

new shoot growth during the growing season. A basal fertiliser application containing nitrogen, phosphorus, potassium and sulphur should be applied annually according to the soil analysis results.

### *Irrigation*

When establishing rosemary, irrigation is necessary until the seedlings have well developed.

### *Weed control*

Inter-row cultivation can be done by a tractor-drawn cultivator or hand hoe. An effective plant density and canopy will eliminate weeds.

### *Pest and disease control*

Rosemary is vulnerable to spider mites, mealy bugs, whiteflies and thrips. Careful monitoring and rotating insecticidal soap with lightweight horticultural oil will assist in keeping the foliage free of pests.

Diseases: powdery mildew and root rot in wet soil. Fungal problems may arise when the plants are over-irrigated.

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# Rosemary

***Rosmarinus officinalis***  
**Family: Labiatae**



**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.

*Rosemarinus officinalis* is an evergreen, shrubby herb that grows to a height of 2.0 m with a unique aromatic odour and a camphoraceous undertone.

## Origin and distribution

Native to the Mediterranean, rosemary grows freely in large parts of southern Europe and is cultivated throughout the world.

In South Africa rosemary is cultivated in Gauteng, the eastern Free State, Limpopo, North West, Mpumalanga and Eastern and Western Cape provinces.

## Climatic and soil requirements

Rosemary is mostly cultivated under dryland conditions in South Africa. It grows well in areas where the rainfall is higher than 500 mm per annum. It requires a well-drained sandy to clay loam soil with a pH of 5,5 to 8,0. A clay percentage of maximum 30 can be tolerated by the plants.

## Uses

The essential oil is used in food products and non-alcoholic beverages. Fresh and dried rosemary leaves,



whole or ground, are used as seasonings for soups, stews, sausages, meat, fish, and poultry.

It is also used as an ingredient in creams, candles, deodorants, hair tonics, shampoos, many household cleaners and air fresheners.

## Cultural practices

### Planting

Seedbeds with a width of 1,2 m and row spacing of 40 to 50 cm are effective with mechanised cutting. Plants are established at 25 to 50 cm within the rows so that it covers the soil quickly. A total of 50 to 60 000 plants per hectare is the average.

### Propagation

Rosemary is propagated by means of seeds, cuttings and layers and division of roots.

### Fertilisation

Rosemary responds well to additional applications of nitrogen, usually applied after each harvest to promote

