

**PATCHOULI OIL**  
(*Pogostemon Cablin*)

Serious attempt for propagating cultivation in various coastal part has been done by CIMAP and few business houses like S.H. Kelkar & Co. in last couple of years. Now there are very good chances that by 2006 India can become atleast self sufficient for it's consumption of 200MT/year. If more area can be taken with coconut and aracanut growers as intercrop it may be possible to gain major share in + 1500 MT/year market. Advantage in case of India is utilization of spent leaf for Agarbatti production, which can result in lower effective cost of oil thus making Indian Patchouli internationally competitive. Agro technique is already very well developed at this stage.

Patchouli is very well cultivated in Gujarat, Goa, Maharashtra, Karnataka, Andhra Pradesh, Orrisa, West Bengal & Assam. It requires loose deep loamy soils, rich in humus and nutrients & flourishes at low altitudes. The ideal pH of the soil for Patchouli is 5.5 – 6.2.

Patchouli grows successfully up to an altitude if 800-1000 m above the sea level. However if prefers a warm & humid climate & evenly distributed rainfall ranging from 1500- 3000 mm per annum. Most soils with good drainage are suitable for cultivating patchouli. Water logged solid are found to be detrimental for the crop and must be avoided because they are susceptible to nematode attack. Generally humid climate with plenty of sunlight is suitable for this crop. The plant grows well as an intercrop in partial shade, but complete shade should be avoided. For growth of the plant, temperature between 25- 35°C is found to be ideal. Planting can be done at any time of the year except in hot months like April, May or October. Once planted, the plants give good yield of leaves for at least 3 years.

Patchouli is propagated vegetatively by using cutting from healthy stock from the apical region.

Irrigation: For getting good yield of the crop, the area should receive good and evenly distributed rainfall. It is not suitable crop under rainfed conditions. For such places, drip irrigation is the most suitable method for irrigation & the cost comes Rs 20,000 per Acre. Due to this Patchouli can be easily grown in places where there is less or no rainfall but rest other climatic & soil conditions are ideal. The yield under drip irrigation is nearly 5 times that of conventional method.

Patchouli has to be harvested when the foliage becomes pale green to light brownish and when the stand emits characteristic patchouli odour, especially in morning hours. The first harvest is taken about 5-6 months after transplanting. Subsequent harvest can be taken after every 3-4 months.

The oil is found mainly in the leaf. The yield of fresh leaves/ha/year is about 10-15 tonnes. On shade drying reduces 3-4 tonnes, which on distillation yield about 50-70 Kgs of Oil. The yield of oil varies from 2.5- 3.5% on shade dry basis of the leaves. Yield of 2.5% may be considered satisfactory in commercial distillation. 10% moisture is good for oil extraction. 1 Acre → 200 Sq. Ft area is used for drying of leaves.

In North Karnataka around Kolar, there is 16-20% humidity & water is available so good growth. Patchouli was brought in 1966 with 5 Plants. In Orrisa, Assam 1000 Acres of land is under Patchouli cultivation & planting material is mainly supplied by S.H. Kelkar. Production of oil is 40-45 Kgs/day.

**Requirements for distillation**

1. Insulation on Distillation Unit.
2. Pressure (min) is 2-3.5 Kg (cm<sup>2</sup>) is must.
3. 4.5 – 6.0 Lacks/ plant for 100 Kgs plants
4. 2.5- 3.5% Yield.

Patchouli (*Pogostemon cablin*) has been identified as one such essential oil bearing aromatic plant with immense export potential. Patchouli oil production could be a rural based, labour intensive, low cost agro-base cottage industry, which will give large-scale employment in rural and hilly areas. Patchouli, being a shade loving plant can easily be grown as an intercrop amidst fruit trees, arecanut, and coconut plantation etc. It can also be easily cultivated in flood free fallow or wastelands. This will provide some extra income for the farmers. Following figures clearly indicates that Patchouli cultivation can be a good option besides the traditional crops.

**(Reference : North Eastern Development Finance Corporation Ltd**

**GENERAL INFORMATION:**

Name of the crop	Patchouli
Economic part used	Leaves
End product	Aromatic essential oil
Uses	Perfumeries, Cosmetics, Toiletries etc.
Type and nature of the plant	Perennial bushy shrub, partially shade loving
Soil	Well-drained deep loam to sandy loam soil, slightly acidic in reaction, with no water stagnation
Climate	Warm and humid climate, up to 1000 m altitude with well distributed moderate rainfall
Propagation	By stem cutting
Planting time with irrigation	April- September
Planting time – rainfed	June- September
Rotation period	Three years
Number of harvests	Average three harvests per year for 3 years
Drying & curing of the leaves	: Shade drying and stored in well packed gunny bags for at least 3 months before distillation

**ECONOMICS:**

Requirement of planting material	12000-15000 per acre or 4000-5000 per Bigha
Spacing	2' x 2' or 2' x 1.5' depending on soil fertility
YIELD	Green leaves, 55 to 66 q/ac/year
Dry leaves	10-12 q/ac/year (minimum)
Oil yield-recovery @ 3.75 kg /q of dry leaves	37.5 to 45 kg per acre/year