

### *Snout beetle*

#### **Symptoms**

This insect tunnels into the heart of the crown where it lays its eggs. The larvae tunnel into the stems, so that the plants start to rot and ultimately collapse.

#### **Control**

Plants can be treated by injecting insecticide into small holes drilled into the stem.

### *Scale insects*

#### **Symptoms**

The white scale insects become visible as neat white rows on the leaves, especially on the lower surfaces. If untreated, the entire plant will eventually be covered by the insects and may die off.

#### **Control**

These and other scale insects can easily be killed off by the use of registered insecticides.

### *Mealy bug (Planococcus citri)*

#### **Symptoms**

The mealy bug is a small, sucking insect which is covered with numerous fine white fluffy threads.

#### **Control**

Recommended pesticides can be used.

### **Harvesting methods**

The crop is ready for harvesting after 18 months of cultivation. Harvesting is done in winter, thereby ensuring that the plant is reserved for the next season. The common method of harvesting is manual leaf cutting. Only 10 to 15 of the lower leaves of an adult Aloe ferox plant are harvested once a year. The leaves are cut with a sickle as close to the stem as possible.

### **Acknowledgement**

South African National Botanical Institute and members of Agri-Africa/Karwil Consultancy are herewith acknowledged for the information provided.

### **Reference**

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[www.Botanical.com](http://www.Botanical.com)

[www.plantzafrica.com](http://www.plantzafrica.com)

**2013**

Printed and published by:  
Department of Agriculture, Forestry and fisheries

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# **Aloe Ferox**

*(Aloe ferox Mill)*



**agriculture,  
forestry & fisheries**

Department:  
Agriculture, Forestry and Fisheries  
**REPUBLIC OF SOUTH AFRICA**

**Scientific name:** *Aloe ferox* Mill

**Common names:** Bitter aloë, Cape aloë, red aloë (English), bitteraalwyn, bergaalwyn (Afrikaans), iNlaba (isiZulu), iKhala (isiXhosa)

**Family:** Aloaceae

## Background

*Aloe ferox* is a succulent plant belonging to the Aloaceae family, which includes the dwarf aloes (*Haworthia*, *Poelnitzia* and *Astroloba*) and gasterias (*Gasteria*), which are also aloë-like in appearance and growth. The *Aloe ferox* derives its name from the ferocious thorns (*ferox* in Latin) that cover the leathery surface of the leaves. It originates from the Swellendam area in the south-eastern parts of South Africa and is distributed throughout the Western Cape, Eastern Cape, Southern KwaZulu-Natal, south-eastern part of the Free State, with a few localities in south-western Lesotho. It occurs in a wide range of habitats, on mountain slopes, rocky places and flat, open areas. The species shows a remarkable adaptability in terms of rainfall and flourishes in the extremely dry areas of the Karoo but also in relatively wet parts of the eastern part of the distribution.

## Climatic and soil requirements

*Aloe ferox* grows well in warm climates with a temperature ranging between 12 °C and 21 °C. The plant can be grown on a variety of soils, including sandy, loamy sands, and silty loams that are moderately fertile and well drained. Waterlogged, saline and alkaline soils are unsuitable for aloë cultivation.

## Uses

*Aloe ferox* is used in beverages and for medicinal purpose. The leaves boiled in water are taken for arthritis, eczema, toothache, sinusitis, conjunctivitis, hypertension, stress and stomach pains. Aloë bitters is widely used as a laxative and is taken in many ways. The leaf sap is applied to relieve skin irritations, burns and bruises. It is known for its anti-inflammatory and antiseptic qualities. It is processed into juice and jelly to be used in cosmetics.

## Cultural practice

### Soil preparation

The field should be prepared well before heavy rainfall to achieve a fine tilth.

### Planting

*Aloe ferox* can be planted in spring, 1, 5 to 2 m from each other. When the seedlings have three or four leaves, or are about 3 cm tall, they should be planted into 1 kg bags containing a well-drained mixture of sand and compost and after two

years they can be planted out into an open ground. About 15 to 18 cm long root suckers or rhizome cuttings should be planted in such a way that a two-third portion of the planting material is underneath the soil.

### Propagation

*Aloe ferox* may be grown from seed and stem cuttings. Seeds can be collected in winter or spring, treated with a fungicide and sown in pots or nursery beds containing a well-drained mixture of sand and compost. Propagation by cuttings is the most popular method. The side branches or basal sprout are removed and the wound is allowed to dry off for some time.

### Fertilisation

A small quantity of manure is required to enhance the growth of the plant. Organic compost can also be used when making planting holes to speed up growth.

### Irrigation

Although *Aloe ferox* is drought tolerant, it thrives and flowers better if adequate irrigation is provided in the summer months. The land should be irrigated immediately after planting.

### Weed control

The land should be kept weed free by weeding the field when necessary.

### Disease control

*Aloe ferox* is prone to a variety of diseases, including aloë cancer (also called galls), leaf spots, bacterial infections and aloë rust. A few of these will lead to the rapid demise of the plants, or will certainly spoil their appearance.

#### *Aloe cancer*

##### Symptoms

*Aloe cancer* (also called galls) causes severe deformation of the leaves or inflorescences.

##### Control

The infected areas should be removed with a sharp knife, taking care not to infect other plants and the wounds should be treated with a registered insecticide.

#### *Crown Gall*

*Crown Gall* is caused by a bacterium and by rapid proliferation of the cells of the plant, the bacterium providing the stimulus for the over-development.

#### *Aloe rust (Uromyces Aloes)*

##### Symptoms

*Aloe rust* is caused by a rust fungus that leaves black spots on the upper and lower leaf surfaces of aloë plants. The first signs of rust are small, orange-yellow spots on the leaves. These

soon become larger and appear on both surfaces of the leaves and eventually burst open to form a black and yellow scaly crust.

##### Control

Treatment with systemic fungicides is very effective. In severe infection, the use of antibiotics is advised. The best way to address the problem is to cut away the diseased leaves and immediately burn these, or paint each spot with an oily or bitumen mixture, thereby preventing the fungus from spreading.

#### *Rot*

##### Symptoms

An early sign of rot is plants that do not grow and form new leaves during a season or two. The bases of the leaves near the centre of the rosette may become blackened, or the leaves begin to sag, losing their firmness and becoming spongy and rotted, resulting in the eventual collapse of the plant.

##### Control

The centre part, which has been affected, should be carefully cleaned out and then treated with a registered insecticide.

#### *Leaf spots*

The spots are often black. They may be very large and unsightly. Sometimes the spots increase very quickly.

##### Control

Recommended pesticides can be used.

#### *Bacterial Infections*

##### Symptoms

These may be shown up as leaf-spots, rots, wilts or blights.

##### Control

Healthy cultivation is advocated for control of bacterial disease, and the use of copper compounds as protective sprays may be effective. Several antibiotics, like streptomycin are also now being used widely as protective sprays.

#### *Soil deficiencies*

##### Symptoms

Discolouration of the leaves caused by a lack of chlorophyll (chlorosis) or plants becoming shriveled and plants not flowering is sometimes the result of insufficient nourishment or lack of trace elements in the soil.

##### Control

It may be advisable to have the soil tested by an expert.

### Pest control

The major insects identified in *Aloe ferox* Mill include Aloë snout beetle, scale insects, mealy bug and mites.