Growing Garlic in Southern California

September 20th, 2009
Altadena Community Center
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Why grow your own garlic?

"Shallots are for babies; Onions for men; garlic is for heroes."
Anonymous

- Texture: Crunchy, like a juicy-firm water chestnut
- Taste: Hot, mild, rich, lingering, there are tons of flavors to choose from depending on what you’re cooking
- Beauty: Lovely colors, silky clove wrappers, sturdy blue-green foliage
- Scapes: Some varieties send up sterile flower heads, delicious stir-fried
- Health: Research shows that garlic has many health benefits
• Each clove of garlic is a clone of the parent plant.
• Garlic reproduces by bulb division or by bulbil but almost never by true seed.
• A plant bulbs relatively late in its life—if harvested too early, a plant will be a “round,” a single, undivided large clove.
About the clove . . .

"Oh, that miracle clove! Not only does garlic taste good, it cures baldness and tennis elbow too." Laurie Burrows Grad

Each clove of garlic is actually a plant. The scabby end of the clove is called the “basal plate.” This is where the roots will grow from, and it is the true stem of the future garlic plant. Sometimes, you can see roots beginning to develop from that end when you peel a clove. The pointy end is where the leaves will emerge after the clove is planted.
About bulbils . . .

"A nickel will get you on the subway, but garlic will get you a seat."
Anonymous

Some varieties send up a scape. At the top of the scape an umbel encases the flower head. While there may be some true flowers in the umbel that may seed, it is very unlikely that the seed will be fertile. Instead, you’ll find lots of tiny cloves that are called bulbils. If you’re a patient person, you can plant these bulbils—they’ll need at least two years, perhaps even three, to reach a harvestable size. Bulbils only form if a scape is left on the plant to mature.
There are two major subspecies of garlic, Allium sativum ophioscorodon and Allium sativum sativum. Sometimes the same divisions are called hardneck (or ophio) and softneck (or sativum). Within these two divisions are many subdivisions, and within these subdivisions are particular varieties that I’ll refer to as strains.

What kinds of garlic are there?

"Garlick maketh a man wynke, drynke, and stynke."
Thomas Nash, 16th Century poet
The ophio, or hardneck garlics, are most closely related to the original garlics that came from central Asia. In this diagram, you can see that the bulb sends up a twisting scape, giving rise to another name for this kind of garlic, “Serpent Garlic.” In general, these garlics do not store as long as softneck garlics. However, they do tend to be more powerfully flavored.

Allium sativum ophioscorodon

“Since garlic then hath powers to save from death, Bear with it though it makes unsavory breath.”

Salerno Regimen of Health (12th century)
<table>
<thead>
<tr>
<th>Ophio Varieties</th>
<th>Characteristics</th>
<th>Image</th>
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<tbody>
<tr>
<td>Asiatic and Asiatic Turban</td>
<td>Short storing, early harvest, 6-10 cloves, weak u-shaped scapes with long spathes, purple and rose bulb covers, tannish rose bulb wrappers, powerfully flavored. Slight difference in coloration divides Asiatic and Asiatic Turban, and debate exists whether they are ophios or sativum. Some Asiatics and Asiatic Turbans grow very well here.</td>
<td><img src="image1.png" alt="Image" /></td>
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<tr>
<td>Porcelain</td>
<td>Heavy, satiny, white bulb and clove wrappers. This garlic tends to be more dense than any other variety. The flavor tends to be very hot in the 6-8 large cloves. They do not tend to grow very well in warm climates.</td>
<td><img src="image2.png" alt="Image" /></td>
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<tr>
<td>Purple Striped, Glazed Purple, Marbled Purple</td>
<td>These three varieties vary by coloration, but they all have beautiful purple bulb wrappers. They usually have between 5-7 cloves. Most are very hot, mellowing when cooked to an almost sweet flavor. Many of these grow well in our climate.</td>
<td><img src="image3.png" alt="Image" /></td>
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<tr>
<td>Racombole</td>
<td>These garlics have strong scapes that loop around twice before reaching maturity. They have dusty, tannish coloration in the 7-9 cloves. Many people consider them among the best tasting garlics, powerful and rich, but alas, they do not succeed with our temperate winters.</td>
<td><img src="image4.png" alt="Image" /></td>
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Allium sativum sativum

It is not really an exaggeration to say that peace and happiness begin, geographically, where garlic is used in cooking.

X. Marcel Boulestin (1878-1943)

Softneck/sativum garlics: Sometimes one or two bulbs in a row will send up a scape, or many of them will send up weak scapes, and in some strains, all will send up scapes. Most strains don’t try to flower at all. Since they don’t flower, they don’t have a central stem to weaken the bulb, and they tend to store a lot longer. They also are frequently milder flavored.
<table>
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<th>Sativum Varieties</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>Artichoke</td>
<td>These will not send up any scape. Most heads will be quite large, with between 12-20 cloves of varying sizes. While some will be mild, some will have much stronger, richer flavors. These store well and grow very well in our climate.</td>
<td><img src="image1.jpg" alt="Artichoke Garlic" /></td>
</tr>
<tr>
<td>Silverskin</td>
<td>Silverskins braid very well, last for a long time, and have a wide range of flavors. They usually have around 15 pink-wrapped cloves and white bulb covers. While they can be grown in our climate, they are not reliable.</td>
<td><img src="image2.jpg" alt="Silverskin Garlic" /></td>
</tr>
<tr>
<td>Creole</td>
<td>Very, very beautiful, with burgundy, rose, and purple bulb wrappers over their long, richly flavored bulbs, contrasting with bright white bulb covers, these garlies grow very well in our warm winters. They send up delicious, curly scapes and usually have 12-20 cloves.</td>
<td><img src="image3.jpg" alt="Creole Garlic" /></td>
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</table>
Which kinds of garlic grow best in our climate?

“To dream that you are eating garlic denotes that you will discover hidden secrets and meet with some domestic jar. To dream that there is garlic in the house is lucky.”

Richard Folkard in ‘Plant Lore’ (1884)

- Among the hardnecks, look for strains within Asiatic, Asiatic Turban, Purple Stripe, Marbled Purple, and Glazed Purple varieties.
- Among the softneck, all strains within Creole and Artichoke will do very well here.
- **Shilla:** Powerfully flavored, slightly mustardy, and large-headed, Shilla is a Asiatic Turban that matures early. It matured two weeks before some of the others, and was ready for harvest the second week of May. This is the first year I grew it, and I'm thrilled: it gave me great yield and great flavor with absolutely no trouble.

- **Ajo Rojo:** Gosh, this is a gorgeous garlic. The outer skins are shiny and translucent, tucking deep burgundy clove wrappers underneath. It is a strong garlic, but not overwhelming, wonderful in sauces and stews. It is a Creole garlic, and it grew much better for me this year than last. Thank goodness, because I love this baby.

*Strains that grow well for me*
- **Red Toch:** This strain is very reliable here. It has big fat cloves that grow out below the roots, creating heart-shaped large heads. Raw, cooked, roasted, this rich, not-too-hot garlic tastes good however I prepare it. It is an Artichoke variety that seems to love our particular climate and gives me a reliable yield of fat heads.

- **New York White (aka Polish White):** This is another Artichoke variety—a type that grows very well for me—but is stronger in flavor than the other two artichoke varieties I grow. It gave me medium-sized heads with big fat cloves and rich and medium-hot flavor. This is a great all-purpose garlic.
**Applegate:** My third Artichoke variety, Applegate has proven itself a couple times for me now. It yields large heads with fat cloves wrapped in rich parchment with purple and peachy-pink stripes, another of the beauty queens. Very mild-flavored, this is the perfect ingredient to use in recipes that call for raw garlic.

**Metechi:** A Marbled Purple Stripe variety, parts of the exterior wrapping are deep, deep purple. It is also deeply, deeply hot. This is the most pungent of the bunch, as well as the prettiest plant as it grows. The foliage is sturdy and symmetrical, with a soft blue blush. This was my first year growing it; I'll definitely grow it again. Hopefully I will be able to harvest larger heads from it next year. I thought it had to be ready to come up, but I should have let it go another week or so.
What about elephant garlic?

Elephant Garlic (*Allium ampeloprasum* var. *ampeloprasum*) isn’t actually a garlic, but is truly a leek. It, however, requires the same conditions to grow as true garlic. It’s flavor is very mild—it makes a delicious soup after being roasted whole, and it is good raw in salads. It is a beautiful plant in the garden, and if you accidentally let it grow past harvest, you’ll be rewarded with dramatically large flower heads.
Okay, all that information about different varieties is well and good, but what does it really mean?

Have I really been missing out when it comes to garlic?

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**Do garlics really taste noticeably different from each other?**

“There are two Italies . . .. The one is the most sublime and lovely contemplation that can be conceived by the imagination of man; the other is the most degraded, disgusting, and odious. What do you think? Young women of rank actually eat—you will never guess what—garlick! Our poor friend Lord Byron is quite corrupted by living among these people, and in fact, is going on in a way not worthy of him.”

Percy Bysshe Shelley, in a letter from Naples (22 December 1818)
What do I need to do to prepare a garlic bed?

"Vulgarity is the garlic in the salad of life." Cyril Connolly

- To prevent spread of viruses and garlic-loving nematodes and thrips, grow garlic where you haven’t grown it before. Crop rotation will limit your problems.
- Your soil should be medium-rich and well-drained. Garlic does not grow well in clay or compacted soil. When I built my new beds last fall, I mixed three parts native soil to one part of Tim Dundon’s good stuff, and I grew the best garlic I’ve ever grown.
- Beds should be dug and loosened at least 6 inches deep, preferable deeper.
- You’ll need to be able to water early in the growth of the plant and again in the spring. I never water during the winter months, but let the rain take care of all the watering needs. Make sure you have an effective system for even watering: I use soaker hoses.
When and how do I plant garlic?

- Planting garlic in the **early part of October** has worked best for me. I’ll probably plant this year the week of the 5th.
- To prepare the garlic to plant, I carefully separate a bulb into cloves, discarding or using the very small bulbs, and planting only the large, healthy ones. I break up the bulb the night before I plant.
- Overnight, I soak the bulbs in a mixture of **1 liter of water, 1 tablespoon of baking soda, and 1 teaspoon of liquid seaweed**. The next morning, I drain the cloves and give them a quick dip (a couple minutes) in high-proof vodka or other alcohol. Both baking soda and alcohol are approved organic treatments, and they both work to kill off any pathogens before planting. And we all know, prior preparation prevents . . . .
- I plant the bulbs in north-south running rows 6 inches apart. I leave at least 10 inches between the rows. I plant each clove pointy-side up about two inches deep.
- Mulch the rows with grass cuttings or very well-rotted compost. The mulch will help regulate temperature and moisture as well as fertilize slowly throughout the growth cycle.
- At least once in the early spring (February) and at least once mid-spring (April), fertilize with a combo of dilute fish and seaweed emulsion.
• Pull them! Garlic has very shallow roots that cannot compete with other plants. Eliminate weeds or settle for small bulbs.
• A healthy layer of mulch not only fertilizes and retains moisture, but also helps discourage weeds.

What about weeds?
"The air of Provence was particularly perfumed by the refined essence of this mystically attractive bulb." - Alexandre Dumas
What problems might I have during the growing season?

- Common pests:
  - Stem and bulb nematode
    - Indication: Stunted, twisted leaves and swollen, spongy base
    - Prevention: None other than crop rotation. Destroy affected plants.
  - Onion thrips
    - Indication: White/silvery patches on leaves from sucking damage
    - Prevention: A healthy ladybug population or Safer’s Insecticidal Soap.

- Common diseases:
  - White rot
    - Indication: Yellow leaves and dying leaf tips and decay of bulb
    - Prevention: None other than crop rotation. Destroy affected plants.
  - Basal rot
    - Indication: Yellowing leaves and rotting from base of bulb, continues to rot bulb after harvest
    - Prevention: None other than crop rotation. Destroy affected plants.
  - Various viruses:
    - Indication: Yellow streaks starting from the base of the plant, dwarfing
    - Prevention: Start with trustworthy stock, rotate crops, destroy affected plants.
How do I harvest garlic?

- As some garlies mature, they will send up scapes. To help the plant focus on building a bulb rather than a non-fertile flower, remove the scape. There is some debate as to when to do this, but I choose to harvest them when they’ve just begun to curl. That way, they’re still young and crunchy and usable as a food. Otherwise, they’re woody and only useful as compost.

- As early as May or as late as the beginning of July, the leaves will begin to yellow and die back from the outside of the plant. When you see that begin, start to withhold watering to prevent rot. Once about one half to two thirds of the leaves have died back, the garlic should be ready to harvest. To make sure, brush away the soil on a couple plants to check the bulb size. Do not let the garlic plant die back completely, or bulbs will split and invite infection.

- I use a small hand shovel to dig down a few inches away from the plant. I grasp the base of the plant firmly with my left hand and pivot the shovel up with my right. I’m careful not to touch the bulb with the shovel so as to not bruise it, but use the soil to push it up. A bruised bulb will not last long.
After harvest, I brush off as much soil as I can from the plants, then lay them in a single layer or hang them in a long row by variety for a week or two in the shady part of my patio. When the soil has completely dried, the outer layers have dried to a paper, and the tops are no longer green, I remove one layer of external bulb covers and trim the roots to eliminate excess soil. If the tops are truly dry, I trim them leaves off about 1 ½ inches above the head and store. This is also the time to braid garlic, if you’re interested in doing so.

Save the biggest, healthiest heads to use as planting stock the following year. Your garlic will grow larger each year as it acclimates to the climate of your garden.

**How do I cure garlic?**

"The only advice I can give to aspiring writers is don't do it unless you're willing to give your whole life to it. Red wine and garlic also helps."

Jim Harrison
- Use old citrus mesh bags or single-layer paper bags to store garlic in a dry, dark, room temperature environment. I store seed garlic (the garlic I’ll plant the following fall) in paper bags in a hall closet.
- Do not store garlic in a refrigerator, an overly hot place, or in direct light.

**How do I store garlic?**

“Tomatoes and oregano make it Italian; wine and tarragon make it French. Sour cream makes it Russian; lemon and cinnamon make it Greek. Soy sauce makes it Chinese; garlic makes it good.”

*Alice May Brock (of Alice’s Restaurant fame)*
If you have any questions in the growing or harvesting process that come up after you leave here, please feel free to email me at niezcka@gmail.com.


