

AFRICAN MARIGOLD

Tagetes erecta

Asteraceae

ECHO® KARATASI YA MAELEZO YA KUPANDA

Maelezo

African marigold is an upright growing, aromatic, annual plant, up to 1.25 m in height, with showy, fragrant flowers up to 10 cm in diameter. This plant is noted for repelling nematodes.

asili

Mexico and Central America.

matumizi

Ornamental, companion plant, repels insects and nematodes.

Crop uses (companion planting) – Marigolds are good to include anywhere in the garden. The strong odor repels pests and masks the smell of many crops, thereby making it harder for pests to find and damage their host crop. They also attract butterflies and other beneficial insects.

Crop uses (pest control) – Marigold roots exude a nematocidal toxin which has been shown to prevent damage from nematodes when planted in rotation with nematode-susceptible crops (Krueger). Some studies also indicate it is effective when planted near the roots of crops in an intercropping system (Olabiyi and Oyadunmade). The flowers contain pyrethrin, an insecticide (Sarin). Marigold flower extract has been shown to be effective against *Tribolium* spp. beetles (Nikken et al.).

Crop uses (medicinal) – Marigold flowers can be consumed raw in salads or made into tea. They are traditionally believed to have medicinal properties. Studies have confirmed that they have antioxidant properties, and may help to prevent some kinds of cancer (Kaisoon). Extracts of dried marigold roots have been used to prevent malaria, a use which also has support from clinical trials (Gupta).

Crop uses (other) – Marigolds are grown commercially as a natural source of lutein, an orange dye which is used in food products and is added to poultry feed to enhance the orange color of egg yolks. Lutein is also known to prevent cataracts and macular degeneration.

Majina ya Kawaida

- English
 - American Marigold
 - Aztec Marigold
 - Big Marigold
 - Mexican Marigold
- Korean
 - cheonsugug
- Nepali
 - Sayapatree

kilimo

Seasons of production – The marigold is a hardy annual. It prefers the warm season but will survive cool weather.

Length of production and harvest period – 85-90 days will bring marigolds to maturity.

Production methods – Generally planted from seed. This variety takes longer to flower from seed than French marigolds. Remove dry or dead flowers (deadhead) to prolong flowering.

Plant spacing – Establish seedlings 20-30cm (8-12") apart, or sow densely and thin.

Pollination – Marigolds are insect pollinated, but cross-pollination is possible.

Known environmental conditions for production – Marigolds prefer full sun. They tolerate drought and should not be over-watered.

Known soil requirements – Marigolds require well-drained soil, but are tolerant of both acidic and alkaline soils.

uvunaji na uzalishaji wa mbegu

Seed saving – Seed can be collected once the flower is dried and brown. Seeds are long, thin black spines, with brown chaff at the base. Pull the cluster of seeds out of the middle of the flower and spread out to dry and clean.

wadudu na magonjwa

Known pests – Major insect pests include Japanese beetle (*Popilla japonica*), and two-spotted spider mite (*Tetranychus urticae*). Aphids, earwigs, caterpillars, leafminers, snails and slugs and whiteflies may also cause damage. Marigolds are susceptible to aster yellows, a pathogen which causes flower parts to develop into malformed leafy structures. Also susceptible to gray mold (*Botrytis* spp.), tomato spotted wilt virus, and various fungal diseases.

Marejeleo

<http://www.missouribotanicalgarden.org/PlantFinder/PlantFinderDetails.aspx?taxonid=277371&isprofile=1&basic=marigold>

<https://plants.ces.ncsu.edu/plants/all/tagetes-erecta/>

African Marigold, American Marigold (*Tagetes erecta*) - Hort Answers - University of Illinois Extension. (n.d.). Retrieved April 2, 2013, from <http://urbanext.illinois.edu/hortanswers/plantdetail.cfm?PlantID=768&PlantTypeID=1>

Gupta, P., & Vasudeva, N. (2010). In vitro antiplasmodial and antimicrobial potential of *Tagetes erecta* roots. *Pharmaceutical Biology*, 48(11), 1218–1223.

Kaisoon, O., Konczak, I., & Siriamornpun, S. (2012). Potential health enhancing properties of edible flowers from Thailand. *Food Research International*, 46(2), 563–571.

Managing Pests in Gardens: Floriculture: Marigold—UC IPM. (n.d.). Retrieved April 2, 2013, from <http://www.ipm.ucdavis.edu/PMG/GARDEN/FLOWERS/marigold.html>

Nikken, F., Habib, M. R., Karim, M. R., Ferdousi, Z., Rahman, M. M., & Haque, M. E. (2009). Insecticidal Activity of Flower of *Tagetes erecta* L. against *Tribolium castaneum* (Herbst). *Research Journal of Agriculture & Biological Sciences*, 5(5), 748–753.

Olabiyi, T. I., & Oyedunmade, E. E. A. (2007). Marigold (*Tagetes erecta* L.) as interplant with cowpea for the control of nematode pests. *African Crop Science Conference Proceedings*, 8, 1075–1078.

R. Krueger, K. E. D. (2010, November 4). Marigolds (*Tagetes* spp.) for Nematode Management. Retrieved April 2, 2013, from <http://edis.ifas.ufl.edu/ng045>

Sarin, R. (2004). Insecticidal activity of callus culture of *Tagetes erecta*. *Fitoterapia*, 75(1), 62.

Setshogo, M. P. *Tagetes erecta*. PROTA4U. Retrieved April 2, 2013, from <http://www.prota4u.org/protav8.asp?h=M4&t=Tagetes,erecta&p=Tagetes+erecta#Synonyms>

Tagetes erecta, African Marigold PFAF Plant Database. Retrieved April 2, 2013, from <http://www.pfaf.org/user/Plant.aspx?LatinName=Tagetes+erecta>