



A great harvest starts with great seed.

Graceland Garlic is South Africa's Premier Cultivator of Top-Quality Garlic Seed.

We specialise in cultivating top quality garlic seed at competitive prices and supply seed throughout South Africa and Africa. Our seeds have been carefully selected, cleaned, and sorted and will be ready for planting from February when the next planting season starts.

Benefits of Garlic Farming.

Any farmer will tell you that farming is an enormous risk. There are so many factors beyond a farmer's control that can affect his crop. Weather, perishability of products and supply and demand that comes into play on the market. Garlic farming is no exception.

However, garlic farming is a very calculated risk.

Since garlic is a winter crop and completely frost resistant, it eliminates much of the potential weather problems other crops may have such as hail, excessive rain, and flood damage. Garlic also needs fairly little water and is an easy grower.

The plant does not have many natural enemies and there are excellent products on the market that can eradicate these problems. Garlic bulb grows underground and therefore is protected against most natural elements that can bruise or damage the bulb.

One of the most important benefits of garlic is its long shelf life, and the fact that it doesn't need to be stored in a climate-controlled area. This means that there are no expenses like running a cooled cooling facility. Thus, it gives the farmer time to hold his produce back and "play" the market for a better price given that it can be kept in storage for months.



A great benefit of garlic is that it has an exceptionally long shelf life and does not need to be kept fresh in a cooling facility.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Secret to successful Garlic Farming.

Growing garlic is a fantastic return on investment with minimal risk involved.

Start small and make many...

Garlic seed increases exponentially. The secret to successful garlic farming is to buy your initial seed. Produce your own seed from your original crop and build up your own seed bank. In subsequent seasons you can plant your own seed. Therefore, you only need to buy seed once. In doing so you will save on the cost of seed when you plant every successive crop.



The secret to successful garlic farming is to buy your own seed and then build your own seedbank and then plant your own seed in the following seasons.

Why the fuss about garlic?

Garlic is considered a superfood. It contains vitamins C and B6, manganese, selenium, and other antioxidants (notably allicin). More recent evidence-based research suggests garlic may be effective against high blood pressure, cardiovascular disease, cholesterol, colds, and some cancers. Garlic has natural anti-biotic-like qualities that builds & boosts the immune system. The South African market is growing and needs local growers to contribute to the homegrown demand.



South African Consumers are increasing becoming aware of the poor quality of imported garlic.

Garlic is used more and more in homeopathic and health products.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Why are cloves bought off the shelf not good for planting?

“Shop seed” or garlic seed that is bought off the shelf is treated with growth inhibitors that make it sterile to prevent it from sprouting and so lengthens its shelf life. It may also have been irradiated and bleached or even carry disease, so it is useless for planting. Make sure to buy your garlic seed from a trusted and reputable seed supplier like Graceland Garlic Seed.



Garlic that you buy off the shelf in shops have been treated with growth-inhibitors so that it wouldn't sprout. Thus, making the seed sterile.

Is there a market for fresh garlic?

The garlic landscape in South Africa looks promising. Garlic prices are soaring in supermarkets, and it looks like it will stay that way for the foreseeable future. SA needs local growers to supply in the demand for good quality home grown garlic. There is also a market for the value-added products like pickled garlic, flakes, and dehydrated garlic. We are well connected in the industry and will put you into contact with buyers once you harvested your crop.



Garlic prices are soaring in SA supermarkets

Consumers are becoming more aware of the poor quality and bland taste of Chinese imports. With the enormous expansion of the health and wellness industry, there is an increasing leaning towards organic and natural products. Garlic is famous for its healing qualities and health benefits. Local is lekker and so is local garlic. It is much tastier and healthier!



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

What does garlic seeds look like?



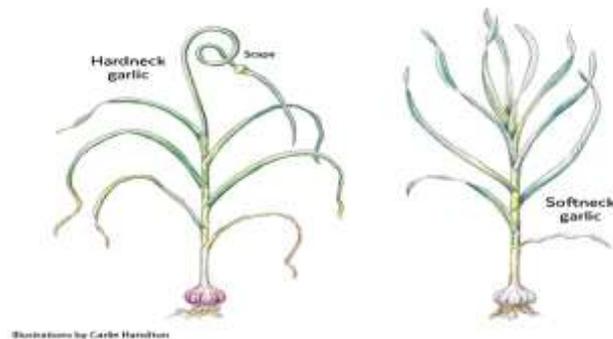
Garlic is propagated by planting its actual cloves.

Garlic seeds are the individual cloves that make up the bulb that you buy in supermarkets. The bulbs are split open, and the cloves are used for planting. After planting the clove, it will form another bulb which consists, once again of many cloves.

Each bulb contains a dozen or more cloves covered with a thin white skin. Each clove is made of two modified mature leaves around an axis with a vegetative growing point. The outer leaf is a dry sheath, while the base of the inner leaf is thickened, making up the bulk of the clove.

While it is possible to propagate garlic sexually, all the garlic commonly grown is propagated vegetatively. The current variation in garlic probably occurred through natural mutation. Because this variability is considerable, we conclude that garlic mutates relatively easily; over time it may adapt to new environments becoming somewhat different from the garlic originally introduced in an area.

Garlic can be divided into two groups of garlic: Hard-neck and soft-neck.



According to some sources, more than 600 cultivars of garlic are grown. Most of them can be classified within one of two basic types: Hard-necked garlic produces hard-stemmed flower stalks. Soft-necked garlic generally does not produce flower stalks. Each garlic variety has its own cultivation requirements and, to the discriminating palate and particular flavour. Soft-neck garlic generally has a more pungent flavour, stores better, and has a longer shelf life.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Graceland Garlic only supplies the best varieties to grow in SA.

The *Egyptian White Garlic* is a soft-neck type that is quite strong and predominantly white in colour. Egyptian White Garlic is a great storage garlic and will last many months if stored in a cool dry area. Plants are robust with normal sized cloves. This garlic has a mild and delicious flavour. Potential yield is 6ton/ha. Growth period 7 months.



The ever-popular Egyptian White Garlic is well-adapted and an easy grower.



The *Egyptian Pink Garlic* – It is well adapted, easy grower and very popular with consumers. When raw, Egyptian garlic has a crisp texture with a sharp, pungent, and spicy flavour, and if crushed, it will emit a strong aroma. This flavour and aroma will lessen with cooking and will develop a mild, savoury flavour. Potential yield is 6ton/ha. Growth period 7 months.



The Egyptian Pink Garlic variety has got a superior pungent taste and is sought after by consumers.

The *Spanish* variety of garlic has fewer but bigger cloves. It appeals to the eye, grows easily, and is sought after on supermarket shelves. It has a medium, spicy flavour and is creamy white in colour. Potential yield is 8ton/ha. Growth period 6 months.



Spanish Garlic has fewer but bigger cloves with a delicious flavour.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Other varieties of garlic that you will find in South Africa.

Giant Garlic is more of a leak than a garlic. Most people are attracted to it because of its size. While it is true that it is easy to clean, it is very watery and does not have a long shelf life. Giant garlic loses its flavour over time. It prefers climates with a higher humidity and isn't such an easy grower as the Egyptian garlic. It is often used for the processed market. Another downside of this cultivar is that it takes 9 months to reach maturity. This means the seed is 2 months longer in the ground than the Egyptian variety. In other words, it means two months longer of weed control and pesticide, irrigation, and fertilizer. So, at the end of the day, it will cost you more to get it ready for the market. Potential yield 8 ton/ha. Growth period 9 months.

Less common varieties of garlic you may find in South Africa include Artichoke, Silverskin Porcelain Purple stripe and Rocamboles.

Garlic Culture

Garlic is easy to grow February and March is the time to plant garlic in The Central and Eastern parts of South Africa. While you can plant right into the middle of May in the Western cape. The plant is extremely frost hardy and garlic is a winter crop. The crop matures in early summer. The growing period is too short for satisfactory yields if planted in the spring since bulbing and maturity will not take place when temperatures are high. Garlic plants should be six weeks old before the first frost.



The reason that garlic is planted in the autumn in South Africa is to permit full leaf development. As soon as bulbing starts, leaf initiation ceases. For highest yields, therefore, the cloves must be planted early enough to permit the development of large vegetative plants during the short cool days of late winter. The yield potential of the plants depends on the amount of vegetative growth before bulbing commences. Bulb growth and development in the garlic plant is favoured by longer days and warmer temperatures.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559



Garlic bulbs grow exponentially during the last few weeks of the plant's growth cycle.

Crop Rotation and Location

It is advisable to practice crop rotation when planting garlic. Don't plant garlic where onions or a member of the onion family has been grown previously. Plant garlic in full sun and in a well-drained bed with organic matter worked into it. Garlic likes well-drained soil, and the addition of organic matter will help even the hardest clay become more friable.

Planting

Garlic does not produce true seed but is propagated by planting cloves, which are the small bulblets or segments making up the garlic bulb. Each bulb usually contains a dozen or more cloves; each clove is planted separately. Do not divide the bulb until ready to plant; early separation decreases yields. Break the bulb open and remove the cloves for planting.



It is economical to plant up to one hectare by hand. For planting more than one hectare, we suggest you use a planter.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559



Garlic planter

How do you plant garlic?

Garlic can be planted by hand or mechanically approximately 140mm x 130mm apart and at a depth of 60mm. This spacing is merely a guide and includes pathways for irrigation and weed control and can be revised.



Use a line as guide to plant in neat & straight rows



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

How much garlic seeds do I need to populate a hectare?



1/4ha / 2 500m² = 62 500 seeds

1/3ha / 3 333m² = 83 333 seeds

1/2ha / 5 000m² = 125 000 seeds

1ha / 10 000m² = 250 000 seeds

In colder areas cloves may be planted slightly deeper for winter protection. Mulching will help protect bulbs from severe cold and will help conserve moisture. Irrigate thoroughly immediately after planting.



Use mulch to retain moisture, for weed control and to protect garlic plants in extremely cold weather.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Plant Development

Matured garlic cloves planted in autumn go through a dormant period.

Garlic cloves require a period of 6-8 weeks of cool weather after planting to undergo vernalization (inducement to bulb and flower) by low winter temperatures. With adequate moisture and lower temperature, roots emerge and leaves sprout, and the plant goes through a period of vegetative growth. During the fall and winter cloves will develop their root systems and initiate some top growth.

The clove will swell considerably, forming a globular bulb with many fine roots. A pair of intertwined leaves will emerge from the terminal end of the bulb and will eventually break through the soil, depending on the weather and location. *Emergence of the plants may be uneven.* As the temperature warms, leaf development will accelerate with flat, dark green leaves on stems reaching a height of or more. Keep plants well-watered during this growth period. Garlic is a water sensitive plant, and it is best to keep the plant moist and not wet. Adequate soil drainage is very important; garlic will rot when lying in a pool of water. Garlic plants need 25 mm of water per week.

Although vernalized (vernalization -- subjected to sufficient cold to induce bulbing), no inflorescence or lateral buds (that later form the bulb) are developed until early spring with the onset of lengthening days and suitable temperatures. Proper bulbing is a function of adequate growth, vernalization, and subsequent growth under longer days. The garlic bulb will grow exponentially during the last few weeks of the growth cycle of the plant.

As temperatures rise and day length increases, bulb formation begins. Do not apply any more fertilizer after bulb formation begins. After approximately 6 to 7 months, leaves will begin to turn brown and tops will fall, indicating maturity. Stop irrigation at this time to avoid bulb discoloration and bulb rots. To ensure bulbs are fully mature, remove the top layer of soil over the top of a few bulbs and check bulbs to make sure they are fully differentiated (division of bulb into distinct cloves). Digging bulbs prematurely can cause spoilage during storage, while waiting too long can cause disease and/or discoloration on the bulbs.

Irrigation



Drip, sprinkle, or furrow irrigation is suitable for garlic.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Garlic requires 25mm per week. Drip or sprinkle irrigation can be used to water your garlic. Drip is probably more ideal because there is far less wastage of water. Flood or furrow irrigation does work in certain soil types. One must just be careful that the water does not wash the garlic seeds out of the ground.

Garlic requires an even, consistent supply of water. However, too much can cause fungi and may cause bulb rots to occur.

Garlic is planted in the beginning of autumn when it is still very hot. Thorough watering at planting time is needed to establish the planting.

In spring, keep garlic growing actively. According to the rainfall, garlic may need extra moisture in spring and early summer. Water stress during clove development has been implicated in under-sized bulbs.

Do not irrigate when garlic matures and once the tops begin to fall and the plants become dry.

Garlic is quite vulnerable to diseases. Exercise care in disease control and irrigation. Water early in the day so garlic can be dry by nightfall, thereby reducing the chance of plant rust and disease.

Soil type does not affect the amount of total water needed but does dictate frequency of water application. Lighter soils such as sandy soils need more frequent water applications, but less water applied per application. The heavier type of clay soils need fewer applications but more water per application.

Soil Requirements & Fertility



Carefully follow a fertilizing and feeding program formulated by an agriculturalist based on your soil analysis.

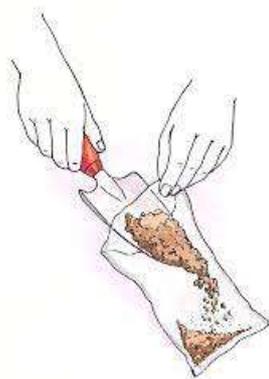
Garlic grows best in full sun and a well-drained soil. Also, garlic grows best on fine, crumbly, loamy soils that are fertile and have some organic matter. Add organic matter, such as well-rotted manure or compost, to the soil on a yearly basis to keep it friable. Garlic bulbs will be small if the soil is excessively dry and if the soil becomes compacted. Prepare a fine soil bed, evenly levelled out so that the garlic seeds do not lie in pools of water.

It is advisable to get a fertilizer and foliar feeding program to supply nutrients that might be lacking in your soil. This will ensure healthier plants, bigger bulbs, and better tasting garlic. Fertiliser might seem expensive, but you will be rewarded with satisfying results when you harvest your crop. Garlic grows well with medium to high amounts of fertilizer. Follow soil test recommendations for your soil. Soil samples can be sent via courier to Nvirotek labs in Hartbeespoort.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559



Having a soil analysis done is crucial.

Prior to planting, soils should be well tilled to provide a loose soil bed for bulb growth. Garlic grows best on well-drained soils with added organic matter. Sandy loam or loam soils have the most ideal texture for growing garlic. However, with the addition of organic matter, clay soils will produce garlic quite well. Also, a green manure crop tilled in a few weeks before planting is recommended to improve soil physical properties. Well-composted manure applied and incorporated is ideal as a soil amendment, especially on low organic matter soils. Drought or excessively wet conditions will reduce bulb yields. The optimum soil pH for garlic is between 6 and 7. Liming is recommended if the pH is less than 5.8.



Prepare a loose soil bed for planting garlic.

If you have heavy, clayish soil you can add organic matter to make it lighter.

Nitrogen — Garlic has a medium to high demand for nitrogen. About one-quarter to one-third of the recommended N should be broadcast and incorporated before planting; use an organic source such as blood meal. The remainder of the N should be top dressed in the spring. In early spring, side dress garlic with ammonium nitrate. Avoid N applications as spring approaches to prevent delayed bulbing. Be sure to figure in the nutrient value of applied amendments such as manure or compost. Symptoms of nitrogen deficiency include a yellowing of older leaves and leaf tips, general yellowing of the plant, poor vigour and low yields.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Phosphorus and potassium — Take soil tests before planting to determine phosphorus and potassium needs. Incorporate all P and K fertilizers before planting. Symptoms of P deficiency include dark green to purple leaves and stunted growth. Symptoms of K deficiency include marginal scorching of the older leaves.

Calcium, magnesium and sulfur — Calcium and magnesium may be low in acid soils. The need for these elements usually can be met by using dolomitic lime and following lime recommendations. Sulfur is a major constituent of compounds believed to be involved with the medicinal qualities of garlic. Adding sulfur does not appear to increase yield, but there is active interest in determining how sulfur fertilizers may affect garlic flavour and medicinal compounds.

Micronutrients — Addition of compost or other types of organic amendments will help to ensure that micronutrient supplies are adequate.

Pests of Garlic

Diseases

Garlic is susceptible to onion diseases, including botrytis, pink root, powdery mildew and purple blotch. Bulb rot can also be a problem in poorly drained soils. Good sanitation and long-term crop rotation is important to overcome these problems. Examine your plants frequently throughout the season to make sure it is healthy and not plagued by insects. Look at the roots, stems and bulbs. You can even send samples of leaves away for analysis to see if you suspect that there are any problems. Treatment is always more effective when problems are detected early.

Insects

The onion thrip can be a problem on garlic but is very treatable. Garlic should also be regularly inspected for damage from cutworms and other insects. Check with your local pesticide agent for appropriate control measures.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Weeds



Use a combination of manual weed control & registered herbicide for garlic.

Weed control is essential for proper development of garlic plants. Garlic has a very shallow root system. Like onions, it does not compete with weeds very well. A combination of cultivation, hand picking and a registered herbicide for garlic plants should be used for weed control. Cultivation should be very shallow to prevent root damage. Keeping your field free of weeds is important. Weeds can keep sunlight from reaching the garlic plants. It also takes up water and other nutrients that was meant to benefit the garlic plants. Use a combination of manual and chemical weed control to get rid of weeds. Using mulch is also effective in combating weeds and retaining moisture in the soil.

Harvest

Garlic is mostly harvested by hand. Some farmers have adapted or modified potato harvesters to harvest their garlic mechanically. Make sure that you do not injure or damage the bulbs when harvesting. Depending on the area, garlic will be ready to harvest from late September to late November. When garlic is mature, leaf tops will begin to dry, discolour, and bend towards the ground. Harvest the garlic when 1/3 of the leaves have died back in this manner. Use a fork to loosen the soil and facilitate lifting the bulbs, thus avoiding stem injury. If harvesting is delayed too long after the tops have died back, bulbs may start to deteriorate.

Allow healthy, harvested bulbs to dry in the sun for several days. It is a good idea to cover the bulbs with the tops to prevent direct sunlight striking them. When the tops and bulbs are dry, especially at the neck area, you can cut the leaves off and store in a cool dry place.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559

Curing & Storage

Leave the stalks and roots on the bulbs while they cure. Bundle 8 to 10 garlic stems together, tie with string, and hang bulb-side down in a cool, dark space. Allow the bulbs to cure for three to four weeks. The key to proper curing is providing good air circulation between the bulbs. As the garlic dries, the skin shrinks and turns papery, forming a protective barrier against moisture and mould. Don't remove the leaves while the garlic is curing. The bulb continues to draw moisture from the leaves and roots. Keeping the leaves intact also helps to prevent fungi or other lurking contaminants from spoiling the garlic before it's fully cured. Curing is complete when the roots look shrivelled and feel stiff, and the leaves are completely brown and dried. Proper curing will extend the shelf life of the garlic bulbs.



Following the correct process in curing & storing your garlic will keep it disease free & extend its shelf life.

The key to keeping your garlic fresh is to keep it in a dark environment where the temperature does not fluctuate radically, and the garlic has adequate air circulation. A cool, well-ventilated place will do for storage for about 6 to 8 months Humidity should be around 70 percent.

Be sure that bulbs are not exposed to light as this will trip the bulb into growth, thereby lessening the length of time it will stay fresh. Also, radical changes in temperature may also cause the bulb to sprout.

Graceland wishes you Great Success in your garlic growing project.

For more info contact Jacques 082 33 22 600.

Order Now

Kindly see our prices on the order page, www.gracelandgarlicseed.com and complete the order form on the order page and we will furnish you with an invoice. The earlier you place your order, the more discount you will receive. Place your order now to avoid disappointment!



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559



A great harvest starts with great seed.

ORDER FORM

Please note that our Garlic seed Prices are available on our website:

www.gracelandgarlicseed.com

Date: _____

Name: _____

Mobile: _____ Email: _____

Garlic variety: Spanish Egyptian White Egyptian Pink

Quantity: _____

Payment option 1: (50% Deposit)

Payment option 2: (100% Deposit)

Invoice Details:

Courier/Delivery:

Collection:

Delivery Town/Address:

Collection Address:

4 Mac Phail street

Petersfield

Springs, 1559

I have read through and agree to the TERMS & CONDITIOS and DELIVERY ISTRUCTIONS on the website www.gracelandgarlicseed.com.

We will send you an invoice upon receiving your order from. Kindly note that your seed order will only be reserved once we have received your deposit AND proof of payment. Seed will be ready for planting from February 2021. Please return this form to jacques@gracelandgarlicseed.com.



www.gracelandgarlicseed.com

4 Mac Phail street, Petersfield, Springs, 1559