

GARLIC FARMING

Ecological Requirements

- Garlic can grow well at an altitude of between 500-2000 metres above sea level. The right temperatures for garlic are between 12-24 °C.
- Extremely high temperatures are not suitable for garlic production.
- Garlic requires a fertile, well-drained, light soil. Clay soils should be avoided since they lead to poor bulb development.
- Soil pH should be between 5.5 - 6.8. Deep soil cultivation is important to ensure rooting depth.
- Excess humidity and rainfall interferes with proper garlic development, including bulb formation. The crop is grown in low rainfall areas where irrigation can be practiced, especially in early stages when the plant requires enough water to grow.
- Adequate sunlight is important for bulb development. Garlic develops its flavour depending on sunlight conditions during growth.

Planting Materials

- Garlic is planted using seed cloves. Buy Seed Garlic to get the planting cloves from a reliable source. Choose heads of garlic that are firm and have tightly clustered cloves.
- They should have many dry, paper-like skins covering the cloves and heads.
- Separate the cloves and leave them with their skins intact.
- The bigger the cloves are, the better the chances of growing high quality garlic.

Land Preparation

- Prepare the land and make sure that the soil is loose and airy to a depth of 6-8 inches.
- The soil should be relatively dry and free of rocks and plant debris.
- The drip should not be set where garlic or onions had been grown for the last 2 years.
- During land preparation apply 16 tons per acre of well decomposed manure and dig it in. You will need 60-80kg TSP fertilizer at planting.

Spacing

- The crop is grown on raised beds or on ridges at a spacing of 30cm between rows and 15cm between the plants.
- The normal seed clove requirement is 200 -280 kg per acre.
- Plant the cloves shallowly about 2-3 cm deep in well firmed, but not compacted soils.

Planting

- Farmers have devised their own method of determining whether their clove seeds are ready for planting - they cut a cross-section of a clove to see if the inner leaf is developing.
- Its colour and appearance help them determine if the cloves are ready for planting.
- Garlic is vegetatively propagated. That means that the farmer has to plant individual cloves separated from the main bulb.
- Very small cloves should not be used. The larger the cloves, the more the space required for planting.
- The cloves should be planted in upright position.
- The bulbs intended for use as seed should be stored in a cool place (10 °C) and a relative humidity of 50 -56 percent.
- The stored bulbs should be continuously inspected to ensure they do not rot and where possible fumigated.

Fertilizer

- Garlic is a heavy feeder but the fertilizer recommendation should be guided by soil test results. There are also general recommendations that can be used.
- At planting use 80kg/acre TSP which should be mixed well with the soil
- Top-dress with 40kg/acre CAN when plants 25cm
- Top-dress with 80kg/acre CAN 4 weeks later

Weeding

The field should be weed free to ensure garlic does not compete for nutrients with weeds.

Harvesting

- Garlic bulbs are ready to harvest 4-5 months after they are planted.

- The outward signs are the green leaves, which will begin to turn brown.
- Check if ready by pulling back the soil around one of your bulbs, if the clove ridges are clearly defined and the bulbs are a decent size, and some of the leaves have died back, then harvest them.
- Do not delay harvesting until the leaves die back completely as with onions, because by this time the bulbs will have started to split. Once the bulbs have split, they are still fine to eat, but may not store for long. These should be used first.
- For Garlic that has been planted in light soils harvest by just pulling out of the ground.
- If the soil is heavier and/or planted deeply, use a fork to carefully lift the whole plant. Shake or brush off any excess dirt. Do not bang them against each other or anything else as this will bruise them and shorten storage life.

Curing

- After harvest Garlic is cured. The curing process gives the bulbs an opportunity to thoroughly dry and adjust to conditions outside of the vegetable garden.
- Curing is important if the bulbs are not quite mature, as the bulb continues to absorb moisture and nutrients from the stem and leaves after harvest.
- In dry areas, some growers place freshly dug bulbs in groups on top of the soil, to dry out and start the curing process in the open sun. However, this is not recommended as some garlic bulbs can get sunburnt, and the dramatic rise and fall in temperature from day to night can harm the bulb, reducing storage times.
- It is better to cure undercover, where temperatures fluctuate less. Leave plants intact (do not remove leaves, flower stalks or roots) and hang in bunches or place on racks in a dry airy position that doesn't get too hot.
- Leave them for a minimum of 2-3 weeks but if you can leave them for longer (say 2 months) they are likely to store for longer.

Storage

- Store Garlic is in mesh bags or loosely woven baskets. It will keep for longer if stored at 6 – 13° C and in moderate humidity.

Pests and diseases

The most common diseases are:

- Purple blotch

- Downey mildew
- Rust and Bulb rot (white rot).

They can be controlled through crop rotation, improved drainage

Can also be controlled using fungicides like; Master, Mistress, Pearl etc

The common pests are:

- Root knot Nematodes
- Tobacco whitefly
- Red Spider Mites

Control them using Asataf ,Alpha etc.

