

summer by hand-weeding, as hoeing could destroy little plants.

#### *Pest and disease control*

Whiteflies, aphids, spider mites, and thrips are the major insect pests affecting chamomile. Cutworms and snails sometimes pose a problem. Treatment to control pests should be carried out with extreme caution as many beneficial insects such as bees and ladybugs visit chamomile.

Cankers, diebacks and wilts sometimes occur, however, these are not a serious problem. Pest and disease control guidelines should also be followed.

#### **Acknowledgement**

We thank the members of SAEOPA and KARWIL consultancy for information provided.

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# German chamomile

*Matricaria recutita*  
Family: Asteraceae



2012 (revised)

Printed and published by

Department of Agriculture, Forestry and Fisheries

Obtainable from

Resource Centre

Directorate Communication Services

Private Bag X144

PRETORIA

0001



**agriculture,  
forestry & fisheries**

Department:  
Agriculture, Forestry and Fisheries  
REPUBLIC OF SOUTH AFRICA

## Background

Essential oil crops are crops that have volatile, aromatic oils in certain parts of the plant. Essential oils are natural plant products which accumulate in specialised structures such as oil cells, glandular trichomes, and oil or resin vessels. The oil is extracted from the plant through steam distillation, chemical extraction or CO<sub>2</sub> extraction.



*Matricaria recutita* is an annual herb with erect, light green, smooth, multibranching stems. The entire plant is downy and greyish green in colour. The plant grows to approximately 60 cm and has yellow disc, white, ray flowers.

There is also Roman chamomile, *Chamaemelum nobile*, and the indigenous Cape chamomile, *Eriocephalus* spp., but these are mostly not commercially planted as compared to German chamomile cultivars.



## Origin and distribution

German chamomile is native to Europe, North and West Asia. It has been cultivated in North America and Australia where it is naturalised.

German chamomile is mostly grown in the Free State, Eastern Cape, Gauteng, KwaZulu-Natal, North West and Mpumalanga provinces.

## Climatic and soil requirements

German chamomile can survive cold winter nights with temperatures of as low as -12 °C. An annual rainfall of 400 to 1 400 mm per season is sufficient to produce a good crop. Chamomile can be grown on a wide range of soil types, however, it prefers a sandy or sandy-loam, well-drained soil with a pH of 4,8 to 8,3.

## Uses

As medicinal plants, the chamomiles have been traditionally considered to be antispasmodics, carminatives, diaphoretics, emmenagogues, sedatives, and stomachics. The plants have been used as bitters, tonics, insect repellents, and as a folk remedy against asthma, colic, fevers, inflammations and cancer.

## Cultural practices

### Planting

German chamomile seeds are extremely small and must be sown very shallow at a seeding rate of 500 to 1 000 g/ha. The seed can be mixed at a ratio of 5 g seed per 4 l of a mix containing very fine sand.

## Propagation

German chamomile is mostly cultivated by direct seeding of the crop.

## Fertilisation

German chamomile does not require large quantities of fertiliser, however, depending on soil tests, small quantities of nitrogen, phosphorus, and potassium should be applied before planting.

## Irrigation

Sprinkler irrigation is used. The soil has to be moist, especially during seedling establishment, but not flooded.

## Weed control

Constant weeding is necessary until the chamomile 'mat' takes over. Keep the plants clean during the

