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# Octomeles sumatrana Miq.

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# SEED LEAFLET

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## *Octomeles sumatrana* Miq.

### Taxonomy and nomenclature

**Botanical name:** *Octomeles sumatrana* Miq
**Family**: Datiscaceae
**Synonyms**: *Octomeles moluccana* Teijsm. Binnend. ex Hassk.
**Vernacular/common names**: Trade name binuang, which is the main Indonesian name (with several dialectic variations) also used in the Philippines (Tagalog).
**Related species**: *Octomeles* contains only one species in a small family of only 4 species. It is related to *Tetrameles nudiflora.*

### Distribution

Natural distribution covers the whole Indonesian archipelago from Sumatra in the west to Maluku and Papua in the east. Distribution includes Malaysian Borneo (Sabah and Sarawak) northwards to the Philippines and eastwards to New Guinea and the Solomon Islands.

It is a long-lived pioneer that regenerates primarily on exposed alluvial soil such as riverbanks or logging tracks, where it can form more or less pure stands. Grows at altitudes up to 1000 m in areas with more than 1500 mm rain that is relatively evenly distributed throughout the year. Grows on alluvial soil and clay or sandy loam soil.

### Uses

The wood is light, relatively soft and with poor resistance to decomposition. It is consequently used where strength and durability are less important e.g. as pulp, container wood, light construction wood, boxes, concrete moulds and match boxes. Young leaves are eaten as vegetables. A leaf extract is used to cure stomachache. Flowers attract honeybees.

### Botanical description

Evergreen, fast growing species. The height can be up to 60-75 m, 250-400 cm in diameter, straight stem and cylindrical, clear bole up to 30-40 m, buttresses up to 6 m tall. Crown is open, when young formed like a pagoda and when mature more rounded. The stem bark is grey, shallowly furrowed and thinly peeling off. Twigs three angled. Leaves spirally arranged, thin, simple, cordate, 12-30 cm long, 6-23 cm wide; petiole 6-30 cm; 5-9 veins, minutely scaled above and with large glands below. Flowers unisexual, in long (male 20-60, female 8-12 cm) hanging inflorescences. Flowers bell-shaped, about 5 mm long.

1, habitat; 2. branch with female flowers; 3. fruit. From: Plant Resources of South-East Asia 5 (2)

### Fruit and seed description

**Fruit**: the fruit is a dehiscent capsule, 11-14 mm long, rounded like a small guava fruit. It has two layers, outer is dark green and inner is yellow and hard. The infructescence consists of about 100 fruits, each containing many seeds.
**Seed**: minute, spindle-shaped and brown. There are 6-7 million seeds per kg.

### Flowering and fruiting habit

The species is dioecious i.e. male and female flowers are on separate trees. Flowering and fruiting is often abundant, but with peaks every 3-4 years. Seasonality varies with location; eastern Indonesia has pronounced seasonality with seed maturity in November-January; in western Indonesia fruiting may occur throughout the year but with highest frequency in May-June and in December. The period from flowering to fruiting is 3-6 months.

### Harvest

When the fruit is mature it is dark green to almost black. Mature fruits open on the tree and release the seed. Collection should be done by harvesting whole infructescenses from the tree before the fruits open.

### Processing and handling

Temporary storage should be in open container or in a porous material for example cloth bag. Fruits are

dried for 1-3 days during which the outer layer will curl and the inner break down so the seeds fall out. Seeds are separated from impurities by sifting using a 210 micron sieve (0,021 mm or 6,5 mesh).

## Storage and viability

The seeds are orthodox. They tolerate drying and can be stored in refrigerator at 2-4°C or in air conditioned room at about 20°C. Seed viability can be maintained at more than 80% for 16 weeks. Viability decreases to 15% after about 1 year.

## Dormancy and pretreatment.

Seeds are not dormant and pretreatment is not necessary. Light may be required for germination.

## Sowing and germination

The seed is mixed with fine sand before sowing on a mixed media consisting of fine sand and soil in proportion 1:1. Seedbeds are covered with transparent plastic and seeds will germinate after a week. Two weeks after sowing the plastic cover is opened and beds are covered with a shading net. Seedlings are ready for transplanting to polybags or pots when they have 4 leaves. Transplanting medium is a mixture of soil, sand and compost 7:2:1. Fertiliser may be added to the planting medium in the amount of one spoon per $m^3$. Seedlings should be shaded at least one week after transplanting before they are exposed to full sunlight.

## Vegetative propagation

The species can be vegetatively propagated by shoot cuttings. The material for cutting should be orthotropic shoots e.g. from hedges/clone multiplication area (branches tend to maintain plagiotropic growth). Length of shoot tips of cutting should be about 25-30 cm with 5-7 internodes and base diameter of about 5,5 mm. To induce rooting, Rootone F is applied on the cuttings with 225mg per cutting or soak with Atonik solution 200 ppm for 30 minutes. As rooting media is used sand or a mixture of sand and coconut husk. Cuttings normally root and are ready to be transferred to polybags in the nursery after 2 months. Seedlings in polybags are ready for planting after 6-8 months.

## Selected readings


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Left: *Octomeles sumatrana* tree in PT Rimba Seraya Kampar-Riau County. Right: inflorescence and infructenscence. Photo: Agus A. Pramono and Nurhasybi, BPPTP.


THIS NOTE WAS PRODUCED IN COLLABORATION BETWEEN BPPTP BOGOR, BPTH SUMATERA AND INDONESIA FOREST SEED PROJECT (IFSP).



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