Kenya Forestry Research Institute (KEFRI)

Growing *Grevillea robusta* in Kenya: Management and Challenges

Scientific name: *Grevillea robusta*
Common name: Grevillea, Silky oak
Family: Proteaceae
Local names: Mukima, Mubariti (Kikuyu, Meru), Muvariti (Embu), Mukima (Kamba)

Ecological requirements

Grevillea robusta originated from south eastern Australia. The species was introduced in Kenya as a coffee shade and is now naturalized in the country. *Grevillea robusta* grows well in areas between 850 to 2500 metres above sea level (m.a.s.l.), with a mean annual rainfall of 600 to 1500 mm and mean annual temperatures of 13°C to 21°C. The species performs best on well drained fertile soils but also grows moderately well on medium textured soils (loam, clay-loam to light sandy soils). However, it does not tolerate water logged soils. The species is widely grown on farms in the coffee and coffee-tea zones of central highlands eco-region with high populations of the species in; Meru, Embu, Kirinyaga, Muranga and Kiambu counties. *Grevillea robusta* is a fast growing tree. On suitable sites, Grevillea can attain a height of 20 m and diameter of up to 25 cm in 15 to 20 years.

Healthy Grevillea tree

Grevillea in full bloom

Propagation

Grevillea robusta is mainly propagated through seeds and wildings from natural regeneration. A kilogram of seed may contain 70,000-100,000 seeds. Seeds can be stored in air-tight containers in a cool dry place for up to two years without significant loss of viability. Seeds germinate within 8 – 20 days with expected germination of 55,000 seedlings from 1 kg of seed.

Planting niches and spacing

Grevillea robusta trees can be planted; along boundaries, as woodlots, on terraces, in alleys, and scattered among crops such as tea, coffee, maize, bananas and beans. Planting along farm boundaries is done in single rows at 2–2.5 m spacing but in small farms it is can be planted closely spaced at about 1.5 m between trees. A spacing of 2.5 x 2.5 m is recommended for plantations and woodlots.

Tree management

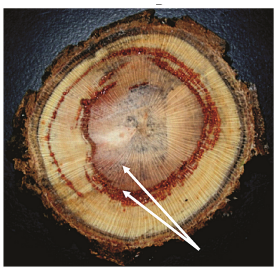
When Grevillea is about 4 to 6 years old it starts to compete with agricultural crops thus reducing yields of the crops substantially. At this time the trees are pruned to reduce shading of crops, and to improve tree form. It is recommended that pruning continue every 2 years. Though pollarding (removing the whole crown), is commonly done in many farms, leaving a ½ to ⅔ of the crown unpruned is encouraged in order to improve tree diameter. Competition with agricultural crops can be reduced by trimming of lateral roots of Grevillea to a depth of 30 cm.

Diseases attacking Grevillea

Disease	Symptoms	Management
Canker and dieback disease	• Dieback of young shoots, branches, and branch tips leaving naked shoots. • Stem cankers and rotten heart wood	Removal of infected branches as soon as cankers or dieback symptoms are noticed
Seed-borne fungi	• Seed rots, poor germination • Pre and post emergence damping off • Seedling stem collar rots, seedling blights, tip dieback • Seedling deaths	• Use certified tree seeds • Treat seeds before storage or before sowing • Strict nursery hygiene, regular spraying with systemic fungicides • Additions of organic and inorganic fertilizers to improve health of young seedlings

Grevillea trees with severe dieback

Resinous stem cankers on Grevillea



Internal destruction of Grevillea wood by canker

Clean Grevillea seeds

Grevillea seeds infected by fungi

Symptoms of mineral deficiencies on Grevillea seedlings

Uses

Grevillea is mainly used for timber, poles/posts and fuelwood. Other used include bee forage, mulch, soil conservation, wind break, shade and ornamental. Farmers are encouraged to convert their Grevillea trees to timber, rather than selling as whole tree or fuelwood to fetch highest return from growing the tree.

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