

Allium Crops: Onions, Shallots and Garlic

Onions, shallots, garlic and leeks are all in the same genus of *Allium* and have much in common. Onions are the most popular of these crops in much of our country, but here in SC Texas, shallots and garlic are at least as important or certainly gaining in popularity. They are all quite hardy and grow from fall until late spring. Although the alliums are used mostly as seasonings, they're a good source of vitamin B1.

Onions - *Allium cepa*

Onions may be grown for either bulbs or green tops (scallions). Planting from true seed can start in late September in north Texas and extends through mid- October in the south. Onions grown from sets or transplants should be planted in early winter. Onions, particularly those grown for bulbs, produce best in light silty or sandy soils. Clayey soils may interfere with the swelling of the bulb. Adding plenty of organic matter or compost to these heavy soils can make good production possible.

Varieties of bulbing onions grown in SC Texas are the "short-day" types. This is very important when selecting varieties, since bulb formation in onions is controlled by day length and temperatures. Bulb initiation begins in the spring as days begin to get longer and the temperature rises. Bulb size depends on variety and growing conditions. If a large bulb is desired, choose a variety capable of producing a large bulb, and develop a large, vigorous plant before bulbing begins.

Bulb shape depends on variety, depth of planting and soil type. Heavier soils and shallow setting produce a more flattened bulb. Crowding plants will also produce smaller and slimmer bulbs. There are several good "shortday" varieties for SC Texas conditions.

For red onions, the Red Creole is a popular selection. They are medium-small, pungent and store well. Red Burgundy, Southern Belle produce a medium to med. large, mild bulb.

For white onions, the **Crystal Wax Bermuda** is popular. It is a medium-sized, mild Bermuda **type also used for bunching onions**. Texas Early White hybrid, Contesa, are also very good. Yellow onions offer some great choices. Yellow Granex is the early hybrid grown in Vidalia, Ga fame. Texas Grano 1015Y, the most popular Texas onion by far, produces a large, mild bulb that is very sweet under the right growing conditions, which South and S Central Texas is famous for. Onions grown for green onions (scallions) or bunching onion use are not as fussy about soils. These onions are normally direct seeded thickly in the row and are grown to suitable size and then harvested for table use.

Varieties for green onion use include Crystal Wax and

Leeks - *Allium porrum*

Leeks are alliums that are similar to green onions but milder in flavor. Leeks are grown from seed or small bulbs planted in the fall. Although the above-ground portion resembles a thick-necked garlic plant, the thick white neck is used in soups, stews and for general onion use. *American Flag* variety should be suitable for Texas.

Garlic - *Allium sativum*

Garlic is thought to have many uses from warding off cancer to protecting from evil. Here in Louisiana we use it to flavor food and boil shellfish. Varieties differ in size and pungency. The Creole variety is intermediate in size. Its pungency is moderate, and it's not the best keeper. The Italian variety has the strongest favor and stores best. Its cloves are small and have pinkish skin. Early and mid-season varieties, such as Chinese Pink, Susanville, and Early Cascade Rose, Early Red Italian etc., are recommended to be grown.

When you buy seed garlic, choose whole bulbs. Break apart the cloves just before planting. Planting a true clove in mid to late fall should provide a plant that produces a cloving bulb in spring. Some bulbs will produce offset corms, which will grow up against the lower side of the bulb. These tough little nutlike corms will produce a plant that develops a solid or noncloving bulb of garlic resembling an onion bulb. These solid bulbs may be used for cooking. If replanted, the solid bulbs will produce plants that will clove the next year.

Shallots - *Allium ascalonicum*

Shallots are said to have been brought to Louisiana by DeSoto in 1532. They are a key ingredient in many Cajun and Southwest dishes. Shallots are similar to multiplying onions but have a slight garlic flavor. Although most of the world thinks of shallots as dry bulbs, in SC Texas the green shoots are used as much as green onion or scallion substitute.

Varieties: *Sante Shallot*: French shallots are an essential part of fine cuisine. Every cook should have some in their kitchen. We recommend the flavorful Sante Shallot. They produce exceptionally high yields and store well. The extra large bulbs are round with brown skin and pinkish-white flesh.

Dutch shallot: They are high yielding and produce 1 1/2 to 2 inch diameter bulbs with a yellow creamy flesh and a pungent flavor. Dutch Yellow shallots store very well compared to other varieties.

Shallot bulbs prefer well-drained soil with plenty of compost, peat moss and soil conditioner when planting. They do best with lots of organic matter. More than one clove can often times be contained in a papery wrapper.

individually. Space cloves 6-8 inches apart in rows 12" apart with the root ends down covering the tips with 1/2' of soil. Side dress you rows plantings with compost laced with your favorite plant-food like Blood/Bone meal, Espoma, Carl Pool. Feed monthly late May. If not, use Osmocote, agriform or high N mineral fertilizers in the same routine, but less often. As the shallot set sprouts and divides into several stalks, the clump may be pulled and divided. Each stalk then may be harvested or set back in a row to grow and divide again.

Allium Culture

Seed for all alliums should be planted from mid-September through October. When grown for bulbs, they are long season crops harvested about nine months after seeding. These seeds are small and have very hard seed coats, so they are slow to germinate. A moist, well-prepared seed bed is important to obtain a good stand. Seed may be planted in drills (rows) on a garden row and allowed to mature in place, or they may be transplanted into a permanent row a few months later. Soaking seed for several hours in warm water will promote good germination.

Choose a well-drained garden loam or sandy soil that will not easily crust over. Spade the soil, and build beds high enough for good drainage. Mix into the bed a complete organic fertilizer like 3-4-4. Use about a 2-3 lbs. per 25 feet of row. Cover seed with no more than 1/4 inch of good soil or sand. When plants are well sprouted, thin to proper spacing if they're to be grown in place. More than one drill can be planted on a bed. Allow 6-8 inches between plants in all directions in high density plantings.

Controlling weeds is more difficult when plants are crowded into multiple drills. Chemical weed control, particularly on the row, is very helpful in such cases. Transplants are commonly planted for onions and leeks. Plants should be about the size of a thin pencil so they're large enough to withstand the winter cold and shock of planting. Too large a plant going through winter may be more easily induced to bolt, that is, to send up a seed stalk and split the bulb. Transplants should be planted in well-developed beds. Use a complete fertilizer like 13-17-11 at the rate of a 2/3 lb. per 20 feet of row. As the plants grow, side-dress with 19-5-9 at 1/2 pound per 25 feet or ammonium sulfate (21-0-0 at 1/3 lb. per 25 feet). On poorer soil, the complete fertilizer is preferable. Lightly side-dress every four to six weeks when temperatures are high enough for plant growth. Dry bulb sets or cloves are planted and grown much like transplants. Press them into the drills 1 to 1 1/2 inches deep with root side down. Be sure to keep up good moisture and fertility as the plant begins to grow in early spring. A large, healthy plant is needed

On heavy or sticky soils, a little soil may be loosened or pulled away from the plant to reduce restriction of the bulb. Be careful not to dig or cultivate deeply and injure the shallow roots. An organic mulch cover applied in late winter will help control weeds, conserve moisture and keep the soil loose around the bulb shoulders.

The cooler spring soil of mulched alliums can also help produce larger bulbs. When growing leeks, rake up soil or mulch heavily around the plant's neck to encourage a thick white stem 4 or 5 inches long. This thick stem is used in cooking.

Harvest and Use

The shallots and young onions can be harvested for scallion use any time they reach sufficient size. With multiplying onions and shallots, you may pull the clump out, break off one stalk and replant it. This stalk will become re-established and begin to divide again if the weather isn't too hot. Young bulbing onion varieties can be pulled early or thinned and used as scallions. Leeks are harvested before they bulb and whenever their thick, white necks are big enough to use (usually in spring). Use them in soups, stews or for general onion use.

Some kind of bulb is formed by all these alliums when it gets hot enough or when you pull your crop to allow it to rest. If you want a crop of storage onions, choose a bulbing short-day onion. Small bulbs of onions, leeks or shallots may be replanted in the fall as dry sets. Allium bulbs are ready for harvest when they have stopped swelling. At that time the leaves lose their healthy color, necks become soft and most of the tops lay over.

The garlic bulbs will have cloved at harvest time. When two-thirds of the tops lay over, pull the plants and cure the bulbs. Pull the plants on a dry and sunny day, preferably after several such days. Allow them to lie on top of the row in the sun for a day or two. Gather the bulbs and trim off roots and tops, being sure to leave an inch or so of stalk at the neck to seal off infection. If you wish to braid the bulbs and store them this way, you must leave more top on the bulb for the braiding. Cure them for several weeks in a warm, dry area with good ventilation. After curing, hang them in a cooler, drier area as braids or in mesh bags, old pantyhose, etc.

Cultural Recommendations

Allium Crop	Planting Dates	Seeds/Plants per 100 sq. ft.	Spacing (inches)
Onions (seed)	9/15-10/15	1/3-1/2 oz.	
Onions (sets)			
Scallions	11/15-2/15	100-200 plts.	1-2
Storage Bulbs	11/15-2/15	300-400 plts.	3-4
Leeks (sets)	10/1-11/30	200-300 plts.	2-3
Garlic (cloves)	10/1-11/30	2-4 lbs.	3-6
Shallots (sets)	7/1-2/28	3-4 lbs	4-8