

**The Geographical Indication of Goods
(Registration and Protection Act, 1999)**

In the matter of an application by the Department of Horticulture, Karnataka for registration of "Mysore veelyedele" (betel vine) as a geographical indication in class 30

STATEMENT OF CASE

1. The Department of Horticulture is a public sector organization under the Government of Karnataka promoting the extension and development of Horticulture in Karnataka.
2. References to betel vine can be found dating back as much as 5,000 years ago. Betel vine is native to India and it has long held a place in Indian history, religion, and culture. It is being cultivated from the period of Maharajas of Mysore in palace gardens as well as villages surroundings Mysore taluk. Now it is found in Uduboor, Toreyenakatoor, Marballi and kalale villages of Mysore. This has very smooth and tasty leaves, which is popularly known as "*Mysore chigurele*" in this area and used for chewing along with areca nut. A copy of Mysore Gazetteer, Vol-III Economic, 1929, New edition is enclosed as proof of historical evidence. It has been used as an ink, stimulant, laxative, contraceptive, digestive, narcotic, and treatment for internal and external infections. Attached, as Annexure-I is a map of the region where Mysore betlevine is being grown in Karnataka. Also attached and marked as Annexure-II are the botanical characteristics of Mysore betelvine.
3. Warm humid, mild temperature, proper shade, Black soil and sufficient water supply are the basic requirements. The plant prefers warm, humid conditions, but can tolerate some drought. It is generally too tender to grow outside the tropics. It requires a tropical climate with high atmospheric

humidity. It can be cultivated in the uplands as well as in wetlands. The traditional variety, Mysore Veelyedele, is generally grown as a single crop with supporting trees. The betel vine thrives best under shade that is mild temperature of about 10-40⁰ C and in low ground area where it can have a supply of water. Black soil is required for its profuse growth. The soils under betel vine in Mysore are sufficiently deep but are well drained due to their high organic content. The crop grows best on well-drained fertile soils. Waterlogged, saline and alkali soils are unsuitable for its cultivation. The crop also comes up very well in lateritic soils. Proper shade and irrigation are essential for successful cultivation of this crop. An annual rainfall ranging from 200 to 450 cm is ideal. The crop tolerates a minimum temperature of 10°C and a maximum of 40°C.; extremely low atmospheric temperature leads to leaf fall. Hot dry winds are harmful.

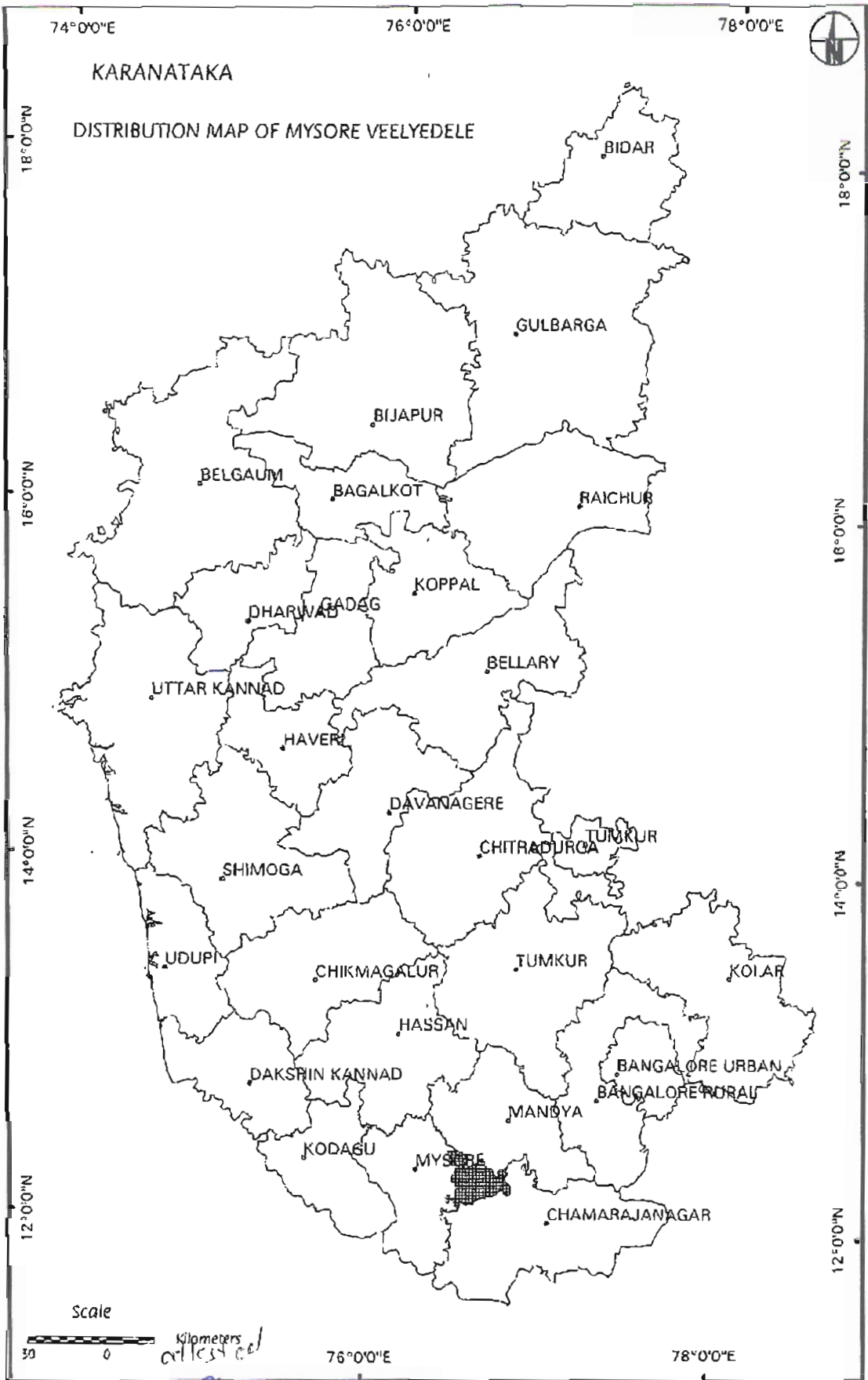
4. Though there are over hundreds of betel vine grown in India, Mysore veelyedele surpasses all owing to its characteristics such as heart shaped leaves, hot taste and smooth texture to the leaves. The presence of black clay soil with moderate rainfall and temperature make Mysore veelyadele unique to that particular locality, where it brings specific hot taste and smooth texture to the leaves, which is very characteristics to that area. The occurrence of rough texture and pungent taste is observed if it is grown outside this region.
5. These unique characteristics of Mysore veelyedele are due to a combination of the inherent genetic constitution of the Mysore veelyedele and the geographical region where it is grown. These characteristics of Mysore veelyedele cannot be replicated by growing the same variety in areas other than Mysore.
6. The name Mysore veelyedele, therefore, qualifies as a geographical indication for the aforesaid type of betel vine originating in the aforesaid region. Department of Horticulture, Karnataka is accordingly making this


application for registering Mysore veelyedele as a geographical indication. Department of Horticulture, therefore, submits that it is in the interest of both trade and public that there should be a registration for Mysore veelyedele as a geographical indication to ensure that the this variety is sold under the name Mysore veelyedele and recognized as betel vine produced in the aforesaid region of Karnataka and having the aforesaid special distinctive and naturally occurring unique characteristics.

- 7. Such a registration would assist in enforcing the provisions of the Geographical Indications of Goods (Registration & Protection) Act, 1999.


Director of Horticulture

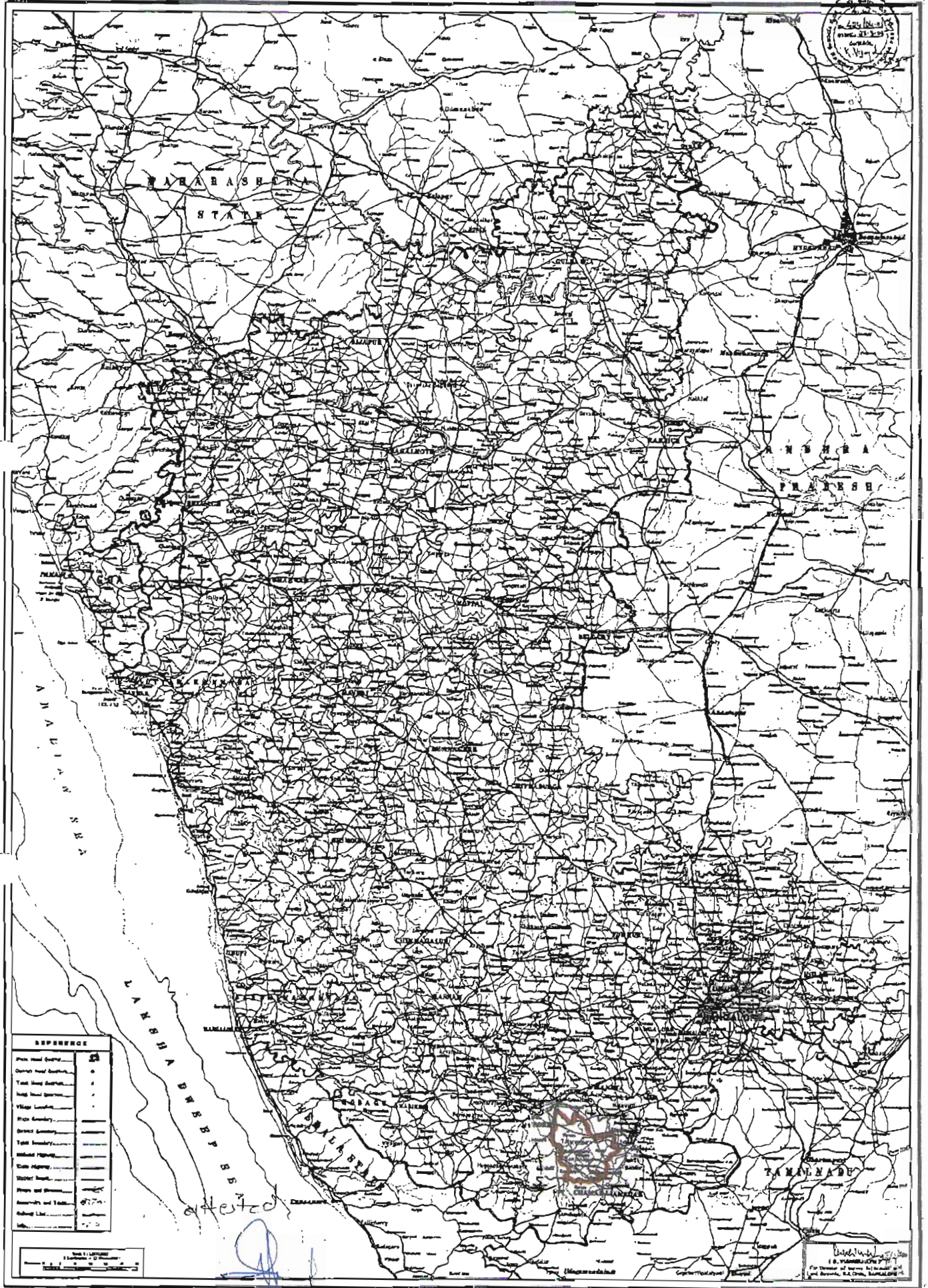
Director of Horticulture
Lalbagh, Bangalore-560 004




Senior Assistant Director of Horticulture
Tropical Citrus Lab
Hulimavu, Bangalore - 560 076.

KARNATAKA STATE

11



REFERENCE	
Principal Rivers	—
Canals and Aqueducts	—
Trunk Road Routes	—
High Road Routes	—
Minor Roads	—
State Boundary	—
District Boundary	—
Town Boundary	—
City Boundary	—
Railway Lines	—
Electric Lines	—
Telegraph Lines	—
Post and Telegraph Lines	—
Other Lines	—

Senior Assistant Director of Horticulture
Tissue Culture Lab
Hulimavu, Bangalore - 560 075

Printed by ...
11, ...
Bangalore

Annexure-II

Botanical Description of Mysore betel vine

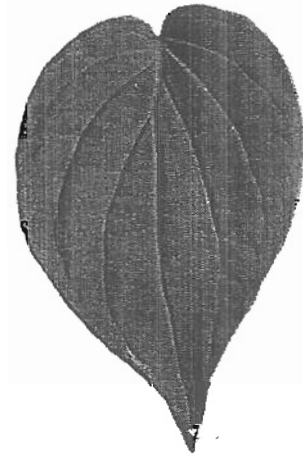
Habit A green leafy vine growing as a ground cover or small climber, very similar in growth habits to Pepper.

Root Tap root system, often rooting at lower nodes.

Stem Slender with longitudinal furrows, twining around the support with dimorphic branching. The vegetative climbing branches are orthotropic and produce plagiotropic side branches which are reproductive in nature, nodes enlarged, 15-20 cm apart. The reproductive branches generally do not have any adventitious roots and do not produce any vegetative or climbing branches. Adventitious roots arise from the nodes, which cling to the supporting plant and help in climbing.



Leaf Leaves simple, alternate, up to 20 x 11 cm, ovate, cordate at base, slightly auricled, asymmetrical, shortly acuminate at apex, margin entire, blade glabrous, light green above and dark at undersurface. Nerves 7 ribbed, raised beneath, 4 ribs start from the base and last 3 ribs start from around 1 cm from the base. Secondary nerves not prominent. Petiole up to 2 cm long.



Inflorescence Dense fleshy spikes up to 7 cm long, pendulous, arise from the leaf axils.

Flower Flowers very minute, dioecious, bracteate, crowded, perianth absent. Stamens 2, hypogynous, filaments usually distinct. Ovary superior, 1-loculed, stigma 5-6, ovule solitary, basal orthotropous.

Fruit Fruit a small drupe.

Seed Seed small with endosperm and a minute embryo.

[Handwritten Signature]
Director of Horticulture
Lalbagh, Bangalore-560 004

Annexure – III

Production Technology of Mysore betel vine

Climate

The plant prefers warm, humid conditions, but can tolerate some drought. It is generally too tender to grow outside the tropics. It requires a tropical climate with high atmospheric humidity. It can be cultivated in the uplands as well as in wetlands. The traditional variety, Mysore "Veelyedele", is generally grown as a single crop with supporting trees and other varieties grown in Karnataka are usually in Areca nut or Coconut plantations as an intercrop.

Site Characters

The betel vine thrives best under shade that is mild temperature of about 10-40⁰ C and in low ground area where it can have a supply of water. Black soil is required for its profuse growth. The soils under betel vine in Mysore are sufficiently deep but are well drained due to their high organic content.

The crop grows best on well-drained fertile soils. Waterlogged, saline and alkali soils are unsuitable for its cultivation. The crop also comes up very well in lateritic soils.

Proper shade and irrigation are essential for successful cultivation of this crop. An annual rainfall ranging from 200 to 450 cm is ideal. The crop tolerates a minimum temperature of 10°C and a maximum of 40°C.; extremely low atmospheric temperature leads to leaf fall. Hot dry winds are harmful.

Cultivation Practice

There are two main planting seasons, one during May - June (Edavakodi) and another during August - September synchronizing the southwest and North East monsoon respectively.

Land Preparation

Apply farmyard manure 25 t/ha as basal dressing in the last ploughing. The land is laid out ridges and furrows 45 cm apart and irrigation channels formed at convenient places. Generally Avisi is used as supporting betel vines. The seeds of Avisi are sown at

the rate of 40 to 50 kg/ha during June-July along the ridges spaced at 100cm. Irrigations are given to the standards twice a week or even more frequently. Along the border some seeds of Moringa or Pangara, Glyricidia are sown as wind breaks.

Planting

The vines are planted during September-October in place where live standards are raised in June-July. 50,000 sets (vine cuttings) are required for planting a hectare. The vine sets are planted at 100 x 20 cm spacing.

Manures and Fertilizers

FIRST YEAR

For Black Alluvial Soils 200 kg N/ha in 4 split doses at monthly interval starting from 2nd month of planting through Ammonium sulphate. 100kg P₂O₅/ha through single super phosphate and 100 kg K₂O/ha through Murate of potash / Sulphate of potash on basal dressing one month after planting.

For Red Soils 200 kg N/ha (100 kg N through FYM or oilcake, 100 kg through Ammonium sulphate), 100 kg P₂O₅ through single super Phosphate and 100 kg K₂O through murate of potash.

SECOND YEAR

Manuring schedule of first year except FYM is to be followed.

THIRD YEAR

Manuring schedule of first year is to be followed.

Intercultivation

Weeding should be done whenever necessary. Trail the vines and train the standards at monthly intervals or even earlier according to the growth of standards or vines. Fix dry bamboos where ever there are no standards.

Lowering the vines

If the vine grown beyond 3-3.5 m. picking leaves will be difficult. Hence, the vines are bundled kept in the top 60cm and tied to the standard. The bundle is planted in the trenches dug at the base of standards.

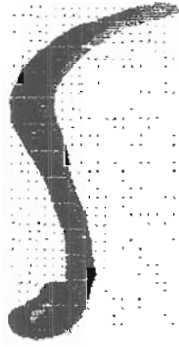
First irrigation soon after planting and 2nd irrigation should be done on 3rd or 4th day. Subsequent irrigations can be given based on the seasonal and soil conditions i.e. once in 2 days during summer and 5 to 6 days during winter.

Areas with good shade and irrigation facilities are preferred for this crop. The land is prepared well and laid out into furrows of 10-15 m length, 75 cm width and 75 cm depth. Such furrows are opened at a distance of 1 m apart. Well rotten farmyard manure and leaves are thoroughly incorporated with the topsoil of the furrows, along with wood ash. High dose of organic manure (20-50 t/ha) is applied to maintain good soil structure, which is essential for the proper development of the root system.

Top portions of mature vines (2-3 years old) are used for planting. Healthy cuttings of about 1 m length with three nodes are used as planting material. For planting one hectare, 20000-25000 cuttings are required. Furrows are irrigated prior to planting. Cuttings are planted in pits 20 cm apart in furrows. While planting, one node shall be buried in the soil and the second node should be at the ground level. The soil around the planted cutting must be pressed firmly to encourage quick germination. It is necessary to provide shade to the planted cuttings. Coconut leaves are used as shading material. To prevent excess moisture in the soil, splashing water on the vines by hand is preferable in the early stages. In the absence of rain, light irrigation, four times daily, is given till establishment. Cuttings establish in three weeks time and the first leaf emerges in about a month.



The cuttings sprout and creep in about a month. At this time, they must be trailed on the standards. Bamboo standards are erected at intervals and linked by tying at heights of 30 cm and 150 cm using coir rope. In the initial stages trailing is done on coir tied for the purpose and coir is trimmed with a special knife (Kudugolu) designed for the purpose. Trailing is done further by tying the vines, at intervals of 15-20 cm along



Special knife

standards loosely with the help of banana fiber. When vines come in contact with standards, they produce adventitious roots using which they cling to support. Trailing is done every 15-20 days depending on the growth of vines.

Betel vine 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.

Dried leaves and wood ash are applied to the furrows at fortnightly intervals and cow dung slurry is sprinkled. This is repeated till four months after planting when the crop is ready for harvest. Application of different kinds of leaves (gliricidia, mango leaves etc) at monthly intervals is found advantageous for the growth of the vines.

Farmers cultivating Beetle vine varieties from different localities

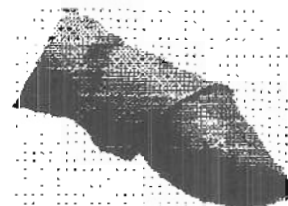
Name of the Farmers	Varieties grown	Place of cultivation	District
Papanna	Mysore veelyedele	Mysore	Mysore
Manchaiah	Mysore veelyedele	Mysore	Mysore
Chikkanna	Mysore veelyedele	Mysore	Mysore
Siddanna	Mysore veelyedele	Mysore	Mysore
Javaraiiah	Mysore veelyedele	Mysore	Mysore
Chikkanna	Mysore veelyedele	Mysore	Mysore
Channa shettaru	Mysore veelyedele	Uduboor	Mysore
Maraiahna kullara muruchola nayaka	Mysore veelyedele	Uduboor	Mysore
Rama nayaka	Mysore veelyedele	Uduboor	Mysore
Kempa nayaka	Mysore veelyedele	Uduboor	Mysore
Huchha nayaka	Mysore veelyedele	Uduboor	Mysore
Kari nayaka	Mysore veelyedele	Uduboor	Mysore
Sannaswamy	Mysore veelyedele	Toreyenakatoor	Mysore
Siddanayaka	Mysore veelyedele	Toreyenakatoor	Mysore
Sidnayaka	Mysore veelyedele	Marballi	Mysore

Anknayaka	Mysore veelyedele	Marballi	Mysore
Devanayaka	Mysore veelyedele	Marballi	Mysore
Dandanayaka	Mysore veelyedele	Marballi	Mysore
Muddanayaka	Mysore veelyedele	Marballi	Mysore
Mudenayaka	Mysore veelyedele	Marballi	Mysore
Guddunayaka	Mysore veelyedele	Marballi	Mysore
Nagarajanayaka	Mysore veelyedele	Marballi	Mysore
Devanayaka	Mysore veelyedele	Marballi	Mysore
Siddanknayaka,			
Somanayaka	Mysore veelyedele	Marballi	Mysore
Puttunayaka	Mysore veelyedele	Marballi	Mysore
Chikkedachanayaka	Mysore veelyedele	Kalale	Mysore
Pinnanayaka	Mysore veelyedele	Kalale	Mysore
Madanayaka	Mysore veelyedele	Kalale	Mysore

General aspects of qualitative and quantitative characters

Qualitative

To get a quality leaves we have to pluck them when they are young and light green in colour with the help of special device, which is attached to the thumb while plucking the leaves. This will reduce the risk of dying back of the cut portion of the petiole.



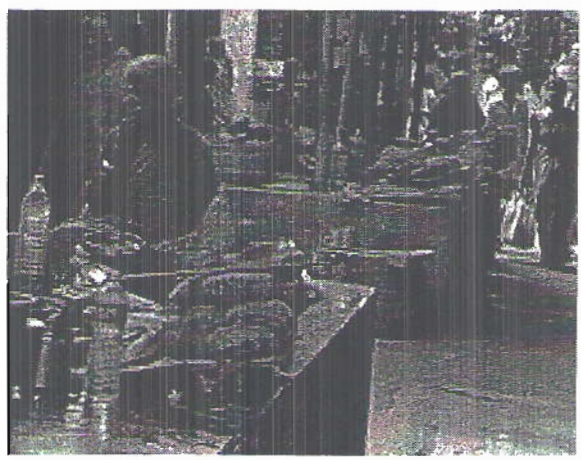
Special device to pluck the leaves

Quantitative

- An acre of betel vine crop yields 25-40 pindies for every 20 days.
- 1 bunch (kattu) comprises 200 leaves, 50 bunches is equal to 1 pindy and a pindy contains 10000 leaves.



Harvested leaves are made in to bunch (neatly arrange the one above the other) and wrapped in Areca leaf sheath or in Banan leaves and brought to open market. Open market is generally held in Mysore, Udboor and Jayapura hobli. Some of the farmers give contract to the agents for lump sum of money and they harvest the leaves and do the marketing. Each bunch will cost



around 20 Rs. The cost of a pindy of leaves ranges from Rs.1000-3000 and it differs from season to season. An average income of about Rs. 40,000 – 1,20,000 will farmer get from this crop for every acre of land with seasonal variation.

General comments by the Farmers

The lands given by King of Mysore (Wodeyar) are under cultivation of betel vine in this area and as they are of more value farmers don't want to leave the cultivation, not because of the profit they are gaining, but for the high value of the land in the center of the city. The crop needs regular attention and requires a lot of labour. Yield is not satisfactory to them. Diminishing water sources is major problem for them to further continue the crop.

Over all analysis of the present status of the crop and Future strategies

The slight decrease in cultivation area due to the lack of proper irrigation within Mysore and adjacent districts like Chamarajanagar focuses on the situation that if disinterest among farmers in cultivating betel vine continues in the present rate, in future Mysore veelyedele may also face severe threat for its very existence. So as to avoid this problem necessary step should be taken to encourage the farmers to cultivate this very famous variety of betel vine. Farmers should be educated with modern irrigation systems like sprinkler and drip irrigation methods. Farmers should be encouraged to grow this particular variety and proper marketing facilities should be given. In most of the cases farmers own a small area of land under cultivation, which will, not be sufficient for them to sustain life. To increase the cultivation of the crop area they have limitation of water (irrigation facility).

[Handwritten Signature]
 Director of Horticulture
 Lalbagh, Bangalore-560 004

MYSORE GAZETTEER

COMPILED FOR GOVERNMENT

VOLUME III

ECONOMIC

EDITED BY

C. HAYAVADANA RAO, B.A., B.L.

*Fellow, University of Mysore,
Editor, Mysore Economic Journal, Bangalore.*

NEW EDITION

checked



Senior Assistant Director of Horticulture
Tissue Culture Lab
Hort. Bldg., Bangalore - 560 076

BANGALORE:
PRINTED AT THE GOVERNMENT PRESS
1999

where the gardens are commanded by tanks, they are planted closer to give as many as 60 to 70 trees per acre. For the planting of the seedlings, pits about a foot deep are dug and filled with earth mixed with manure and sand quite up to the top. It is believed that the coco-nuts should not be planted deep.

In the gardens under tanks, moisture is abundant as they are irrigated whenever necessary; in the dry land gardens, tillage takes its place; the gardeners have to be ploughed six times in the year, the earlier ploughings help to soak up the rains and the later ones to retain the moisture in the soil. Manure in the shape of sand and red earth and cattle manure is applied about the middle of the year. In gardens, a good digging up is given after the North-East Monsoons are over about January and February.

Harvest and yields.

The trees begin to bear from the 7th year, but generally from the 10th and continue to bear, it is said, for 100 years. About 100 nuts per year will be the yield of an average well-grown tree. Produce is gathered mostly from the month of October onwards. Except in the Tiggur neighbourhood, the nuts are gathered when they are quite ripe from the nuts and sold in the shell. In the Tiggur area, they are allowed to ripen completely and deep. They are gathered and stacked; when a sufficient number accumulates, they are husked in such a way that both husk and shell are removed and the kernel called "Gerasu") is got intact; they are sold straightway. A thousand coco-nuts will give from 10 to 13 maunds of copra of this kind. The copra so made is sold for use in confectionery and is too valuable to be used for the extraction of oil. Only those which become mouldy and unfit for this purpose are used for extracting oil.

Coir.

Coir, the most important by-product of the cocoa-nut tree, is made only in the areas where the coco-nuts are

picked for the sake of the nuts in the shell, i.e., before they are dead ripe. With dead ripe coco-nuts, the fibre is very coarse and woody. The best coir is made from the husks of the coco-nuts which are picked young for the sake of the cool refreshing drink they afford in this stage.

Special shows of coco-nuts and coco-nut products have been held by the Department of Agriculture to demonstrate strikingly the uses of the cocoa-nut palm; special manures are being popularised; the Government also sent at the cost of the State certain selected merchants to study the manufacture of copra and coir in Ceylon and Travancore.

The export of coco-nuts and copra is valued at about Rs. 53 lakhs (1922-23).

The betel-vine thrives best in low ground where it can have a supply of water. A black soil is required. In the western parts of the State, the betel-vine is grown with *areca palm*.

In the eastern parts, the garden is divided into rows, 10 cubits in width, having on one side an elevated channel for supplying it with water and on the other side, a canal to carry off what is superfluous. The rows are divided into beds. In the centre of each division, a row of small holes is formed, each one cubit distant from the other. In December or January, in every hole, two cuttings of the vine are put, each two cubits long and covered with earth. The shoots are watered regularly; while the four ends project and form an equal number of young plants, they are allowed to climb upon dry sticks, put in for the purpose. In small drills made across each of the beds, are planted rows of the seeds of the *agase, nugee, and verjiv*. The garden should be kept clear of weeds and manured once a year. When the plants are a year and a half old, they are

Small vine paper book.

detached from the sticks, two cubits of each are buried in the ground and the remainder conducted close to the root of one of the young trees, is allowed to support itself on the stem. At the end of two years, two cubits more of each plant are buried in the ground and ever afterwards, this is once a year repeated. A plantain tree is planted at each corner of the bed to give additional cohesiveness to the garden.

In the western parts, where the betel-vine is grown with areca palm, when the plantain is fifteen years old, a hole is dug near every tree, one cubit deep and one and a half in width. The ends of five cuttings of the betel-vine are buried in each hole with the upper extremity sloping towards the palms. In the second year, the vines are tied up to the palm. In the third year, and every other year, so much of the vines next the root as have no leaf must be buried.

At the beginning of the fourth year, the cultivator begins to gather the leaves for sale and for 15 to 20 years, continues to obtain a constant supply. Afterwards, the plants die and a new garden is formed. From 4 to 6 pickings a year are had; the money value of the produce of an acre may come to Rs. 2,000 but few rajahs do more than 1-10th of an acre as the cultivation is very laborious and has to be all done by manual labour.

The leaves are extensively used in the Indian household for chewing with areca-nut.

The coffee plant (*Coffea arabica*) is believed to be a native of Abyssinia and most writers agree that it was brought to Mysore about two centuries ago by one Baba Budan who had made a pilgrimage to Mecca. The plant is a many branched small tree or bush, which if left to grow naturally, is 15 to 20 feet high and bears white flowers resembling orange blossom.

Coffee unfortunately registers a continued decline with 122,070 acres in 1914-1915, 108,000 in 1915-1916 and 104,000 in 1916-1917. There was a slight rise with 104,175 acres in 1917-1918 and 110,066 in 1918-1919. But it again began to decline with 106,066 acres in 1919-1920, 106,946 in 1920-1921, 103,951 in 1921-1922, 103,800 in 1922-1923 and 97,585 in 1923-24. The following are the acreage figures from 1916-1917 to 1923-1924:—

Acre.		Acre.	
1916-17	... 104,416	1920-21	... 106,949
1917-18	... 108,175	1921-22	... 103,951
1918-19	... 110,066	1922-23	... 103,800
1919-20	... 106,066	1923-24	... 97,585

Coffee grows best at altitudes between 2,000 and 5,000 feet with a rainfall of 60 to 90 inches and a temperate climate. Sloping or even fairly steep land is suitable, provided that surface erosion is prevented; good natural drainage is important and flatland wetlands are unsuitable. There are five descriptions of land in Mysore in which coffee has been planted:—

- (1) The forests termed *kans* generally situated in mountainous country intersected by streams of clear water, with rocky or sandy beds.
- (2) Honey ghat forests termed *mole*.
- (3) Village jungles termed *udru*.
- (4) *kimri*, or land, the original timber on which having been cut, has been followed by a secondary growth of trees of a smaller type and
- (5) *Kanuvu*, or land covered with hard wood-trees or bamboos.

Some of the finest estates have been formed on lands of the first and third classes which have the decided advantage of possessing a rich deposit of decayed vegetable mould that has not been exposed to atmospheric influences, and hence contain an almost inexhaustible store of organic and

Coffee.
(*Coffea arabica*)

Selection of land