

Pompom Tree



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CLASSIFICATION

Kingdom: Plantae

Family: Thymelaeaceae

Botanical name: *Dais cotinifolia*

Common names: Pompom (English), Pincusion tree (English), African button flower (English), Kannabas/Speldekussing (Afrikaans), inTozwane-emnyama (Zulu), inTozani (Xhosa)

1. BACKGROUND

1.1 Origin and distribution

Eve Palmer mentions the interesting fact that Linnaeus founded the genus *Dais* in 1764. The Thymelaeaceae family is made up of approximately 50 genera and 898 species, found worldwide but occurs predominantly in warmer zones, from Africa to Australia and few Mediterranean countries. Most of the *Dais* genera are native to Southern Africa. Species such as *Dais cotinifolia* is from South Africa Tanzania, Malawi, Zimbabwe, Swaziland and Lesotho. It was introduced into the highlands of Kenya and Tanzania as an ornamental. It has been planted in Europe since the 18th Century and was also introduced in other parts of the world. The name *Dias* means “torch” in Greek, and refers to the layout of the flowers on the stalk and bracts. Its natural habitat is the eastern parts of the Eastern Cape, through the Transkei and into KwaZulu-Natal, Mpumalanga and Limpopo; where it can be found growing on the margins of forests, wooded slopes and in stony kloofs. Pompom tree occurs from the dry bushveld to the mist belt in Natal to Zimbabwe.

1.2 Production areas in South Africa

Dais cotinifolia is growing wild from Mpumalanga, Free State, Gauteng and Limpopo through the eastern coastline areas (Eastern Cape, KwaZulu-Natal) of South Africa.

1.3 Description

Tree

Dais cotinifolia, known as pompom tree, is hardy and wonderfully ornamental with attractive flowers in the Thymelaeaceae family and regarded as one of the best South African indigenous trees. It is a well-loved indigenous tree, tough enough to be used as a street tree and small enough to fit into most gardens. The plant flowers around Christmas time and it looks like giant candy floss, as it transforms into a cloud of soft pink balls. *Dais cotinifolia* is a semi-deciduous to evergreen tree with height of up to 13 m and dense rounded crown. Trees reach their full height within 4–5 years. Flowers are produced on the previous year's growth. In very cold areas the trees are deciduous, but in warmer climates like Cape Town they only lose their leaves for a short time at the end of winter.

Roots

Dais cotinifolia has a non-invasive or non-aggressive rooting system as such it could be planted 2 meters from a building or a pool and is suitable for townhouse gardens.

Bark

Most of the Thymelaeaceae members, inclusive of *Dais cotinifolia*, have tough, fibrous bark, with twigs that are markedly flexible. Bark on young branches is grey-brown with prominent corky dots (lenticels), but grey with shallow brownish grooves on old branches and stems. The bark can be smooth, single or multi-stemmed, with brown stems covered in small speckles of whitish cork. The branchlets are heavily fibrous, and if one tries to break off a twig, the tough bark will often strip down to the stem. Branchlets are often flattened at the nodes.

Leaves

Leaves are simple in opposite pairs and crowded near tips of branchlets, midrib conspicuous, venation pale green and prominent below, margin smooth. Leaves are dark, dull green above, with a blueish silver tinge, and paler, light-green below. They are often covered in fine, silky hairs. The veins of the leaves are a translucent yellow colour, forming very clear patterns as they run through the leaves. Length of leaf stalk grows up to 5 mm. When held to sunlight, the leaves often appear illuminated. The leaves are lightly scented with petiole growing up to 5 mm long.

Flowers

Fragrant pink to mauve coloured flowers grow in dense spherical terminal heads up to 50 mm in diameter with 2-6 shield like bracts at the base of each head. Flowers are hairy tubular corolla up to 30 mm long. The calyx forms the petal-like lobes with 10 stamens of different lengths inserted in tube. The sepals which are small parts of the flower are usually green, they function as protection for the flower in a bud and often as support for the petals when in bloom often resemble petals.

Fruit

Fruit is a one seeded reddish brown to blackish nutlet at the base of the calyx tube. They are typically berries or capsules and known to emit an unpleasant odour.

Seeds

Seeds are small, black and usually covered in a fleshy appendage with hard and brittle seed coat. *Dais cotinifolia* seeds can be collected after 2 months from flowering.

2. CLIMATIC AND SOIL REQUIREMENTS

2.1 Rainfall

Pompom tree prefers temperate climates and it is frost hardy. It should be protected from strong coastal winds. It performs optimally when planted in a sunny spot. The amount of rainfall (mm) required for growth of pompom tree is not well documented.

2.2 Temperature

Pompom trees prefer warmer areas and can tolerate severe frost provided they were given adequate protection during the first two years. The plant requires full sun and tolerate partial shade. The developed trees are fairly resistant to drought whilst young trees need protection from frost for their first two years.

2.3 Soil requirements

Pompom tree prefers rich, well-drained sandy or loamy soil with acidic or neutral pH. To encourage quick and profuse growth, plant in a deep hole filled with compost, add bone meal, and water regularly for the first 2-3 years.

3. CULTURAL PRACTICES

3.1 Soil preparation

Soil analysis before planting pompom tree is important in order to find if there is any deficiency of nutrients before the soil can be supplemented with deficient nutrients. Application of lime is essential to improve the uptake of major nutrients (NPK). Weeds should be cleared thoroughly prior to planting. The existing vegetation should be killed off by pre-emergence herbicides, removed or smothered before beginning to work on the soil or loosen it and to prepare the planting field. This can be done with a tiller or by hand, using a spade and garden fork.

3.2 Propagation

The tree is propagated through seeds and stem cuttings. Seeds can be sown into the seedling trays filled with a well-drained river sand and compost in spring or early summer, the trays can be placed under shady place. Ensure that seeds are not sown too deep and are covered lightly with fine pounded bark or sand, and keep moist. Pompom seeds should be treated with a fungicide that improve the germination and prevents damping off disease. The young seedlings can be potted as soon as they are big enough to handle.

Stem cuttings should preferably be propagated in summer firmly into river sand and compost. Stem cuttings should be about 40-60 mm long and 5-10 mm in diameter and must be pre-treated with root-stimulating hormones. Young planted pompom tree should be placed under a sunny position. Pompom tree can also be propagated from side shoots which can be dug out and replanted.

3.3 Planting

Young pompom tree is planted in a dug hole of about 1 m x 1 m. A thick mulch of compost should be placed around the base of the tree, which helps to prevent water from running away, keeps the soil moist and cool, suppress weed growth and slowly releases nutrients into the soil. The tree grows fast and reaches full height within 4 to 5 years and blooms from their second year.

3.4 Fertilisation

Pompom plants should be mulched thickly with compost to increase soil fertility and helps to maintain soil structure. Thick compost mulch also keep the roots cool and retain moisture. The plant is fed with a slow release NPK fertiliser (3:1:5) at six weeks intervals throughout growing season for best flowering results. The plants can also fed with a balanced organic fertiliser occasionally in summer.

3.5 Irrigation

The young tree should be irrigated regularly during the summer months until it is well established which usually takes about two years. The quantity of water (mm) required is not well documented.

3.6 Pruning

Pompom tree can be lightly pruned when necessary. It reacts well to pruning and can be trained into a standard. Flowers are produced on the previous year's growth, so any pruning should be done after flowering.

3.7 Weed control

The suitable time to control weeds is when doing soil preparation. Mulching could be used to suppress weed. Pre-emergence registered herbicides can be applied for weeds that appear before planting but herbicides label instructions should be followed to avoid contamination. It is recommended that only registered and recognised chemicals be used.

3.8 Pest and disease control

Dais cotinifolia is susceptible to pink disease, caused by *Corticium salmonicolor*. Infestation symptoms include branch and stem die-back due to girdling cankers, which are characterized by gum exudation, cracking of the bark due to death of the cambium, and abundant pink mycelial growth. Under glasshouse conditions, plants are susceptible to spider mite.

The major signs of insect, mite and diseases on pompom tree:

- Large amount of deadwood: Every tree and shrub has dead branches in it. When more than 15% of a pompom tree appears dead, it shows that the tree is infected and it should be treated.
- Damaged leaves: When pompom tree has more damaged/wilting leaves, it shows that the experts are needed to diagnose the problem.
- Decay or open holes: Dead and decaying parts of pompom tree as well as cracks, openings and holes in the trunk and branches, it shows that pompom tree is infected.

- Mushrooms growing from the roots or on the trunk: Mushroom growing on and around pompom tree show sign of decay.

Treatment for diseases on pompom tree:

- Tree pruning: Removing dead and diseased branches reduces the spread of disease and helps to keep pompom tree healthier.
- Tree fertilization: Soil injections of fertilizer in spring stimulate root growth and strengthen the tree's ability to resist disease.

Treatment for pests on pompom tree:

- Spray treatments: Primary using of eco-friendly bio-rational chemicals limit the impact of damaging pests.
- Manual control: This is the most expensive and time-consuming method. The pests may be removed by hand. This is not a solution that is often used, but it's always an option.

3.9 Harvesting methods

The flowering period of the plant is during summer months i.e. November, December, January and February; and bears fruit from March to April. Pompom flowers are picked early in the day for quality reasons. Flowers are harvested using sharp secateurs and they are graded according to stem length.

4. USES

Dais cotinifolia is beautiful in flower and is frequently planted as an ornamental tree or shrub in East and southern Africa. Pompom tree is used as street tree and is ideal for office and car parks. It is an excellent specimen tree planted on centre of lawn and at back of border and can also be planted as a wayside tree and is used as a container plant. It encourages biodiversity as it provides valuable nesting sites for birds and also attracts butterflies in a garden. The non-aggressive root system of the pompom tree permits planting close to buildings and paved areas. This versatile small tree is an excellent choice for patios as the roots do not damage paving and they can also be grown very successfully in containers. The pompom tree is even tough enough to be used in parks or as a street tree.

The fibrous bark is extremely tough and makes an excellent rope; it was formerly used for tanning hides. Most of the large pompom tree close to human habitation is destroyed by people removing the bark to make ropes for tying up bundles of firewood. In some parts of South Africa, a leaf decoction is drunk to treat stomach-ache.

Dais cotinifolia has potential to become a worldwide important ornamental plant, because of its stunning sight when flowering, its fragrant flowers and its uncomplicated growth. The development of cultivars with different flower colours might be a good trade option.

5. REFERENCES

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