water should not remain for more than half an hour in the bed. If water logging by heavy rains or excess irrigation occurs, drainage should be arranged immediately. The best time for irrigation is morning or evening. During cultivation betel vine is very much affected by diseases and insects that result in great loss for the farmers. It occurs in a very virulent form and if not controlled, causes widespread damage and even total destruction of the entire betel vine plantations.

STATEMENT OF THE PROBLEM

Now a day's customer's lifestyles and needs have gone through tremendous changes. These changes are new challenges for the farmers whose produce has to meet the customers demand. Concern to betel producers the size and

color of leaf is important factors to categories the product in the market. The crop is usually cultivated by the farmers generation after generation following the traditional methods. Pest attack and unawareness of the different diseases that affect betel vine. The present research study investigates in these aspects.

SCOPE OF THE STUDY

The study analyse the problems of both production and marketing of betel leaves. Kulithalai Taluk ranks first in the area and production of betel leaves in Karur District, Krishnarayapuram block in Kulithalai Taluk has chosen for the study. Since this block has occupied the first place in production and marketing of betel leaves. A preliminary survey of the area was undertaken with a view to gain an insight into the physical and economic environments of the production and marketing condition in the region.

OBJECTIVES OF THE STUDY

- To study the betel leaves market constraints
- To identify the factors limiting betel vine cultivation and
- To suggest the measures for the promotion of betel vine cultivation.

METHODOLOGY

Primary analytical method has been used for the purpose of conducting this research. The research was conducted Krishnarayapuram block in Kulithalai Taluk of Karur District. This is an empirical study, the sample used in the study consist of 94 respondents drawn through simple random sampling technique. Information gathered by personal discussions with farmers through interview schedule by adopting convenience sampling technique. The secondary data are collected through websites, journals, and publications of agriculture department. Garrett's Ranking Technique has been applied to analyze the primary data. The respondents are asked to rank of the given factors that are limiting production of betel vine and also to rank the problems in marketing. The order of merit thus given by the respondents are converted into ranks by using the formula.

$$\text{Percent position} = \frac{100 (R_i - 0.5)}{N_j}$$

Where R_i - rank given for i -th factor by j -th individual N_j - number of factors ranked by j -th individual. The percent position of each rank thus obtained covered in to scores by referring to table given by Garrertt and woodworth. Then for each factor, the scores of individual respondents are added together and divided by the total number of respondents for whom scores where added. These mean scores for all the factors are arranged in descending order, ranks are given and the most limiting factor is identified.

PROBLEMS IN MARKETING

For the purpose of the study, the problems in marketing were listed as (i)transport (ii)too many middlemen(iii)absence of grading(iv)fluctuating price and (v)inadequacy of finance. The respondents were asked to rank the factors and the ranks given by them are given in Table .2

ANALYSIS AND INTERPRETATION

Problems in Marketing

Table 2

Problems	Total Score	Mean Score	Rank
Fluctuating price	5479	58.29	I
Too many middlemen	4742	44.38	II
Inadequacy of finance	4590	48.83	III
Transport	4423	47.05	IV
Absence of grading	4172	44.38	V

SOURCE: FIELD SURVEY

It could be seen from the table that the fluctuating price com-

manded the greatest attention in marketing. The farmers were affected heavily by the price fluctuations. The second rank was given to too many middlemen. In betel vine marketing large number of intermediaries were involved and large margins were taken up by them. In a way however, it was inevitable because the produce was highly perishable and required personal care and quick handling. Inadequacy of finance was given the third rank. Betel vine marketing requires heavy capital so, the cultivators did not easily enter into the trade activities. The high cost of transport was considered as the fourth major problem. The fifth rank was given to absence of grading which reduce the quality of betel leaves and price.

FACTORS LIMITING PRODUCTION

For the purpose of the study, the agro-biological factors limiting the production were listed as (i) severity of pests and diseases(ii)inadequacy of water (iii)soil conditions (iv)severity of rains and(v)severity of winds. The respondents were asked to rank the five factors according to their effect on yield. The ranks given by the respondents for the various limiting factors are given in Table 3.

Table 3

Agro-Biological Factors Limiting Production

Problems	Total Score	Mean Score	Rank
Severity of pests and diseases	5439	57.86	I
Severity of rains	4802	51.09	II
Severity of winds	4563	48.54	III
Soil conditions	4441	47.24	IV
Inadequacy of water	4161	44.27	V

SOURCE: FIELD SURVEY

It could seen that the severity of pests and diseases was the foremost obstructing factor in the production of betel leaves. The betel vine farms were severely affected by wilt disease and once the crop was infected with wilt diseases the crop suffered heavy damage. Both the quality and quantity of betel vine gets affected .The second rank was given to the heavy rain. Betel vine needs good drainage. In rainy season the betel vine become affected because of the loss of good drainage facilities. The third rank was given to the severity of winds. Soil condition was the fourth major problem in the betel vine cultivation. In the study area, during the study period, there was no problem with regard to water supply. So water supply was given the last rank.

ECONOMIC AND INSTITUTIONAL FACTORS

The economic and institutional factors limiting production were listed as (i)Inadequacy of credit (ii)high cost of labour (iii)high cost of pesticides (iv)Unfavourable market (v)high cost of fertilizers. The respondents were asked to rank the five factors and the ranks given by the respondents are given in Table 4.

Table 4

Economic And Institutional Factors Limiting Production

Problems	Total Score	Mean Score	Rank
Inadequacy of credit	5090	54.15	I
High cost of labor	4750	50.53	II
High cost of fertilizer	4960	52.77	III
Unfavourable market	4501	47.88	IV
High cost of pesticides	4103	43.65	V

SOURCE: FIELD SURVEY

As could be seen from the table, inadequacy of credit was ranked by the respondents as the most important problem in economic and institutional factors. The betel vine crop required heavy capital investment, so credit availability attracts the attention of the cultivators more. The second rank was given to high cost of labour. The betel vine cultivation was

highly labour intensive. The betel vine crop required skilled and unskilled labour in large numbers and the labour cost for skilled labour was high and this was the problem faced by the farmers. The third rank was given to high cost of fertilizer. The betel vine crop required heavy doses of fertilizer, so even a meager rise in price affected the farmers severely. Fourth rank was given to unfavourable market condition, indicating that the farmers were more worried about conditions of production than about marketing condition. High cost of pesticides was the fifth rank as the farmers spent more on fertilizers than the pesticides.

MAJOR FINDINGS OF THE STUDY

- Involvement of too many middlemen and non-existence of regulated market.
- The most important constraint is price fluctuation because of volatile seasonal fluctuation in the production of betel leaf.
- Severity of pests and diseases was ranked as the first major problem. Betel vine yard is always threatened by pest and disease attack. More than 15 insects and pests attack betel vine yard.
- Inadequacy of finance and high cost of labour are the limiting factors for the cultivation of betel vine leaves.
- Traditionally managed operations and untrained labour, poor planting materials are the main causes of low yield of betel leaf.

SUGGESTIONS

- Market price should be collect and published periodically by the government to help the farmers.
- Periodic inspection of the farm is required to prevent diseases. By establishing export promotion council the betel leaves can be exported to other countries opening new market avenues to the growers.
- Extensive propaganda should be given to make the betel

vine growers aware of the plant protection practices to control pests and diseases. The government should gear up its extension agencies to educate the farmers.

- Organised credit through commercial banks and government for the cultivation of betel vine would help the growers from depending on the credit from traders.
- The healthy planting material is an important indicator to achieve good yield and the quality of betel leaf produced. There is need to select good quality material through new planting techniques with modern technology.
- Research may be undertaken to utilise betel leaves for other medical purposes and efforts towards evolving disease – resistant varieties.

CONCLUSION

In India, betel vine is grown as an important cash crop. Betel leaves has good export potential and India exports betel leaves to the other countries. The betel farming activities can generate employment opportunities for throughout the year. Further, as far as the national employment generation is concerned, about 20 million people derive their livelihood directly or indirectly from production, processing, handling, transportation and marketing of betel leaves in India. It is the most important cash crop. This adequately justifies its nomenclature as the "GREEN GOLD OF INDIA". A well coordinated effort by the farmers, traders, scientists, administrators and policy makers is required to be initiated to boost up the national economy through proper exploitation of this green gold. The central and state government should jointly take appropriate steps to improving pest management of betel farm activities, to establish a Research and Development Board, to enhance export oriented activities meeting global standards, to reduce intermediaries in marketing, to stabilize the betel prices, to increase farm cultivation and awareness among betel growers.

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