



Garlic

2010

Printed and published by:

Department of Agriculture, Forestry and Fisheries

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Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

Background

Origin and distribution

Garlic is native to Europe and central Asia. It was used in England by the first half of the 16th century and was later taken to the Mediterranean area.

Garlic is classified as a hardy crop, which means that it can survive low winter temperatures. The bulb formation in this crop is influenced by temperature and day length, although to a lesser extent than onions. Most of the conditions that are suitable for the production of onions also apply to garlic. The suitable growth temperature for garlic is 13 °C to 24 °C.

Uses

Garlic is used as a condiment for flavouring. As a medicinal plant or herb it also has healing properties. Garlic can be consumed to reduce blood pressure, to lower blood cholesterol levels and to control pathogenic body worms.

Cultural practices

Planting

The general recommendation for spacing the divided cloves is 8 to 15 cm, with a row spacing of 30 to 40 cm. Cloves can be planted approximately 50 mm deep on the raised beds or on flat ground, manually or by using machinery. The planting date of garlic differs from one area to another. However, in South Africa the general recommendation is from February to May.

Fertilisation

The first step before planting is to incorporate the compost into the soil as it improves not only the soil's fertility but also its structure. At planting, about 125 g of 3:2:3 can be applied per m² using the broadcasting method. During the growing period, which can be 6 to 8 weeks after planting, a light side-dressing of 40 g of 3:2:3 can be applied per m² of the garlic field.

Irrigation

Garlic can be grown successfully, using furrow, sprinkler, or drip irrigation. Garlic has a relatively shallow root system and it is therefore sensitive to moisture stress throughout the growing season. The soil type on which garlic has been planted does not affect the total volume of water needed, but does determine the frequency of water application. Mulching is recommended to reduce the rate of moisture loss from the soil surface.

Weed control

Weeds are controlled by cultivation or hand-hoeing or with registered herbicide application. Deep cultivation close to the plants should be avoided as root damage with subsequent yield losses may occur. All these methods may be integrated for best control.

Pest and disease control

The following are some of the frequent pests and diseases affecting the garlic plant: cutworm, pink

stalk borer, nematodes, white bulb rot, brown rust, pink root, stemphylium leaf blight and neck rot.

Registered chemicals, good cultural practices as well as field sanitation are the three mechanisms that should be used in an integrated control programme for all the pests and diseases affecting garlic. Proper sanitation should include the removal of all the diseased plant material. In some instances, bulbs from infected fields should not be used for planting. The field of production that is infected can be flooded with water to control certain diseases such as pink rot. Bulbs suspected of being diseased should be treated with a registered chemical prior to planting, and a sound crop-rotation system should be followed. There are also resistant cultivars that can be planted.

For most pests, control can be done by ploughing the lands in winter. Cutworms occurring in the ground are exposed to natural enemies such as birds.

Acknowledgements

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[www.garlicfarm.ca/garli production.htm](http://www.garlicfarm.ca/garli%20production.htm).