-PRODUCTION GUIDELINE-

Fever tree

*Acacia xanthophloea*
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Department of Agriculture, forestry and Fisheries
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Contents

Part I: General aspects

- Classification ........................................................................................................ 1
- Origin and distribution ..................................................................................... 1
- Production levels and area ............................................................................. 1
- Major production areas in sa ........................................................................ 1
- Cultivars ........................................................................................................... 1
- Description of the plant .................................................................................... 2
- Climatic requirements ...................................................................................... 3

Part II: Cultivation practices

- Propagation ........................................................................................................ 3
- Soil (substrate) preparation .............................................................................. 4
- Planting .............................................................................................................. 4
- Fertilization ......................................................................................................... 4
- Irrigation ............................................................................................................. 4
- Weed control ...................................................................................................... 4
- Pest control ........................................................................................................ 5
- Harvesting .......................................................................................................... 5

Part III: Utilisation

Part VI: References
Part I: General aspects

Classification

Kingdom: plantae
Family: fabaceae (mimosoideae)
Scientific name: *Acacia xanthophloea*
Common names: fever tree (english); koorsboom (afrikaans); mookakwena (sepedi); umhlosinga (isizulu); nkelenega (xitsonga); munzhelenga (venda)

Origin and distribution

*Acacia xanthophloea* is native to southern and eastern africa, including Botswana, Kenya, Malawi, Mozambique, Somalia, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

It was introduced as a landscaping tree into Taiwan, India and California. The native range of *Acacia xanthophloea* extends across tropical and subtropical climates, from the equator (Somalia and Kenya) to South Africa.

Production levels

International

The fever tree’s bark is traded on local markets in South Africa, with an estimated trade volume of 7 500 kg in 1988. It is also imported from Mozambique.

South Africa

The fever tree is seen in cultivation in the cooler areas of the highveld such as certain parts of Johannesburg and Pretoria. The production/domestication of the fever tree in South Africa has not been documented yet.

Major production areas in South Africa

*Acacia xanthophloea* occurs in groups in low-lying swampy areas in the Limpopo, Kwazulu-natal and Mpumalanga provinces.

Cultivars

*Acacia xanthophloea* belongs to the pod bearing family fabaceae. There are
40 species, subspecies and varieties of acacia present in South Africa. Many species such as the fever tree have leaflets which fold up at night.

Description

Mature plants

The tree’s bark has a striking appearance, which is smooth, slightly flaking and greenish-yellow to yellow in colour. The fever tree is an attractive, semi-deciduous tree approximately 15 to 25 m tall and 10 m wide, has an open, rounded to spreading or flattish crown, which is sparsely foliated. If the powdery surface is rubbed away with a finger, it reveals a green bark beneath.

- **Twigs**

  Young twigs have a reddish-brown bark which, when peeled off, leaves the twigs sulphur yellow.

- **Leaves**

  Leaves are bipinnate, with 4 to 7 pairs of pinnae and 10 to 17 pairs of leaflets per pinnae. Leaflets are 2.5 to 6.5 mm x 0.75 – 1.75 mm long. Spines are white, straight, strong, and arranged in pairs.

- **Thorns**

  The long, straight, and white thorns are arranged in pairs and although they are very significant on young trees, they often become barely noticeable on mature specimens.
• **Flowers**

The flowers are sweetly scented golden yellow balls and form during spring. Flowers are pollinated by insects. The blossoming time is between September and November.

• **Roots**

Large size tap roots which are not aggressive should not be planted close to buildings. If planted for ornamental purpose, trees should be planted in groups of up to 5 for best effects.

**Climatic requirements**

*Temperature*

The fever tree prefers moist and warm growing conditions but does well in drier areas, if given adequate amounts of water. It can only tolerate low levels of frost and is completely intolerant to drought. It is able to survive moderately low temperatures. Six or more hours of sunlight a day are favourable.

*Soil requirements*

The fever tree prefers sandy soil and it is often found in black cotton soils. The plant has root nodules containing nitrogen fixing bacteria, which allows for the nitrogen enrichment of soils, which has a positive impact on the growth of the tree.

*Water requirements*

The fever tree occurs mainly in depressions and shallow pans where underground water is present or surface water collects after summer rains. It is also found in low-lying swampy areas, along the margins of lakes and on river banks.

**Part ii: Cultivation practices**

**Propagation**

The fever tree is propagated through seeds and seedlings.

*Seeding production*

Seed need scarification to achieve maximum germination. Before sowing, the seed should be soaked in hot water overnight. This causes the seeds to swell
and prepares them to be sown by the next morning. Seeds can be sown in seedling trays using a well-drained seedling medium and then covered lightly. Germination is generally fair, reaching about 70% after two weeks.

When the seedlings reach the two leaf stage (approximately six to eight weeks after sowing), they should be transplanted from seedling trays into nursery bags, taking care not to damage the long tap root. Seedlings and young trees transplant well.

**Soil preparation**
Vegetation and weeds should be killed-off by the use of pre-sprouting herbicides, be removed or smothered (buried) before any work on the soil of the planting area is done.

**Planting**
The seedlings are normally planted in the ground after 6 to 12 months when they are 1 m tall. Owing to its mature dimensions, it is recommended not to plant it close to the buildings.

A 6 cm deep hole should be dug and compost should be added to the soil that was removed from the hole. The tree should be placed in the centre of the hole and the soil at the top of the root ball must be level with the surrounding soil surface. The hole should be filled with soil mixture. Firm it well and make a basin around the tree. It should be planted in late spring to early summer season.

**Fertilisation**
It requires plenty of compost at the juvenile growth stage. Fertilisers are not yet specified. Fever tree root improves soil fertility by nitrogen fixation.

**Irrigation**
The fever tree requires regular deep watering because it is indigenously grown in swampy areas. The tree grows well in wet soil conditions.

**Weed control**
The best way to control weeds is prevention. Weed infestation should be treated when the weeds are still small.
**Pest control**

Insects such as bees are attracted by the yellow colour and sweet scent of the flowers and perform a pollination role. The information on pests that infest the fever tree in South Africa has not yet been documented.

Seed and wood are susceptible to pests damage. Monkeys often eat young pods making them not readily available from natural stands.

**Harvesting maturity and method**

The bark is removed with a knife and bark collectors usually focus on larger-sized trees. *Acacia xanthophloea’s* tolerance to damage is high and trees usually recover from bark removal as well as from elephant damage. However, excessive destructive harvesting is domestically common.

**Part III: Utilisation**

The fever tree is becoming a popular tree to plant in gardens, parks and parking lots. It offers plenty of light shade, which is advantageous as it does not inhibit the growth of lawns and plants.

The Zulu people use powdered bark and roots as an emetic to treat malaria and to also treat eye diseases. The gum, which occurs in large quantities on the trunk, is reportedly edible and is eaten by monkeys. The wood is hard and heavy and makes excellent general purpose timber. The wood is also a good source of firewood and charcoal.

**Part VI: references**


www.Plantzafrica.com, accessed on 05 may 2014
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