



News & Notes of the UCSC Farm & Garden

Issue 143, Fall 2014

Center for Agroecology
& Sustainable Food Systems

For the Love of Garlic – An Interview with Pete Rasmussen of Sandhill Farms

Pete Rasmussen fell in love with hardneck garlic (*Allium sativum ophioscorodon*) more than a decade ago as a UC Santa Cruz student while visiting the Alan Chadwick Garden. His marine biology focus quickly shifted to hands-on sustainable agriculture education with UCSC's Center for Agroecology & Sustainable Food Systems (CASFS), laying the foundation for a lifelong journey into the world of farming. Encouraged by CASFS instructors and UCSC faculty, Rasmussen, along with family and friends, broke ground and planted his first garlic crop in the fall of 2005.

Today, Rasmussen grows over 35 rare and unique varieties of hardneck garlic (and one softneck, Inchelium Red) on 4 acres in the mountains of northern Utah at Sandhill Farms (www.sandhillfarms.org). On Saturday, October 25, he'll team with Chadwick Garden manager Orin Martin to share his passion at a workshop on growing garlic in the home garden and on the small farm (see registration details on page 3). Here he offers some growing tips for home gardeners and thoughts on his favorite varieties.*

Why is garlic a good crop for the home garden? Although garlic's growth cycle is long (October/November–June/July) and it does need timely care and attention to yield a productive harvest, growing garlic in the home garden is a must. Why? In addition to the countless reasons why "growing your own" is preferable when talking about fresh produce, herbs and flowers, growing your own garlic has some unique advantages:

1. Growing your own garlic connects you to the seasons in a special way. Fall is planting time (seed selection, site preparation, clove popping, planting, labeling, mulching); winter (climate depending) is the hibernation time, when below-ground development is at work; spring brings the excitement of new growth (often the first green in the garden in cold winter locales), weed management, irrigation preparation, more weed management (as Orin Martin says, you either grow weeds or you grow garlic, but not both), and scape harvesting; and summer is the season for timely irrigation, attention to plant signals for maturity, and the joys of harvesting bulbs that have been hidden beneath the soil for nearly 9 months. Then curing, cleaning, eating—the cycle begins again as summer rolls into fall. Garlic is a crop of all seasons.

2. Garlic's list of medicinal benefits is immense, well studied, and ancient. Growing your own plant medicine is a great way to keep immune systems strong when winter arrives.

3. Garlic is a natural pest deterrent: you can take advantage of its strong odors from sulfur and other chemical compounds by making a simple garlic water or garlic pepper spray that can be effective in controlling aphids and other garden pests. Companion planting or border planting in the home garden is also a natural deterrent (again, odor factor) for deer, moles, and voles. You can explore integrated pest management by incorporating garlic in the home garden.

4. And of course, the culinary factor. Many people's home-cooked meals start with garlic, reason enough to grow your own.

Some Tips for the Home Gardener

What type of soil preparation is involved? Like many home garden crops, garlic loves well-drained soil high in organic matter and well-aged compost. Because garlic has a shallow root system, shallow (4–12 inches) incorporation of compost prior to planting will give garlic access to the nutrients it needs to produce a robust vegeta-

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*Read more about growing garlic and the many garlic varieties available in the For the Gardener series article *Garlic: A Primer*, online at casfs.ucsc.edu/about/publications/for_the_gardener.html. You can also request a free copy by calling (831) 459-3240.

tive plant (December–May) that will result in large and healthy bulb growth and harvest (mid May–July). So, in the home garden, loosen soil (double digging is great if needed) and add well-aged compost prior to planting. Composts that include animal manure as an ingredient will provide a good source of nitrogen. Don't plant in an area that has had other alliums (leeks, onions, etc.) in the past year or two if possible to minimize disease risks.

Can garlic tolerate much shade? Full sun is best. Bulb size will be significantly reduced in shade and even partially shaded locales.

What is the timing for planting and harvesting in this area? I like the “holiday plant” explanation in the *Garlic: A Primer* article, where Orin Martin writes, “In mild Mediterranean climates like that of Central California, garlic can be thought of as the “holiday plant.” You plant it just prior to Thanksgiving, top dress, foliar feed, or otherwise add supplemental nutrients on Valentine’s Day and St. Patrick’s Day, start to taper off watering on Memorial Day, and harvest around the Fourth of July.”

In the workshop on October 25, we’ll also discuss the pros and cons of early vs. late plantings in this area. Late plantings (December, January) can be one method to address rust challenges in coastal California climates; plants are younger and more resistant to rust (a fungal disease characterized by small reddish to dull orange flecks on the leaves) hitting at an earlier growth stage vs. rust hitting a maturing plant that was planted in October.

What sort of cultural care is required? *Garlic: A Primer* addresses many of the cultural requirements for garlic. Here I’ll just emphasize a few for the home garden:

Fertility: green manure crops (vetch, broad beans, grasses, etc.) are a great way to add long-term fertility to the garlic plot. Also, I highly recommend growing Buckwheat (*Fagopyrum sagittatum* Gilib) before a garlic crop. It matures (when first white flowers appear) in just 30 days after sowing, helps smother weeds, and brings up phosphorus from lower in the soil profile. When incorporated into soils before garlic planting, buckwheat improves tilth greatly. It’s also a great bee attractant.

What about supplemental fertility? Healthy, rich soil (which is created months and months or years and years before you plant your garlic) is the number one way to successfully grow garlic (in addition to good seed quality). Supplemental fertility is just that, supplemental. I know plenty of good garlic growers that grow legume green manure crops the summer before planting, add animal manure compost 4 weeks before planting, and don’t do any supplemental feeding and harvest great bulbs.

That being said, garlic is very responsive to supplemental fertility in the early vegetative stages of growth. We foliar feed our garlic in early spring (when garlic has four true leaves) with 2–4 rounds of liquid kelp and liquid fish emulsion applied as a foliar spray in March/



The farmers’ lounge and drying barn at Sandhill Farms in Eden, Utah. The farm produces 2,000–3,000 pounds of garlic annually.

April/early May. Although not required, plants do seem to respond well—and any improvement in vegetative growth in early spring will have positive effects on bulb size and storability later in the season.

In addition to providing fertile soil and supplementing that fertility, growing great garlic also means managing weeds. Mulch can be great for this, as is timely and constant care during early growth and throughout the growth cycle.

Are there particular pests or diseases to be concerned with? If so, what are the options for organic control? Pests can include ground rodents like moles and voles (even though garlic can often deter them, it seems some moles and voles like garlic) and setting traps is the best options for addressing this should it be a problem. Diseases include both fungal and viral infections that can come from infected seed and/or infected soil. Due to clonal regeneration of garlic through the cloves rather than cross-pollinated seeds, disease can be a serious concern. Rotating garlic plantings year to year, securing quality seed, and keeping an eye out for signs of disease are the best methods of prevention and mitigation.

How do you know when garlic is ready to harvest? We harvest when about 50–60 percent of the leaves are still green. As Orin writes in *Garlic: A Primer*, “Each green leaf on the plant represents an intact bulb wrapper at harvest and in storage. Inevitably, two to three wrappers will be destroyed in the harvest or during postharvest handling. Garlic stores best with a minimum of two intact bulb wrappers; with fewer than two wrappers, cloves can split apart, turn green from sunburn, and suffer the effects of dehydration, or rot from too much moisture. Harvesting garlic at the slightly green or immature stage is safer than waiting until it’s overmature. Good drying and curing conditions can compensate for a slight degree of immaturity.”

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A Note on Sandhill Farms' Garlic Operation

Pete grows garlic commercially at Sandhill Farms in Eden, Utah, where he harvests about 2,000–3,000 pounds annually. A majority of the harvest is sold as Heirloom Seed Garlic and Heirloom Culinary Garlic via the farm's on-line store (www.sandhillfarms.org).

In describing the operation, Pete says, "We ship garlic across the country to garlic enthusiasts, home gardeners, and home chefs who are interested in exploring the diverse world of Heirloom Garlic. We use social media (Facebook, Instagram, etc) as part of our marketing outreach efforts. Additionally, we sell bulk seed garlic to local community gardens, farms and market gardeners throughout the Inter-Mountain West, mainly in Utah. We sell culinary garlic to local Salt Lake City restaurants and specialty produce markets—and I'll just note here that it's taken about 5–6 years to create the demand for Heirloom Garlic from restaurant chefs who were previously accustomed to pre-peeled Costco/Christopher Ranch commercial garlic."

"Several years ago Whole Foods Markets (which has four regional stores in the Salt Lake City area) contacted us, so we are also experimenting with the wholesale garlic market through their stores. Our production currently is only enough for about 1–2 months of sales in the Whole Foods stores (September/October), so this is an area we are exploring further. Although it takes more time and effort to sell our crop via smaller on-line accounts and local restaurants, I enjoy and thrive on these more intimate markets versus the larger wholesale accounts. I think a balance is key to a financially viable garlic-focused farming operation."

What are some of your favorite varieties and why? I love hardneck (stiffneck/ophioscorodon) garlic the most. Compared to softneck garlic, hardneck garlic is more closely related to the wild garlic of South Central Asia's mountains—garlic's homeland—and for me this creates an extra layer of mystique and curiosity. Flavors of hardneck garlic are often said to be more "complex" more "intense" and more "diverse" than their softneck counterparts, although I think so much with garlic flavor is linked to the terroir—climate, soil type, cultural growing techniques, etc.

Hardneck garlic is extremely diverse in terms of its bulb and clove coloration (from jasmine white wrappers to purple-tinged pinstripe wrappers, mahogany clove wrappers, and pink-hued clove wrappers), bulb size (golf ball sized to larger-than-elephant garlic sized) and clove segmentation: some hardnecks have just 2–3 huge cloves (Porcelains) while others have 9–12 slender, crescent-shaped cloves (Standard Purple Stripes).

Hardneck garlic also produces a "secondary harvest" of delicious scapes (the flower stalk)—this creates an ad-

ditional marketable product for farmers, and a seasonal treat for the home gardener. Lastly, hardneck garlic thrives in extremely harsh growing conditions (-60°F winters, 100°F summers) such as where we farm in the Wasatch Mountains of Northern Utah. Every season, I experiment with new varieties, I notice mutations on existing varieties, and the flavors and character of each variety seem to change slightly, reflecting the effects of terroir and seasonal climate variations.

Below are notes on some of my favorites varieties (for additional varietal descriptions, see: www.sandhillfarms.org/seed-garlic.html).

Corona Music: Very productive and reliable Porcelain variety, huge bulbs and huge cloves (4–8 per bulb), good storability, excellent and intense raw flavor, so creamy and sweet when baked. Thrives in cold weather climates but also produces well in mild climates.

Music is probably the most common of all hardneck varieties and is in high demand from both culinary and seed garlic customers. We call our Music "Corona Music" in honor of Corona Farms in northwest Washington, which originally provided the seed many years ago.

Siberian: Stunning bulb coloration, purple stripes and mahogany cloves. A great hardneck for milder winter climates. Very juicy and thick scapes are excellent for use in the kitchen.

Wasatch: Porcelain strain with satiny white bulb wrappers, pink and purple clove coloration, 4–6 large cloves per bulb. Well adapted to winter growing conditions.

Tibetan Purple: My favorite garlic from the 2014 harvest, this Standard Purple Stripe has long, slender, elegant crescent-shaped cloves, deep purple striping on the wrappers and deep purple on the clove wrappers. Very long-storing hardneck; firm bulbs last well into winter when grown, harvested, and cured well. Excellent and crunchy raw flavor, holds its flavor integrity well when roasted. A prized garlic in our collection.

What are some good sources for garlic "seed"? Hood River Garlic (www.hoodrivergarlic.com), Filaree Farm (www.filareefarm.com), Sandhill Farms (www.sandhillfarms.com), and Renee's Garden (www.reneesgarden.com) all offer a good variety of high quality garden seed.

A workshop on Growing Great Garlic will take place on Saturday, October 25 at the UCSC Farm (register online at garlic2014.bpt.me). The workshop will cover varietal selection, planting, cultural care, harvest, and the various uses for garlic, as well as a tasting of raw and roasted garlic varieties.

Planting stock and culinary garlic will be available for sale at the workshop. Contact Pete Rasmussen at sandhillfarmsutah@gmail.com if you have questions or would like to order garlic prior to the workshop.