**Taxonomy and nomenclature**

Family: Asteraceae  
Synonym(s): Tagetes glandulifera, Tagetes gladulosa  
Vernacular/common names:  
(English): Mexican marigold, stinkweed, Khaki weed  
(Maa): Ol’ bangi  
(Kikuyu): Mubangi  
(Kamba): Muvangi/ kivangi  
(Luo): Nyanjaga  
(Luhya): Etakanyi

**Distribution and habitat**

It is an invasive weed on farms. Grows well in disturbed areas and cultivated beds, usually found in maize farms. Originally from South America but is now a widespread weed in Africa, South Europe, South Asia and Australia. In Kenya it is found in Nairobi, Taita Hills, Voi-Nairobi road, Kaimosi, Masai Mara, Gatundu, Gathiru Forest in Nyeri, Machakos.

**Uses**

*Insecticidal* - Powdered plants are effective against maize and Mexican beans weevils when mixed with grain but require relatively high concentrations. Plant extract is effective against aphid *Brevicoryne brassicae* and red spider mites in vegetables. Essential oil is used against ticks. Decoctions show effective control of intestinal parasites in domestic livestock. Secretions from roots are effective against nematodes, worms, insects, fungi and perennial weeds.

*Medicinal* - It is used to treat gastritis, indigestion and intestinal worms. Externally it is used to treat skin infections and haemorrhoids. The essential oil treats fungal infections like athlete’s foot and boosts the respiratory system. It has antimicrobial, antiphlogistic, antiseptic, antispasmodic, cytolyphactic, sedative, emollient, fungicide and hypertensive properties.

*Other uses* - Used in perfumery and as flavour in beverages and food industry.

**Botanical description**

Strongly scented annual herb with stiff erect stems up to 2 m tall. Leaves stalked, opposite, light green, 7-15 cm long, pinnately dissected into 4-6 pairs of pinnae. Leaflets lanceolate, margins finely serrate. Undersurface of leaves bears sunken oil glands with liquorice-like aroma when ruptured. Glands also present on the stems and involucre bracts. Inflorescences terminal with numerous tube-like capitula of dull yellow florets.

Note: Always verify your plant specimen and deposit a voucher in a verified herbarium.

**Fruit and Seed description**

Black achenes, narrowly ellipsoid and hard seeds, 6-7 mm long, pilose, pappus of 1-2 setae to 3 mm long and 3-4 scales to 1 mm long with ciliate apex.

**Flowering and fruiting habit**

It flowers in February, June and November. The fruits are available in December-January, March-April and July-September.
Harvesting
Harvesting of seeds is done in February, May and October. Harvesting of leaves and flower parts are done above the ground where leaves and inflorescence are desirable.

Processing and handling
Mature fruits, black-brown in colour, are removed from stalks. Seeds are obtained by sieving dried fruits to remove husks. One pod has several seeds.

Propagation and cultivation
Seeds germinate readily when sown fresh, without treatment. Seeds are sprinkled directly on soil or only just cover with soil. Germination takes place within one week. Seedlings can also be transplanted to pots. Grows well in disturbed areas, in heavy clay soils or sandy soils.

Safety measure
Always use gloves, protective clothing and caution when handling and applying plant materials to field crops or stored commodities and minimise exposure of consumers. Avoid contact with the skin. In case of accidental contact, immediately wash the affected area with clean running water.

Caution: This plant can be invasive.

Selected readings
www.pfaf.org


Pesticidal plant leaflets are a series of species wise extension leaflets on botanical pesticides. Leaflets are compiled from existing literature and research available at the time of writing. In order to currently improve recommendations, ICRAF, MSBP and the University of Greenwich encourage feedback from users and researchers who have experience with the species. Comments, corrections, improvements and amendments will be incorporated into future edited leaflets. Please write your comments to: d.ofori@cgiar.org or p.anjarwalla@cgiar.org