

*Rose geranium* in cultivation is subject to numerous and very virulent fungal, viral and bacterial diseases, namely botrytis grey mould or mildew, leaf spot and blossom blight, bacterial blight, alternaria leaf spot, rust, black leg and black stem rot, root-knot nematodes, solarisation (heat stress), and geranium yellowing disease.

For the control of rose geranium diseases:

- Take cuttings only from healthy plants which have been kept dry.
- Discard any plants with virus-like symptoms such as mosaic, distortion or leaf spots. Practise sanitation when propagating cuttings.
- Destroy infested plants, rotate planting areas and never replant in known infested areas unless cleared from infection.

### Acknowledgements

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# Rose geranium

*Pelargonium cv. rosé*  
Family: Geraniaceae



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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.

*Pelargonium* cv. *rosé* is a shrubby perennial growing to a height of 1 m if left unpruned.

## Origin and distribution

*Pelargonium* cv. *rosé* is endemic to the Western Cape. It is a hybrid species that was developed from crossing *P. capitatum* and *P. radens*. Rose geranium is mainly grown in the Lowveld of Mpumalanga, KwaZulu-Natal, Western Cape and Limpopo provinces.

## Climatic and soil requirements

Rose geranium requires well- drained soil with a pH range of 5,0 to 8,5. It grows well under frost-free conditions at a temperature range of 10 to 33° C. The suitable rainfall for dryland cultivation should range between 700 and 1 500 mm per year, uniformly distributed throughout the season.

## Uses

Rose geranium oil assists in balancing the secretion of sebum and clearing sluggish and oily skins. Traditionally geranium was used to stop bleeding, ear ache, heal wounds, ulcers and skin disorders, as well as to treat diarrhoea, dysentery and colic.

There is a fresh produce market on a limited scale within the cut flower industry for long, fresh stems used in flower arrangements as background filler in flower arrangements and providing a rose scent.

## Cultural practices

### Planting

In-row spacing of 40 cm with a row width of 50 cm that will give a total of 50 000 plants per hectare when growing in a high rainfall area or under irrigation is necessary. In areas with lower rainfall, density can be 20 000 to 30 000 plants per hectare.

### Propagation

As rose geranium is a hybrid, propagation is therefore done by cuttings from mother plant material or by means of tissue culture.

### Fertilisation

Calcium and potassium are important for successful growth. Phosphorus uptake is enhanced by mycorrhizal fungi association (present in the soil). High nitrogen levels can increase herbage yield. However, it may result in lower oil yield per mass.

### Irrigation

Overhead, flood and drip irrigation can be used. Overhead irrigation should be used with care as it may induce the development of fungal diseases.

### Weed control

Inter-row cultivation can be done by a tractor-drawn cultivator or hand hoe. Mulching with compost or grass will inhibit weed growth.

### Pest and disease control

Rose geranium plants are attacked by many different species belonging mainly to the Hemiptera, Coleoptera and Lepidoptera. Among the most important pests are the white grubs, cutworms, cockchafters, whitefly, aphids, mites, termites and white peach scale.



Above: Cuttings being made (Photograph: W. G. Alberts)