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BETEL LEAF: THE GREEN GOLD OF INDIA

The Indian betel leaves are in great demand in several countries of the world. Leaves worth about Rs 30-40 million are exported to European countries. This clearly indicates the profitability of the crop, which can be further exploited.

The betel plant is an evergreen and perennial creeper, with glossy heart-shaped leaves and white catkin. It is a native of central and eastern Malaysia, which spread at a very early date throughout tropical Asia and later to Madagascar and East Africa. In India, it is widely cultivated in Tamil Nadu, Madhya Pradesh, West Bengal, Orissa, Maharashtra and Uttar Pradesh. Offering betel morsels (pan-supari) to guests in the Indian subcontinent is a common courtesy. The betel plant is currently extensively cultivated in India, Bangladesh and Sri Lanka.

The role of betel leaves in the national economy

The vast economic potential of the crop can be adequately established by the fact that about 15-20 million people consume betel leaves in India on a regular basis, besides those in other countries of the world, which may add up to over two billion consumers. The betel farming activities can generate employment opportunities for agricultural workers throughout the year, helping them to support their families. Further, as far as national employment generation is concerned, about 20 mil-



lion people derive their livelihoods directly or indirectly by producing, processing, handling, transporting and marketing betel leaves in India.

The Indian betel leaves are in great demand in several other countries of the world where demand far exceeds the local supply. Consequently, leaves worth about Rs 30-40 million are exported to European countries. This clearly indicates the profitability of the crop, which can

be further exploited in the interest of the nation.

Betel leaf and areca nut consumption across the world

In about three to six months time, betel vines grow to a height of 150-180 cm. At this stage, branching is noticed. Leaves are plucked along with the petiole, with the right thumb.

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Once harvesting commences, it continues almost every day or week. The interval of harvesting varies from 15 days to about a month, till the next lowering of vines. After each harvest, manuring has to be done.

Types of leaves

There are various types of betel leaves, the most popular being Calcutta, Banarasi and Magahi. The harvested leaves are used both for domestic consumption and for export to the Middle East, European countries, USA, Pakistan and Myanmar. Paan is one of the major sources of income in rural Bangladesh. In Kerala, the most famous variety of betel leaf is from Venmony near Chengannur and it is called Venmony Vettila. Betel leaf cultivated in Tirur in Kerala, and Hinjilicut in Odisha are of fine quality. Betel leaves exported from Tirur are famous in Pakistan as ‘Tirur Paan’.

In Tamil Nadu, a variety of betel leaves are cultivated at Madurai, Dindukal, Dharmapuri and Erode districts, *Anthiyur Betel* being particularly popular among betel chewers. A large number of farmers and other employees are involved both directly and indirectly in betel leaf cultivation and marketing.

Betel chewing

In different countries, the leaves are folded in different ways and generally, some calcium hydroxide is smeared inside. Slices of the dry areca nut are on the upper left of the leaf and slices of the tender areca nut on the upper right. The fold on the lower right contains tobacco—a relatively recent introduction.

There is archaeological evidence that betel leaves have been chewed along with the areca nut since very ancient times. It is not known when these two different stimulants were first put together. In most countries,

the mixture of both has a ceremonial and highly symbolical value.

**Various uses
of betel leaves**

In India, the betel leaves and areca nuts play an important role in Indian culture, especially among Hindus. Many traditional ceremonies governing the lives of Hindus use betel leaves and areca nuts. For example, to pay the priest, devotees place the money in the betel leaves and then put that beside the priest. The betel leaves and areca nuts are used ceremonially in traditional weddings. Based on a folk tale about the origins of these plants, the groom traditionally offers the bride’s parents betel leaves and areca nuts (among other things) in exchange for the bride. The betel and areca nut are praised as an ideal combination symbolising a married couple bound together in love.

But the high rate of oral cancer in South Asia is thought to be due to the chewing of betel preparations; the inclusion of tobacco may worsen the risk, but there is also evidence that the areca nut, alone or as part of a betel leaf, may cause cancer even without tobacco.

Medicinal properties

In India, betel is used for deworming. According to traditional Ayurvedic medicine, chewing areca nut and betel leaf is a good remedy against bad breath. These are also said to have aphrodisiac properties.

Scanty or obstructed urination. Betel leaf juice is credited with diuretic properties. Its juice, mixed with dilute milk and sweetened slightly, helps in easing the passage of urine.

Weakness of nerves. Betel leaves are beneficial in the treatment of nervous disorders. The juice of a few betel leaves, with a teaspoon of honey, serves as a good tonic. A teaspoon of this mixture can be tak-

en twice a day.

Headaches. The betel leaf has analgesic and cooling properties. It can be applied to relieve intense headaches.

Respiratory disorders. Betel leaves are useful in pulmonary afflictions suffered in childhood and old age. The leaves, soaked in mustard oil and warmed, may be applied to the chest to relieve a cough or difficulty in breathing.

Constipation. In the case of constipation in children, a suppository made of the stalk of betel leaf dipped in castor oil can be introduced in the rectum. This instantly relieves constipation.

Sore throats. Local application of the leaves is effective in treating sore throat. The crushed fruit or berry should be mixed with honey and taken to relieve an irritating cough.

Wounds. Betel leaves can be used to heal wounds. The juice of a few leaves should be extracted and applied on the wound. Then a betel leaf should be wrapped over it and bandaged. The wound will heal with just a single application, within two days.

Boils. The herb is also an effective remedy for boils. A leaf is gently warmed till it gets softened, and then coated with a layer of castor oil. The oiled leaf is spread over the inflamed part. This leaf has to be replaced, every few hours. After a few applications, the boil will rupture draining out all the purulent matter. The application can be made at night and removed in the morning.

The problem of breast milk secretion. The application of leaves smeared with oil is said to promote the secretion of milk when applied on the breasts during lactation.

Precautions. Cancer of the mouth and lips has been found to be more frequent in areas where the betel chewing habit is widely prevalent. Other ill-effects of paan-chewing like



dyspepsia and pyorrhea, and cancer of the tongue and cheeks have also been observed amongst excessive chewers.

Other uses. Paan-supari, especially the paan, is prescribed by Ayurvedic physicians as an aphrodisiac. Partly owing to its deodorant, aphrodisiacal, and invigorating properties, paan-supari came to become a part of the ritual by which a wife welcomes her husband.

Culinary uses

Betel leaf is a popular spice in Southeast Asian cooking, with the leaves being used in their raw and cooked form. A traditional way of preparing the leaves is as a wrapping for spiced minced meat and other morsels of food. Because the leaves are so attractive, they are often used as a base for decorating platters, with food arranged on top of them. The white flower spikes of the betel plant develop into seeds/fruits that look a little like a green/brown mulberry when ripe and can be eaten; it is a tasty morsel of sweet jelly-like pulp.

Betel cultivation

Since the betel plant is a creeper, it needs a compatible tree or a long pole for support. Paan cultivation is a specialised type of agriculture. High ground and especially fertile soil are best for betel. Waterlogged, saline and alkali soils are unsuitable for its cultivation. A typical farm will be fenced with bamboo sticks and coconut leaves, with the husk of paddy laid over it. The soil is dug well and laid out into furrows of 10-15m length, 75cm width and 75cm depth. Oil cakes, cow dung, rotten farmyard manure and leaves are thoroughly incorporated with the topsoil of the furrows along with wood ash.

The cuttings of the betel creeper 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 half a metre apart, and the saplings entwined around upright sticks of split bamboo and reeds.

Proper shade and irrigation are essential for 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 creeper remains productive for several years from the date of planting. Betel needs constantly moist soil, but there should not be excessive moisture. Hence frequent light irrigation is required, but only to the extent that the standing water does not remain for more than half an hour in the bed. If water logging due to heavy rains or excess irrigation occurs, drainage should be arranged immediately. The best time for irrigation is in the morning or evening. Dried leaves and wood ash are applied to the furrows at fortnightly intervals and cow dung slurry sprinkled. Application of different kinds of leaves at monthly

intervals has been found to be advantageous for the growth of the betel.

Recommendations

1. As there is no betel leaf research institute in India, diseases that afflict the plant have serious consequences and farmers are unable to contain their spread even after applying pesticides and germicides according to the suggestions of the local Agriculture Extension Department (AED) officials.

2. During the last three years, more than 300 betel leaf farms have been completely destroyed due to the disease.

3. According to sources in the Agriculture Extension Department (AED), in India, there are more than one million betel leaf farms on which a crop worth over Rs 50 billion is produced annually and over 100,000 people

depend on it for their livelihood.

4. When attacked with stem-rot disease, leaves of betel-leaf plants turn red and later the entire plant dies. Many acres of land earlier used for betel leaf farming are now being used for the cultivation of vegetables and other rabi crops. The farmers can get rid of the disease by using selected insecticides.

5. Healthy plants are important to achieve good yields and quality betel leaves. There is a need to select good-quality material and use new planting techniques.

6. Traditionally managed operations and untrained labour, apart from poor planting material, are the main causes of low yield of the betel leaf.

7. Betel leaf exports earn a significant portion of foreign exchange for the country. Yet, there is a need for proper research on export systems and gathering of market intelligence

besides a continual modulation of export policy decisions to boost exports.

8. The central and state governments should jointly take appropriate steps to improve pest management in betel farms, and establish a Betel Research and Development Board, to enhance export oriented activities with regard to global standards; reduce intermediaries in marketing; stabilise the betel prices; increase the area under betel farm cultivation and raise awareness among betel growers. These initiatives will enable India's betel leaf crop to contribute a significant portion to India's foreign trade in the near future. ■

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