



News & Notes of the UCSC Farm & Garden

Issue 150, Summer 2016

Tomato Tips for the Home Gardener

– by Martha Brown

“Only two things that money can’t buy — that’s true love and homegrown tomatoes.”

– Guy Clark

Tomatoes are by far America’s most popular garden vegetable, with surveys by the American Gardening Association showing them grown in more than 85% of U.S. vegetable gardens (peppers were distant second at 58%). Two main reasons cited: taste and ease of growing. According to a Christian Science Monitor article, “With the exception of sweet corn, no other home-grown vegetable has so much more flavor than its store-bought counterpart. Add to this the high yield of a tomato vine for the small amount of space it occupies and it seems that the tomato may hold top spot in the home garden indefinitely.”

Here Christof Bernau, manager of the greenhouses and handworked gardens at the UCSC Farm, offers a few tips on growing tomatoes on the Central Coast.

Seedlings, Soil Preparation, and Planting

Tomatoes are big, robust plants, so growing them in soil that has a good history of cover crops and composting will help ensure adequate fertility to support the vegetation and fruit load. Working the soil deeply prior to planting will also give tomato roots a chance to extend and access nutrients and moisture; particularly if you’re dry farming, tomato roots can extend as much as 5–6 feet down, “chasing” moisture as the soil dries down.

When planting, Bernau recommends digging a hole big enough to bury half the length of the seedling: for example, if you have an 8”-tall transplant, bury 4” of the stem (you don’t have to trim off the leaves). Planting deeply will get the roots into moister soil, and the buried portion of the stem will extend “adventitious” roots, anchoring the plant more firmly. “If you have really leggy transplants, you can plant on the diagonal [to avoid having to dig a really deep hole] and the above-ground portions will right themselves,” says Bernau.

Seedlings should be planted when soil temperatures begin to warm and we have moved away from consistent winter rains. Some growers plant as early as the beginning of March, but you will have faster establishment and your plants will grow more quickly if you plant mid April through mid May, especially if you live near the coast. As with other transplants, it’s best to plant on a day when conditions are mild, and to water in plants thoroughly to insure good root to soil contact.

Pinching and Pruning

Most tomato varieties are indeterminate (this should be noted on the varietal tag at the nursery): think cherry tomatoes and many heirlooms. If the tag doesn’t indicate it, you can look up the variety in a seed catalogue or online to find out the plant’s growth habit.

As Bernau explains, “Indeterminate varieties grow vegetatively [adding stem length, shoots and leaves] for a period of time, then flower, get pollinated, continue to grow, flower again, and will go on that way as long as weather conditions allow.”

Determinate varieties, in contrast, grow vegetatively for a longer period and establish a larger plant, then put on a lot of flower clusters all at once. The fruit sets and ripens all at the same time (or nearly so), and the harvest window is relatively short. This is true of many of the sauce/paste tomatoes, such as San Marzano, as well as processing tomatoes grown for ketchup and other tomato products.

Finally, some tomatoes fall in between the two types and are classified as semi-determinate or semi-indeterminate, showing a blend of characteristics.

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Indeterminate varieties may benefit from some management or “pruning” to decrease the amount of vegetative growth and increase light penetration and air circulation. Improved circulation can help reduce the incidence and spread of fungal diseases in areas where moisture tends to linger on the plant.

Thinning out vegetation can be done by pinching or pruning out developing stems. Says Bernau, “If you look at a developing tomato plant you’ll see that compound leaves grow laterally off of the main stem, and at the base of each leaf where it meets the stem is an axillary bud that will grow into another shoot or cane.” When the buds are small they can be pinched out with your fingers; as they get bigger, use a sharp set of pruners to remove them (see illustration).

Flower clusters, your future fruit, form internodally (between the other stems) as short, slender laterals off of the main stem—leave these lateral canes in place.

There are many schools of thought as to how much vegetative growth should be removed from a developing tomato plant, from those who don’t pinch or prune at all to some greenhouse growers who remove all of the laterals, leaving only the main stem (trained to grow up a string) and the fruiting branches.

In the UCSC Farm’s handworked garden, staff remove all side shoots up to about a foot off the ground, then thin the remaining lateral stems to leave 3 to 5 main vegetative shoots or “canes” along with the fruiting stems. Thinning takes place relatively early in the plant’s growth, establishing an open architecture that promotes air movement and light penetration. However in some regions, including hotter inland settings, too much light can cause sunburn on the fruit, and plants should be managed accordingly.

The other time to “pinch” tomatoes is when the plants are small but are already setting flowers. Since it takes a lot of energy to set up and ripen a fruit, it’s better to delay flowering until the plant has further developed. Exceptionally early flowers should be pinched off to direct the plant’s energy to vegetative growth.

Training and Trellising

Options for trellising tomatoes include pre-fab wire cages, which work fine, says Bernau. “Another option is to drive in three wooden stakes firmly around the plants and wrap the stakes with nylon or jute to provide support.”

If you’re growing in longer rows, Bernau recommends the “California weave,” with two stakes driven deep into each end of the row at about a foot apart, and 3 to 4 parallel lines of string attached to the stakes and running down the length of the row, with the first set at about a foot off the ground and additional pairs of string each about a foot above the previous pair. The string should be pulled taught between the stakes and be strong enough to support the future weight of your crop. The plants can then be trained to grow between the strings, and your “weave” will help promote air circulation through the plant canopy and keep the fruit clean and off of the ground.

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When thinning vegetation, use fingers and pruners to pinch and prune developing stems. Illustration by Laura Vollset.



Summer/early Fall Calendar of Events

Summer Garden Walk

Saturday, July 16, 9:30 am – 11:30 am
Alan Chadwick Garden, UCSC

Join garden managers Orin Martin and Sky DeMuro for a summertime walk and talk in the Alan Chadwick Garden at UCSC. Orin and Sky will discuss caring for summer crops, including potatoes, peppers, eggplants, pole beans, leaf crops, and alliums (onions, leeks, garlic) and mid summer cut flowers. Learn about fertility and irrigation options and how to extend your gardening season.

Cost of the workshop is \$15 general admission (pre-registered) or \$20 (at the door); \$10 for Friends of the Farm & Garden members (pre-registered) or \$15 (at the door); \$5 for UCSC students and limited-income.

To pre-register online, see gardenwalk.bpt.me. To pre-register by mail, send a check made payable to UC Regents to: CASFS/UCSC Farm, 1156 High St., Santa Cruz, CA, 95064. Attn: Pam Dewey, Garden Walk. For more information call 831.459-3240 or email casfs@ucsc.edu.

National SAEA Conference

July 29 - 31, UC Santa Cruz

The Sustainable Agriculture Education Association (SAEA) conference invites participants from across the agriculture and food system involved in adult education. Learn more at: sustainableaged.org/conferences/2016-santa-cruz-ca/

Docent-Led Tours of the UCSC Farm

Sundays, August 7, and September 4, 2 pm - 3:30 pm
UCSC Farm

Join us for a guided tour of one of Santa Cruz's most beautiful locations—the 30-acre organic farm at UC Santa Cruz. Tours meet at the Louise Cain Gatehouse.

Visitors can enjoy touring the organically managed greenhouses, hand-worked garden beds, orchards, row crop fields, and children's garden, while learning about the history of the site and the basic concepts of organic farming and gardening, including water conservation practices. The monthly tour is free and does not require a reservation.

Summer Fruit Tree Walk

Saturday, August 6, 9:30 am – 11:30 am
UCSC Farm

Join fruit tree experts Orin Martin and Sky DeMuro for a summertime walk and talk in the orchards at the UCSC Farm. Orin and Sky will discuss summer care of fruit trees, including summer pruning, irrigation, fertility, and preparing your orchard for fall and winter.

Cost of the workshop is \$15 general admission (pre-registered) or \$20 (at the door); \$10 for Friends of the Farm & Garden members (pre-registered) or \$15 (at the door); \$5 for UCSC students and limited-income.

To pre-register online, see orchardwalk.bpt.me. To pre-register by mail, send a check made payable to UC Regents to: CASFS/UCSC Farm, 1156 High St., Santa Cruz, CA, 95064. Attn: Pam Dewey, Orchard Walk. For more information call 831.459-3240 or email casfs@ucsc.edu.

Sixth Annual Farm to Fork Benefit Dinner

Sunday, August 28, 3 pm - 8 pm
UCSC Farm & Cowell Ranch Hay Barn

Celebrate and support the Farm & Garden's Apprenticeship and other educational programs at our annual fundraising dinner. Enjoy remarks by Apprenticeship graduate Harrell Fletcher, who developed UCSC's Collective Museum project, as you feast on a fabulous locally sourced meal prepared by Amy Padilla and Heidi Schlecht of Feel Good Foods accompanied by wonderful local wines.

Tickets are \$150 and are available at specialevents.ucsc.edu/farmtofork. For information on paying by check, call 831.459-3240 or send email to casfs@ucsc.edu.

Fall Harvest Festival at the Farm!

Sunday, September 25, 11 am - 5 pm UCSC Farm

Join us to celebrate the fall harvest with a fun day on the farm! Enjoy live music, great food, workshops, tours, kids' crafts, fresh produce and much more at this campus and community event. \$5 general admission. Free for Friends' members, UCSC students, and kids 12 and under. For more information or to volunteer, call (831) 459-3240 or send email to casfs@ucsc.edu.

If you'd like more information about these events, need directions, or have questions about access, please call 831.459-3240, email casfs@ucsc.edu, or see our web site, casfs.ucsc.edu. UCSC student participation in workshops is supported by UCSC Measure 43 funding. Sponsored by the UCSC Center for Agroecology & Sustainable Food Systems (CASFS), and the Friends of the UCSC Farm & Garden.

The Hay Barn is Open, It's Fabulous, and It's Available to Rent!

The Cowell Ranch Hay Barn is open and ready for business! With Phase 2 of construction completed, CASFS staff members recently moved into office space, exhibits and displays are being planned (see below), and the building has already been used for workshops, conferences, fairs, and weddings, with more on the calendar, including the upcoming National SAEA Conference (see page 3). See the Fall 2015 issue of the *News & Notes* to read about the Hay Barn's dedication celebration, and see casfs.ucsc.edu for more on this landmark project. Stay tuned to the *News & Notes* and casfs.ucsc.edu for more about this amazing new facility as its role in campus and community activities continues to grow.

If you're looking for a unique setting for an event, the Hay Barn is also available for rent by community members, organizations, and campus groups. It can host gatherings for groups ranging in size from 10 people in the small conference room up to 325 (standing room maximum) in the main hall, with seating at tables for up to 200 and room outdoors as well. The rental program helps support educational programming in the Hay Barn.

Details about renting the Hay Barn are available at casfs.ucsc.edu/about/hay-barn-rental.html, or by contacting Melissa Betrone, mbetrone@ucsc.edu.

Turning the Hay Barn into a Visitor Center and Welcoming Front Door to the Farm

Thanks to a \$250,000 gift from the Joseph and Vera Long Foundation, the Hay Barn will soon have interpretive exhibits and interactive displays for the education and inspiration of the many types of visitors to come through its big barn doors. This generous gift, pledged over two years, will provide for the development of displays with award-winning museum exhibit designer Darcie Fohrman, as well as support staff time. The goal is to complete an initial set of exhibits in time for the upcoming 50th Anniversary Celebration.

Friends' Board Opportunities

The Friends of the Farm & Garden Board is seeking someone with an affinity for spreadsheets and budgets to join our Board. Initially you would work with and then, ideally by late fall, become our treasurer. Join a dedicated group of community members who work together to support this amazing program! We have other openings on the Board as well. If you are interested, please contact Monica Larenas, Board Co-President, at mlarenas@calcentral.com for more information and details.

Save the Date and Help Celebrate Our First Fifty Years!

As 2017 glimmers on the horizon, we are looking toward the 50th anniversary of Alan Chadwick's 1967 arrival at UC Santa Cruz and the founding of the Student Garden Project (now the Alan Chadwick Garden), which spurred the creation of the UCSC Farm and helped inspire the Agroecology Program, now the Center for Agroecology & Sustainable Food Systems.

Planning is underway for a 3-day "First Fifty" celebration on July 28–30, 2017. Mark your calendar and stay tuned for details on this and other 50th anniversary events coming up in 2017.

Applications Open for 2017 Apprenticeship Program

Aspiring organic farmers and gardeners are invited to apply for the 2017 Apprenticeship in Ecological Horticulture at the University of California, Santa Cruz. The upcoming six-month program starts in April 2017. Course fee support at different levels is available, including the Simply Organic annual scholarship and Matthew Raiford Scholarship (see next page). AmeriCorps funding can also be used for course fees.

The Apprenticeship is managed by the Center for Agroecology & Sustainable Food Systems at UCSC. It is open to all participants 21 years or older, regardless of educational background.

Program information, application materials, details on course fee waivers, and a list of dates for upcoming orientation tours are available online at casfs.ucsc.edu/apprenticeship. Application deadlines for the 2017 program are August 15, 2016 for international applicants, and September 30, 2016 for U.S. citizens.

The six-month, full-time residential program is based at the 30-acre organic farm and 3-acre Alan Chadwick Garden on the UC Santa Cruz campus. The program trains adults in the concepts and practices of organic gardening and small-scale sustainable farming, blending experiential learning with traditional classroom studies.

Program graduates have established their own commercial farms and market gardens, developed farm- and garden-based educational programs, run urban garden programs, and more (see page 7 of this issue). You can read more about Apprenticeship alumni's work at www.growafarmer.org.

For more information about the Apprenticeship, please contact the Center for Agroecology & Sustainable Food Systems at 831.459-3240, or at casfs@ucsc.edu. Learn more about CASFS at casfs.ucsc.edu.

New Scholarship Fund to Support Veterans in the Apprenticeship, Other Gifts and Grants Fund Essential Needs

We are extremely grateful for the generosity of long-time Friends of the Farm & Garden member Gabrielle Stocker, whose recent \$50,000 gift has created the Matthew Raiford Scholarship for Veterans. This scholarship honors apprenticeship alumnus and nine-year US Army veteran Matthew Raiford.

Matthew is a graduate of the Culinary Institute of America and founded UCSC's Farm to Fork Benefit Dinner while he was an apprentice in 2011. He had the vision and the talent to create this annual fundraising event, believing that apprentices should "pay it forward" each year for the next class. A native of Brunswick, Georgia, Matthew is co-owner with his sister Althea of Gilliard Farm. They are sixth generation farmers on their family's land, which is a Georgia Centennial Family Farm. He is also co-owner of the Farmer and the Larder restaurant with Jovan Sage, in Brunswick, Georgia.

The Matthew Raiford Scholarship for Veterans is intended to support veterans who wish to attend the six-month Apprenticeship in Ecological Horticulture. Gabrielle Stocker intended her \$50,000 to provide a full scholarship each year for five years, plus covering additional costs associated with training a veteran apprentice. The first scholarship has been awarded to a veteran in the 2016 Apprenticeship.

Additional donations are welcome to the Matthew Raiford Scholarship for Veterans, as we hope to grow this fund even more to support the growing number of veterans interested in farming. Please contact Anne Hayes, Director of Development, at (831) 502-7274 or adhayes@ucsc.edu for information on contributing to this fund. Checks can be made to the UCSC Foundation with "Matthew Raiford Scholarship" in the subject line and mailed to Anne Hayes, Division of Social Sciences, UCSC, 1156 High Street, Santa Cruz, CA 95064. Online donations can be made through UCSC's secure donation site that can be accessed through our support page at casfs.ucsc.edu (indicate designation code CA034F or Matthew Raiford Scholarship).

Gifts and Grants Fund Education Programs, Scholarships, and a Tractor and Dump Truck!

Apprenticeship scholarship funds were also bolstered this year by other Friends' members. Sharon Naraghi and William Ekhard generously gave \$10,000 for a scholarship in addition to \$1,500 in other support for the Apprenticeship contributed at the 2015 Farm to Fork Dinner. Additionally the Agadino Foundation has funded a scholarship for a 2016 apprentice.

Thanks to a generous \$30,000 gift from an anonymous Friends' member, the Farm and Garden have been able to purchase a very suitable used tractor and a larger, more serviceable dump truck to improve our operations this year.

Julia Mitchell made a gift of \$20,000 for the Alan Chadwick Garden with a note saying: "It's the garden that I really love. I intend this gift to see it along another year at the least, or hopefully into the deep future. I spent many wonderful hours there . . ."

The True North Foundation awarded a grant of \$50,000 for "Sustainable and Organic Agriculture Education and Training at UCSC CASFS." This grant provides \$25,000 in support of the Community Supported Agriculture (CSA) training along with \$25,000 for the undergraduate education work being integrated at CASFS. An anonymous foundation has also made a grant of \$40,000 to support education and outreach at CASFS.

Giving Day Success

Many thanks to those of you who supported Farm & Garden-based educational work by donating during UCSC's first-ever Giving Day in May.

We exceeded our expectations, bringing in close to \$10,000 for programming that supports undergraduate students, apprentices, and the staff who teach them about sustainable agriculture and organic farming.



Students in an agroecology internship examine a bell bean cover crop at the UCSC Farm

Elizabeth Birnbaum

Apprenticeship Updates

Meet the 2016 Apprentices

Here's a brief introduction to the rest of the new group of apprentices that joined us on April 11, 2016 from across the U.S. and overseas (the first part of the group was introduced in the Spring 2016 issue of the *News & Notes*).

Your membership in the Friends of the UCSC Farm & Garden helps fund this 49-year-old internationally known training program by providing funds for scholarships, teaching staff, equipment, outreach, and facility improvements.

Many thanks for your ongoing support!

Joseph Johnson: I live in Belle Chasse, La. I recently completed my Associates degree in Clinical Dietetics. During my studies I became interested in community nutrition and urban farming. I am currently a volunteer with the Backyard Gardener's network in their food as medicine program. I also began small-scale vegetable gardening at my home. It is my intent to teach farming/self-sustainable techniques to urban communities with the skills I acquire while at CASFS.

Rachel Lane: Previously, I worked at a rare plants nursery, Annie's Annuals, in Richmond, California—communing with other garden nerds, and stoking my own passion for gardening. I was an ally with City Slicker Farms, a food justice non-profit that grows organic produce in Oakland, California. I hope to deepen my knowledge of regenerative farming/community living—with the intention of reawakening and restructuring the connections between food production and community.

Shelley Lewton: I live in Bozeman, Montana. I enjoy working in greenhouses and on small-acreage farms, as well as creating community gardens in both rural and urban settings. During this apprenticeship I would like to enhance my knowledge and skills in sustainable agricultural practices. My hope is to work with refugee and immigrant communities to increase self-sufficiency through farming and educational opportunities.

Charlie McIntosh: Growing up in St. Louis, Missouri, food has always brought people together in my family. I studied biochemical engineering in Boulder, Colorado, learning about energy, water, and waste systems. After graduating I found myself drawn to the study of permaculture and natural building at Aprovecho in Cottage Grove, Oregon. Most recently I served in AmeriCorps with the International Institute of St. Louis growing healthy food with refugees in the heart of the city.

Lucas McKinnon: A Santa Cruz, California, native, I recently moved back after one year abroad and four years in

Seattle, Washington. I studied history and biology and worked on Seattle University's urban farm, CitySoil. I'm hoping to develop stronger tangible skills in agroecology to support a career that focuses on securing land rights for agriculturalists internationally as a means of preventative healthcare.

Jaynie Miller: I grew up in Michigan, and did my undergraduate studies in sustainability in Lake Tahoe, California. Post-college, I worked on two organic farms in the Sierra Nevada foothills, as well as grew my own food. It was during this time that I cultivated a love for agriculture. I love heirloom varieties and diversity, so at CASFS, I want to gain additional skills so that I may run my own diverse community supported agriculture (CSA) farm.

Phuoc Nguyen: I'm originally from Vietnam, have been living in Orange County, California, for a couple of years, and went to California State University of Fullerton for Sociology. Bringing the people and the land back together – to heal ourselves, our communities and the land is what I set out to do. May all being and nonbeing be happy and free!

Marianne Olney-Hamel: I live in Oakland, California, and I have worked as a program assistant for refugee resettlement organizations both in Oakland, California, and Kansas City that aim to help resettled refugees start their own farming businesses. As an apprentice with CASFS, I'm hoping to strengthen my farming skills so that I have a more well-rounded skill set to put to apply to urban agriculture projects in the East Bay.

Tamir Pelleg: Originally from Israel/Palestine, I'm currently living/working in New South Wales (NSW), Australia, in the Permaculture Research Institute (PRI), which experiments with ecological ways of supplying human needs that are mindful of nature's needs and patterns. Since finishing my BA in Psychology and Philosophy I've been experiencing and learning Permaculture and Organic Gardening with the intention of creating learning opportunities for children and youth in order to help them be agents of beneficial change.

Vivian Santana Pacheco: I'm from Greater Los Angeles, California, and have lived in San Francisco, California, for 10 years. In 2015, I learned basic gardening skills at a farm cooperative in Mexico and continued learning locally. After CASFS, I'd like to be part of putting community food growing projects, ending racism, and putting sustainability at the center of local justice movements. I have a master's in public policy.

Natania Schaumburg: I live in Philadelphia, Pennsylvania, and have worked with local food systems in some capacity over the past few years. Most recently, I ran the Fresh2You Mobile Market, a pilot project of the Chester County Food Bank, which aims to increase consumption of fresh fruits and vegetables in underserved communities. I'm looking forward to increasing my knowledge of organic agriculture and hope to apply these skills to my future work combating food insecurity.

Mark Spicer: I live in Oakland, California, but am originally from Detroit, Michigan. I went to undergrad in Tennessee where I lived and worked on a cattle farm. I completed my graduate education in Hayward, California and I worked on a farm in Sonoma County. I would eventually like to open my own operation after getting the required experience. I was in the Marines for nearly 10 years.

Jeremy Teperman: I'm a lifelong resident of Queens, New York, where, for the past four years, I've worked with the New York City Compost Project. Teaching and helping others to set up community-driven compost projects has given indescribable meaning to my urban existence. I'm incredibly excited and honored to take part in the CASFS apprenticeship, where I'm hoping to hone more concrete farming skills so I can continue contributing to the food justice movement in New York City.

Betsy Thomas: I live in Pescadero, California, and have spent the past two seasons working at Fifth Crow Farm as part of their organic flower production team. Before entering the farming and gardening world, I worked as a social worker in the mental health field. My hope is to broaden my knowledge and skills at CASFS, to connect with people interested in alternative ideas surrounding farming, and to explore my vision for using farming therapeutically.

Warren Uesato: A San Francisco Bay Area native, I live in San Jose, California. After obtaining a chemical engineering degree in the 80's, I spent my working career as a semiconductor process engineer. I discovered the joy of community-based agriculture at Veggielution in the latter part of 2014, and served last year as a volunteer at the Asian Rural Institute in Nasushiobara, Japan. At CASFS, I would like to further develop my knowledge/skills of sustainable agriculture and discern my next steps.

Andy Vasconcellos: I live in Oceanside, California, and this past year I was working at a resort spa called Cal-a-vie growing produce for their kitchen. The past four years I have been working and living on various farms, mostly in northern California. At CASFS I am looking to broaden my agricultural knowledge and meet like-minded individuals in the process. I plan to work towards developing suburban market gardens, providing fresh produce to my local community.

Laura Vollset: I live in Santa Cruz, California, and am a thirty-seven year-old illustrator and mum of toddler twins. I am apprenticing at Love Apple Farms and run my own micro farm (livingleavesmicrogreens.com), supplying restaurants with micro greens and edible flowers. I hope CASFS will help me deepen my knowledge of small scale agriculture, helping me expand my business, explore new avenues, and become a fully fledged member of the amazing farming community in this area.

Jas Wade: I was born & raised in Los Angeles, California. These last two years I have volunteered and worked with local organizations that run community gardens throughout the city, and dedicate their work to addressing oppression within the food system while building agency within communities to address health conditions. During CASFS I am looking to build and strengthen my agricultural knowledge/skills in the service of community sustainability & resilience.

Emma Wood: Where I live is a loaded question. I just came back to the United States from four months in South East Asia. Most recently I was working on a biodynamic farm in Michigan. The last three years I have been on farms in and out of the United States absorbing information. At CASFS I hope to gain a deeper understanding of the science side of farming so I can be more successful in my own farming endeavors.

Keep Up with Farm & Garden News!

Keep up with the latest news from CASFS/UCSC Farm & Garden by becoming a Facebook friend. Type Center for Agroecology and Sustainable Food Systems into your Facebook search engine and "Like" our page. And check out the CASFS website for updates, information and resources: casfs.ucsc.edu. You can read more about the Apprenticeship alumni's activities at www.growafarmer.org.

Apprenticeship Alumni News

Caroline Martin (Apprenticeship class of 2015) is the latest of the Apprenticeship alumni cohort now working at Blue House Farm in Pescadero, California, which is owned and managed by **Ryan Casey** (2001). You can now find Blue House at the Saturday Westside Farmers' Market in Santa Cruz.

Lan Dinh (2013) is working in Philadelphia and Camden as farm project and food sovereignty project director for the nonprofit VietLead. Read about one of Vietlead's efforts to improve food security and share cultural knowledge through the Resilient Roots community garden: articles.philly.com/2016-06-22/news/73926855_1_elders-container-garden-east-camden. You can support their efforts to fund summer garden interns here: www.tinyurl.com/OurRootsfund.

Corey Block (2008) is running the Urban Agriculture Program for the Tenderloin Neighborhood Development Corporation (TNDC), a 35-year-old affordable housing non-profit working to house and serve the diverse and vibrant Tenderloin residents who are feeling the pressures of San Francisco's housing market more than most. Says Corey, "TNDC has made an incredible commitment to urban agriculture and food access and I'll be growing food, working with our development team to expand the garden real estate and developing programs to get residents involved in their gardens."

Anna Pierce-Slive (2013), **Chad Morse** (2007), and **Hannah Shulman** (2010) are teaming up to teach a week-long workshop for farm and garden educators at the Esalen Institute in Big Sur, California. Writes Anna, "This workshop is specifically geared toward people interested in or already involved with farm- and garden-based education. Through a combination of hands-on activities, group presentations, panel discussions, and mentored feedback sessions, we will work together to create and deliver clear, inspiring lessons and deepen our impact as educators. Our classroom will be Esalen's beautiful hand-scale garden and three-acre farm."

The workshop dates are September 18–23, 2016. For details, see the Planting the Seed entry on Esalen's website, www.esalen.org/learn/workshops/all

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Tomato Tips, from page 2

Ongoing Irrigation and Fertility

Water tomatoes every 4 to 5 days for the first few weeks after planting; irrigation can then be cut back to one deep watering a week. "Watering conservatively gives the benefit of richer flavor along with saving water," says Bernau, who notes that extreme wet/dry swings should be avoided. "If a plant hasn't been watered for a couple of weeks and then you do a deep watering, you may end up with the fruit 'cracking' as it takes up more moisture than the skin can expand to accommodate."

Regular watering also helps minimize problems with blossom end rot, a syndrome that occurs with inadequate calcium reaching the fruit. "Under dry conditions the plants don't have access to calcium," says Bernau. "It's not in solution even if it's present in the soil, and there's no way to get it to the plants if they're not irrigated."

Because tomatoes are in the ground a long time, it may be useful to top dress with a fertility source part way through the growth cycle. Options include applying compost around the base of the plant; this should be done relatively early in the plant's growth to give the compost time to break down and release nutrients. Other options that can be applied midway through the season include blood meal, feather meal, or a pelleted fertilizer such as Sustane. If the plants are on drip irrigation, a top dressing can be worked into the soil under the drip line.

Minimizing Diseases

Although tomatoes may be relatively easy to grow, they're also prone to fungal diseases such as late blight (*Phytophthora infestans*) that spread readily via spores. With that in mind, Bernau recommends rotating the location in

which you grow your plants, particularly if you live in areas where summer fog creates damp conditions in which fungal diseases can thrive.

Other ways to minimize disease problems include avoiding activities that move fungal spores from plant to plant. For example, any pinching, pruning, trellising, or harvesting should be done when the canopy is dry.

Signs of early or late blight will appear as discolored foliage, spotty concentric rings, or marbling of leaves, and blotches on the stems and at leaf axils. Consult your local nursery, Master Gardener group, or see UC Davis's IPM website, ipm.ucanr.edu, for more information on signs and symptoms of early or late blight.

If blight does appear, prune and remove the affected plant parts when the canopy is dry. Be sure to sanitize your pruning tools before moving from one plant to the next. For early and late blight, Bernau notes that you can also use an organic control such as Serenade, *Bacillus subtilis*, a beneficial bacterial fungicide applied as a foliar spray. Serenade comes as a concentrate that is diluted in water before applying. Bernau recommends dechlorinating your water first by letting it sit in an open basin or bucket overnight, as chlorine kills off the spray's bacteria.

To enjoy tomatoes at their home-grown best, let them mature to peak ripeness. The fruit should have good, full color with a slight give, and the little "knob" at the tip of the calyx should part easily from the stem. Avoid refrigerating your tomatoes as the cold will affect their taste and texture. "Use them right away," says Bernau, "and just keep picking."