# MINISTRY OF AGRICULTURE, FEDERATION OF MALAYA

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# PATCHOULI

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# PATCHOULI

#### INTRODUCTION

Patchouli (Pogostemon cablin Benth.) is a small herbaceous plant with flaccid leaves and stems. Because of their strong and lasting odour, the leaves have been used in the Orient since early times for the scenting of shawls and other fabrics. The oil from which Essence of Patchouli is prepared is obtained by the distillation of the leaves.

The origin of the crop is not known for sure but it appears to have been brought to Malaya from the neighbouring isles. It was reported to have been cultivated originally in and near Penang; the cultivation of the crop and the distillation of the leaf for the production of oil became an industry of some importance in the latter part of the 19th century. However, interest in the crop in Malaya gradually declined with the coming of rubber planting at the beginning of this century.

#### SOIL

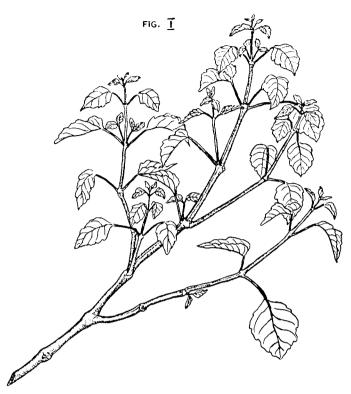
Patchouli will grow on a variety of soils but the one best suited for it appears to be a fertile, moisture-retaining loam. Good crops can be obtained from muck soil provided it is well drained.

Clean weeding is essential for the successful growth of the crop and consequently all weeds must be eradicated before any attempt is made to plant the land with patchouli.

Continual cultivation of patchouli on the same land will cause the crop to deteriorate, so rotation would appear to be necessary. Patchouli is, however, very suitable as a catch-crop with young rubber.

#### PROPAGATION

Patchouli is propagated from cuttings (see Fig. 1) taken from vigorous plants and planted directly into the field. The cutting, which is 12 to 16 in. long, should be semi-mature, that is when the colour at the base is just beginning to turn white. Cuttings taken from secondary growth are not considered to be suitable as they do not produce vigorous plants. Planting into the field is usually done immediately, but the cuttings can be kept for a few days if they are stored in a cool, dry place, preferably in shallow baskets, in an upright position allowing free circulation of air. About three to four pikuls of the cuttings will be required to plant one acre of land (2,500 cuttings weigh approximately one pikul).



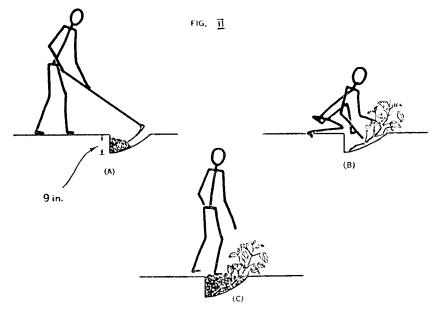
A cutting of patchouli taken for planting.

# PLANTING

Planting is done at the commencement of the rainy season. The operation is a simple one (see Fig. II): a hole about 9 in. deep is dug with a changkol and the cutting is placed in it with three nodes below ground level; the hole is then filled in, taking care that the soil is well pressed down. If the cuttings are poor, then it will be necessary to plant two cuttings at each point. The plants should be set out in rows 3 ft. apart, with about 3 ft. separating the plants in the row.

Under favourable conditions the cuttings will begin to produce shoots in about a fortnight, and at the end of one month the plants will have to be manured; usually 1 to 3 oz. of sulphate of ammonia is given to each plant. However, no manuring will be necessary on virgin soil.

During the growing period the land requires constant weeding and a little light cultivation is well repaid in quicker and stronger growth of the plant.



The Planting of a Patchouli Cutting

- (A) A hole about 9 in deep is dug with a changkol.
- (B) The cutting is placed in the hole with at least three nodes below ground level.
- (C) The hole is filled in and the soil well pressed down.

## HARVEST

The plants will be ready for harvesting in six to seven months, and an indication of maturity is given when the stems begin to turn white. The leaves and stems should be cut at about 3 in. above ground level with a pair of secateurs and then removed to a drying ground. If possible, harvesting should be avoided when the leaves are wet to help prevent fermentation during drying.

An average yield of 60 pikuls of undried material can be expected from the first harvest.

Under good soil conditions, three further rounds of harvesting can be obtained from the land at intervals of three to four months; the yield from each cropping should be about 30 to 40 pikuls of undried material.

The succeeding crops should be manured at two months after each harvest when from 1 to 3 oz. of sulphate of ammonia should be given to each plant. Care should be taken that the fertiliser is spread some distance away from the main stem of each plant to avoid scorching it. On virgin muck soils no manuring need be practised but only three crops can, in such circumstances, be taken off the land.

#### PESTS AND DISEASES

The patchouli plant is comparatively free from attacks by pests and diseases. There are reports of die-back when the crop is grown on infertile soil but the remedy appears to be rotation of crops and the use of fertile soils.

## PREPARATION FOR MARKET

After harvesting the leaves and stems should be taken to an open drying ground, which may be a concrete floor or other hard, dry surface. They should be spread out in a thin layer and the mass constantly turned over to obtain even and thorough drying and to prevent fermentation, which would be detrimental to the quality of the oil produced. The material must be placed under cover at night to protect it from dew.

With good sunshine the drying will be completed in two days and the weight of the dried material will be about 25 per cent of the original wet weight.

Since the stem yields only a small quantity of oil, which is of an inferior quality, it is usually discarded when preparing the material for sale. The marketable dried leaf will weigh just over 50 per cent of the weight of the original dried material. Thus a yield of 60 pikuls of wet material from an acre will give about 8 pikuls of saleable dried leaf.

#### USES

The oil is obtained by distillation, the average oil content in the leaves being about 3 per cent. Most of the distillation is done in Singapore, but limited quantities of dried leaf are exported to Europe and the United States for processing in modern distillation plants.

Patchouli oil is one of the most valuable ingredients in perfumes, cosmetics and high-grade soaps.

## CURRENT DEMAND

Prior to World War II the oil was produced chiefly in north-west Sumatra and to a lesser extent in Malaya. The Japanese occupation and post-war strife have, however, materially damaged the patchouli industry in Sumatra and as a result the current demand exceeds the supply.

Production in Malaya has not yet reached its pre-war level. The acreages under patchouli in Malaya during the pre-war and post-war periods are given in Table 1.

# Table I

# AREA UNDER PATCHOULI IN MALAYA.

Year	Area (acres)
1936	440
1937	20
1938	20
1939	292
1940	945
1947	501
1948	109
1949	32
1950	37
1951	16
1952	8
1953	37
1954	81
1955	83
1956	26

The present demand for patchouli is very keen and the dried leaf finds a ready sale on the Singapore market, where the price is \$70 to \$100 per pikul. With the present large scale rubber replanting programme and the current high price of patchouli leaf it appears that this is an ideal catch-crop, in suitable areas, for young rubber.

For further advice, apply to:---

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