



"Our Seeds Succeed"

Anderson's Seed and Garden, Inc.

Garlic

There are **FOUR** types of garlic:

1) **SOFTNECK**- Softneck garlic is sometimes called "common" garlic, but there is nothing common about it. Softneck varieties are easy to grow and tolerate a wide variety of climate conditions. The bulbs can be rather large with multiple layers of cloves. They have superior shelf life, and under proper conditions can be stored for up to 9 months. And they have some wonderful flavors. Planted bulbs generally yield 5-8 times their weight at harvest. A half pound will provide cloves for 20-30 plants. Hint: Plant the biggest cloves, and eat the rest.

***Incheleum Roja**- Our favorite among the softnecks. Its relatively spicy but prolonged taste won the 1990 garlic tasting test at Rodale Kitchens. Originally found growing in the Colville Indian Reservation, it is an "artichoke" softneck. The bulbs can be rather large, sometimes 3 inches across, and can have up to 20 cloves. It stores well. The flavor becomes more pronounced over time.

2) **BULBILS** - Hardneck garlic flowers produce clusters of miniature "bulbs", which while not true seed, serve essentially the same purpose. A bulbil planted in the fall (spring) will produce tasty garlic shoots in the spring (early summer). If the plants are left to grow through the first season, they will produce small bulbs, called "rounds". These in turn can be replanted, and will produce regular bulbs in year two.

***German Red**- A large plant with tall scapes that can produce rather large bulbs can have considerable red color in the wrapper. The cloves themselves have a brownish skin. The taste is hot and zingy. It can produce between 10 and 16 cloves per bulb.

***Spanish Roja**-A very versatile and tasty variety. Up to 12 cloves per bulb. Peel easily, store up to 4-6 months. Several very large cloves with each bulb. It has been described as the most piquant garlic in the world. It may have been brought to the U.S. by immigrants before 1900. It seems to prefer colder winters.

3) **HARDNECKS**- This is where the *real* flavor is, say garlic aficionados. Since hardnecks have many fewer cloves, the cloves are larger and easier to peel. The tall scapes, when cut, make a great stir fry vegetable and also a stunning floral piece. Planted bulbs can yield 5-8 times their weight in harvest. A half pound will provide cloves for between 15-20 plants (plant the larger cloves, eat the smaller ones).

***Romanian**- A long storing porcelain hardneck. The bulbs have large, easy to peel cloves. The taste is hot and pungent with a considerable bite. Speaking of bite, if you have vampire problems, this is the one for you.

***Korean Red**- A big bulbed hardneck from Korea, where folks really know their garlic. Its garlic that makes kim chee a world wide favorite! The big cloves are also easy to peel.

4) **ELEPHANT**- The largest bulbs and cloves of them all. The king of the roasters. The mildest of the garlics - actually, it is closer to a leek than a garlic. Perfect for stews, roast vegetables and garlic mashed potatoes. They grow well in most parts of the country. Mulching with straw or grass clippings and keeping the soil relatively moist, even during the winter, promotes larger bulbs.

HOW TO GROW GARLIC

SOIL - Garlic likes full sun and well drained soil. Garlic is quite tolerant when it comes to soil types and textures, but it definitely appreciates sandy-clay-loam that is friable (easily crumbled in the hand) and has a high organic content. It does best when the pH is in the 6.2 to 6.8 range. You can get your soil tested at the local university extension office or use one of the soil test kits here at Anderson's. Make sure you take samples from several spots in your garden and mix them together to obtain a representative reading. The garden or field should drain easily - standing water just won't cut it as the bulbs could rot in the ground. To increase the tilth of the soil, add organic matter such as well-composted manure. You can also green mulch, that is plant cover crops such as clover or buckwheat, available in bulk at Anderson's, and then till them into the ground.

PREPARATION - As with most crops, proper soil preparation is essential. If you have a large enough field, disc and cultivate to really work up the soil. If you have a large garden, rototill. If you have a small plot, spade up the top 6 to 12 inches. Garlic roots like to go deep, so well cultivated soil is a big help. Mix in the organic matter and manure at this phase. After the deep tilling, we find a final pass with a cultivator that powders up the upper several inches of the soil aids in planting.

PLANTING - When to plant? The fall is best. Remember garlic is a bulb (like tulips and daffodils). Plant 4 to 6 weeks before significant ground freezing may occur. Here in Cache Valley and the Wachatch Front, late September and into October will generally do. The idea is to get the cloves in the ground during warm weather so germination occurs and good root formation follows. It is good sign when you get green shoots popping above the soil in late autumn. Don't worry. The tips may suffer a little winter burn, but they can tolerate zero and below. Studies have actually shown that some garlic leaves actually grow ever so slightly on sunny days with temperature is below freezing. Recent tests have shown that early spring planting provides good results not only in the South, but also in colder areas.

When do you "crack" the bulbs? Since one obviously does not plant the bulb whole, you must crack (split) the wrapper and separate the individual cloves. It is best not to do this more than about 48 hours before actual planting, or they will begin to dry out and lose viability. Incidentally, one half pound of garlic typically has about

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3-5 bulbs. And each bulb has somewhere around 5-15 cloves (it depends on variety). Thus at the most you'll have somewhere in the neighborhood of 15 to 75 potential plants per half pound of garlic. You can get a return of about seven times for a successful planting. But keep one rule in mind: bigger cloves mean bigger bulbs. Thus the smaller cloves should not be used for you main crop.

What can you do with the small clove culls? Well, you can eat them. Or, here's a secret: use them for spring baby garlic. Just go ahead and plant them like any other garlic, in a separate plot and with a much tighter density (1-2 inches apart is fine). In May when the plants are about 12-16 inches tall and look like scallions, dig them up. And prepare for a real culinary treat. They have both the look and texture of scallions, but they taste of pure garlic. Try them in salads, braised, with roasts, in stir fries, whatever. They are just great. You can also plant spring cloves for greens and have a nice crop in 60 to 90 days.

How deep to plant? We find the tips should be about 2 inches below the soil surface. For elephant (Buffalo) garlic, make that 3 to 4 inches. Be sure to plant with the pointy side up/basal plate (root) down. They will grow at other orientations (they're tough plants) but you will have bent stalks which detract aesthetically from the final product.

How to plant? While we use a modified onion planter, most people do it by hand (as do we in our test plots). There are several techniques. In dry climates we find it works best to let the upper few inches dry out and then bring in the cultivator, turning the soil almost to powder. Then you can literally just stick the cloves in the ground by hand and the soil covers them up as you remove your fingers. If you have heavier and/or wetter soil, you can poke a hole in the ground with a broom handle and just drop the cloves in the hole, covering up the entire batch with a rake at the end. This works best if you water the soil several hours before planting so it is moist but not muddy.

How close do you plant them? Our experience is that closer is better. If you look at the commercial plantings out in Gilroy, they are amazingly tight. But the cloves should have enough room to grow into large bulbs (at least 4 inches for hardneck and 6 inches for elephants). We plant in about 2 foot wide rows about 6 across with 4 - 5 inches spacings (5 across and 6 inches for elephants). The close planting helps with weed control once the plants get larger in spring as the leaves block out the sun to the later sprouting weeds. In any case, if you plant in rows, be sure to leave enough room (24-30 inches) in between so you can get in there to weed next spring (which you can count on).

FERTILIZING - Garlic appreciates fertilizer, and a good 16-16-16 works well, typically 3 pounds per hundred square feet. Our practice has been to till in quite a bit of very aged cow manure during the initial soil preparation phase. You can side dress the crop when germination starts in the fall. In the spring, fertilize again, but do not fertilize beyond late May, since high nitrogen levels at this stage may actually decrease bulb size. Organic growers such as Yucca Ridge Farm apply foliar sprays of liquid fish and seaweed fertilizer, several times in the spring. Some people will dust the bulbs with HI-YEILDS Bone Meal at planting time to spot fertilize and help with germination

MULCHING - This is a key element to real garlic success, and the colder your winters, the more mulching is essential. Mulch serves many purpose, not the least of which is to regulate the sharp changes in temperature and moisture that can occur during winter, especially out west. But it also goes a long way towards controlling weeds the next spring. Mulch can be hay or alfalfa (but no seeds unless you want to grow a second crop). Lawn grass clippings are excellent. Chopped leaves will work if you have them. You should plan to put the mulch on immediately after planting (perhaps after giving the ground a really good watering). Don't be shy on the mulch, at least several inches should cover your crop. You would be surprised how tough those shoots are when it comes to punching through the mulch. If you do mulch extra heavily, removing some of the overburden in spring might be a good idea, but leave enough for weed control.

IRRIGATION - Garlic is a bit confusing when it comes to water. Most of the time it really likes moist (not soggy) soil. Watering regularly in the fall during germination is essential. In dry climates, watering in winter is also important. Do not let the upper several inches of soil turn to dust. When do you need to water? Try the old farmer's test of clumping a bit of soil in your fist. If the clump stays together upon releasing your fingers, it is wet enough. If not, water. Keep on watering into the spring when the maximum green shoots are forming. Then about mid- to late June, or when the scapes (on hardnecks) are standing high, STOP. During the last four weeks, when the bulbs are finishing off, and the wrappers are drying out, too much water is not good. You can create a mold or fungus problem (you don't need that). Wet soil also makes for dirty and unappealing wrappers. In drier climates some people like to heavily irrigate at the pre-planting phase to help build a winter deep soil moisture reserve

WEEDING - Most people hate weeding, but you must do it if you want to be a "garlic pro". Garlic plants do not like competition, so getting the weeds out makes a big difference in your results. And don't let them get ahead of you. Sometime in early May this miracle happens - the little green fuzz of weeds explodes into a maze of 12 inch high monsters almost overnight.

HARVESTING - Many people make a big mistake at this point. They wait too long to harvest. Keeping garlic in the ground beyond a certain point does not result in bigger bulbs, but rather dried out, split and nearly useless ones. When to harvest? When the lower third to half of the leaves have turned brown, but there are still mostly green leaves higher on the plant, it's time to harvest. Others suggest harvesting when the hardneck scapes are standing straight up but before the pods containing the bulbils open up. You can always test dig one or two plants. You should be able to see the shape of the cloves beginning to bulge through the wrapper. Harvest in Cache Valley about the first week of July. There is also a two to three week difference in the harvest dates of the several varieties, so watch you plants carefully. To get the bulb out of the ground, don't just try to pull them. The stalk will break. You must dig, using a pitchfork or the like in order to loosen the soil. Then you can lift the entire plant out of the ground. Don't let the bulb stay in the sun very long as it will sun scald, which reduces its quality. Incidentally, many people wonder if the scapes should be cut in order to increase bulb size? For elephants the answer is definitely yes. For hardnecks, yes appears to be the correct answer also, although some varieties seem less affected by leaving the scape attached. Cut them generally just before the scape has fully extended (or the coils in the Elephants have started un-curling). When still young, the scapes are considered good eating by some.

CURING - You can pop a bulb out of the ground and take it to the kitchen. However, if you want to store your garlic, you have to cure it first. After the curing process they store up to six months. The entire plant, leaves and all, should be dried out for about two to three weeks. The drier your climate the faster the curing will go and the less chance you will have to deal with mold. There are many ways to do it. The simplest is to tie up a bunch (a dozen?) with string/wire and hang them in a well ventilated place. Do not wash your bulbs or let them be exposed to water. You can also pack them loosely into large mesh bags or in open sided crates. But they must get a lot of air circulation. If you do find any that are molding, throw them away as fast as possible. After the curing is complete, lop off the tops about an inch above the bulb and trim the roots. When you do your sorting, keep your biggest bulbs for planting stock. Remember, big bulbs come from big cloves which come from big bulbs....and so on. Also it has been argued that the smaller bulbs taste better (perhaps by people who have trouble growing large bulbs?).

STORAGE - Storing garlic requires an even temperature (50-70°F seems to work) and a relative humidity averaging in the 50-60% range. Make sure they get plenty of air circulation. When storing in bulk, onion-type mesh bags hanging in a well-ventilated room is good. In a kitchen, a ceramic garlic keeper (or a burlap bag) will do fine. Do not store at high humidity or in the refrigerator - they will try to sprout and their taste heads south in a hurry. As winter approaches you might keep your bulbs in a paper bag to slow down desiccation. Most hardneck garlics and elephants can be kept for several months. The softneck varieties do tend to have a somewhat longer shelf life.