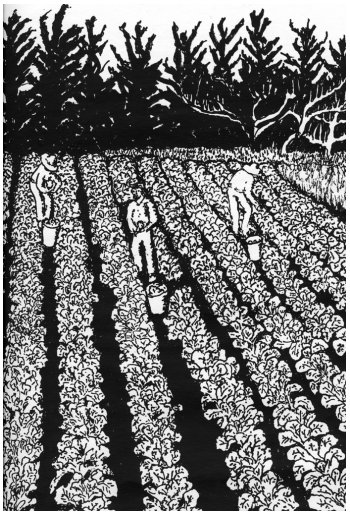

Forrest Cook

News & Notes
of the UCSC Farm & Garden

Issue 173, Winter 2023

UC Santa Cruz Earns Agricultural Experiment Station Designation

Underscoring more than a half century of pioneering work in organic farming, University of California President Michael V. Drake announced in November that UC Santa Cruz will be designated as an Agricultural Experiment Station (AES). UC Santa Cruz and UC Merced are the first campuses to receive this designation in 50 years and join UC Davis, UC Berkeley and UC Riverside as AES campuses.

"Both UC Santa Cruz and UC Merced have long conducted research on agricultural issues, so it is appropriate that these campuses also receive this designation and have their work recognized as contributing to the overall UC agriculture research portfolio," said President Drake. "Congratulations to these two new campuses on this wonderful milestone."

AES is a system of campus-based scientists with the mission to develop cutting-edge knowledge and technologies to address agricultural, natural resources, and health issues. UC's AES faculty conduct land-grant mission research and transfer basic and applied knowledge to the public through UC Cooperative Extension offices.

"Our campus has been working toward this designation for some time and I'm so pleased that the hard work of our faculty and staff has paid off," said UC Santa Cruz Chancellor Cynthia Larive. "UC Santa Cruz has a more than 50-year track record of pioneering work in organic farming and building sustainable food systems. This designation will allow us to continue building programs and have a positive impact on our community and on the wider field of sustainable, regenerative agriculture."

Leading at the intersection of innovation and social justice, UC Santa Cruz has a long history of ground-breaking work in agroecology and regenerative agriculture. The campus has a well-earned reputation as a trailblazer in organic agriculture, a standing supported by continued efforts among campus researchers to find new ways to fight agricultural disease and pests without using chemicals.

"UC Santa Cruz was a pioneer in organic agriculture and sustainable farming and is unique for the longevity of our work in those fields," said Carol Shennan, emeritus professor of environmental studies and former director of the Center for Agroecology. "This designation will allow the campus to broaden our community impact by continuing to expand on the foundation already in place."

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The Center for Agroecology, rooted in the Social Sciences Division, brings a social justice perspective to envision an equitable future for food systems. Founded more than 50 years ago, the center created an intersectional space for researchers to study the science, policy, and community aspects of organic and sustainable agriculture.

"If we're really changing food systems and access to sustainable agriculture, we need to create spaces where people who have deep knowledge and experience, like farm and farmworker families, help shape the system as it grows," said Darryl Wong, executive director for the Center of Agroecology. "UC Santa Cruz is very well positioned to lead that work, from an interdisciplinary perspective."

UC Santa Cruz has played a vital role in the flourishing of organic farming on the Central Coast and beyond, through undergraduate education, training provided by the Apprenticeship Program, and faculty research projects. The Central Coast is well known around the world for the high concentration of organic production, and UC Santa Cruz is internationally recognized as a hub of organic activity and expertise.

Steven Gliessman, emeritus professor of environmental studies, led the groundbreaking research on organic strawberry farming that transformed the industry. UC Santa Cruz researchers continue to work to find profitable alternatives to chemical use in agriculture.

Joji Muramoto, a Cooperative Extension specialist with the Center for Agroecology and the first Cooperative Extension specialist dedicated to organic agriculture, coordinates a statewide program focused on the organic production of strawberries and vegetables. The center is in the process of hiring an additional specialist, as well.

The Center for Agroecology offers an Apprenticeship Program that immerses seasoned beginners in experiential study of soil health and cultivation, plant physiology, and crop production and distribution. Around the world, graduates of the program are improving the health of the environment through organic food production, education, advocacy, and social service programs.

The center manages the Alan Chadwick Garden, a 3-acre organic and bio-diverse garden on the UCSC campus founded in 1967, and the UCSC Farm, a 30-acre organic farm founded in 1971 that serves as an outdoor classroom and research site. For more than 50 years these sites have hosted students, residential apprentices, and community members who learn about organic gardening, farming, and the food system.

"I believe the new AES designation will facilitate the continued success of the UC Santa Cruz Farm in supporting relevant on-farm research with the goal of improving our collective ability to sustainably produce food for our communities in a rapidly changing environment," said Jim Leap, former UCSC Farm manager.

Center staff participate in interdisciplinary research projects that focus primarily on improving organic farming practices and increasing the sustainability of local food systems. They collaborate with UC Santa Cruz faculty and students, local farmers and gardeners, the UC Division of Agriculture and Natural Resources (UCANR), and others to study farming and food systems issues.

"Having worked with the Center for Agroecology for over 15 years, it has been an incredible journey to see how the projects we have stewarded impact the Central Coast and the state, and connect to national and international dimensions of the food system." said Tim Galarneau, UCSC food systems education and research specialist. "I look forward to advancing new and innovative efforts from the field to the plate."

Building on work happening in the Environmental Studies Department and at the Center for Agroecology, a new agroecology undergraduate major was introduced in fall 2020. The undergraduate bachelor of arts degree rounds out UC Santa Cruz's programming in agroecology, adding to pioneering faculty research, hands-on experience for students, and transformational alumni contributions to the field and organic farming.

"The AES designation expands our capacity to do research, but it also codifies this sense of community involvement and engagement that is at the core of the work we do," said Wong. "This is an agricultural experiment station for the community."

—Abby Butler, UC Santa Cruz

Photo: Carolyn Lagattuta

Calendar of Upcoming Events

Visit https://agroecology.ucsc.edu/news-events/events.html for more information and to register for these events.

Getting Started with Fruit Trees

Saturday, January 28, 9am—12pm at the Chadwick Garden

Learn how to select, plant, grow, and manage healthy, productive deciduous fruit trees organically with instructor Orin Martin. *Cost: $50. Members get 10% off with code "10-OFF."*

Organic Citrus Short Course

Thursday, February 9, 5pm—7pm: Online lecture
Saturday, February 11, 9am—4pm at the UCSC Farm and Chadwick Garden
Sunday February 12, 9am—12pm at Abounding Harvest Mountain Farm

Seasoned citrus growers Orin Martin and Christof Bernau of the Center for Agroecology and Daniel Paduano of Abounding Harvest Mountain Farm will provide detailed information appropriate for a range of growers, focused on a diverse range of citrus production. This course carries UCSC Extension credit and scholarships are available. *Cost: $200*

Fruit Tree Grafting for the Home Gardener and Small Scale Grower

Saturday, February 18, 9am—1pm at the Hay Barn

Learn the basics of rootstocks and scion selection, the importance of a sharp, quality grafting knife, and timing for the best luck with your graft at this hands-on workshop. *Cost: $70. Members get 10% off with code "10-OFF."*

Planning and Planting the Small Orchard Block Short Course

Thursday, February 23, 5:30pm—7:30pm: Online lecture
Saturday, February 25 , 9am—4pm at the UCSC Farm and Chadwick Garden
Sunday, February 26, 9am—12pm at Fifth Crow Farm

Instructor Orin Martin will walk participants through the planning and planting of an orchard, from site selection and soil preparation to sourcing and planting quality trees, as well as seasonal care, pest/disease/weed management, and winter pruning. This course carries UCSC Extension credit and scholarships are available. *Cost: $200*

Dry-Farm Symposium

Thursday, February 23, 9am—3pm at the Hay Barn

As we confront the fragility of California's water system, a crucial question emerges: how can we adapt to water scarcity without jeopardizing farmer livelihoods? Join farmers, researchers, technical assistance providers, and policy advocates as we discuss dry farming in this community of practice. Presented by Western SARE (Sustainable Agriculture Research and Education) and the Center for Agroecology. *Free admission*

Roses Are a Celebration! Starting Right with Organic Rose Growing

Saturday, April 22, 9am—12pm at the Chadwick Garden

Learn how to grow organic roses in your garden with instructor Orin Martin. This hands-on workshop will cover varities, site selection, management, pests and diseases, and how to propagate. *Cost: $60. Members get 10% off with code "10-OFF."*

Save the Date: Spring Plant Sale

Saturday, April 29 at the Hay Barn

Our popular plant sale returns to the Hay Barn in 2023! Purchase fruit, veggie, herb, and flower starts for your garden grown in the UCSC Farm greenhouses by Center for Agroecology staff and students. Proceeds of the sale support the Center's programming.

Photo: Jim Clark

Roses: The Queen of Flowers by Orin Martin

Arguably, roses are considered both the most enticing and popular plant in the garden. Roses are a celebration—they are the queen of flowers. Given their bounteous, celebratory nature, it is not surprising that many people want to grow them.

Photo: Carolyn Lagattuta

At the same time, roses are notoriously finicky and susceptible to many pests and diseases. In fact, roses are considered to be nigh on impossible to grow organically. But it ain't necessarily so. By caring for roses in what could be called a "plant positive" approach, organic rose gardening is doable. A challenge, but definitely doable.

Why Grow Roses?

There are so many reasons to grow roses: for the sheer pleasure of it, for the bounty of blossoms they provide, and for the benefits they bestow on the garden. To me, the first, last, and deciding reason to grow flowers is for the sheer beauty of it. Just as vegetables and fruits are food for the body, flowers can be thought of as food for the spirit and soul. And of all the flowers, roses are a cut above.

Growing your own roses and other flowers will save you money. Even in the best of times, the cost of flowers lies somewhere between a splurge and prohibitively expensive. This needn't be. You can grow your own for literally pennies per bloom. Project forward to next spring or summer. Imagine yourself picking and choosing color combinations from a plethora of rose blooms and annual flowers that you've grown yourself. Taking the DIY approach will make the savings all the more satisfying.

Growing roses also makes biological sense. Flowers attract and maintain robust populations of beneficial insects that in turn aid in controlling detrimental insects (mites, aphids, thrips, and the like). A diverse garden of flowers and vegetables also provides shelter, habitat, water, and nutrition to beneficial insects.

Yes, there are many benefits. But growing roses is a commitment. Roses require almost constant care. A block of roses can easily absorb 10–20 minutes a day (every day). You may be able to "lump-up" and devote a weekend morning a week, but delaying 2–3 weeks will be unsatisfactory, for you and the roses. And even if your care is skilled and on point, there is no guarantee of 100% success. It is almost inevitable that there will be stretches of cool, gray, wet weather during any and maybe every growing season that will make your roses look like color plates from a textbook on rose diseases. Fall behind in care, choose an inappropriate variety, experience a stretch of poor weather, and the agony may overwhelm the ecstasy.

Rose Varieties

In the Chadwick Garden we grow dozens of varieties of roses, too many to describe in this article. They, of course, include the "Greatest Hits" of Modern Bush Roses (hybrid teas, grandifloras, and floribundas). Some of my favorites have been available for over 30 years, including 'Goldmedal' 1983, 'Honor' 1980, 'Just Joey' 1972, and 'Mr. Lincoln' 1965. Some have been around for over 50 years: 'Peace' 1945, 'Queen Elizabeth' 1954, 'Etoile de Holland' 1919, 'Dainty Bess' 1925, and 'Crimson Glory' 1935. That these roses are still being planted after so many years is an enduring testament to their redeeming qualities and performance.

Another group of roses, called David Austin roses, are more formally classed as English shrub roses. I call them "the new, old-fashioned roses." Austin's roses offered (and continue to offer) a startling breakthrough for home gardeners and commercial growers alike. There are now in excess of 300 cultivars on the market. In addition to their beauty, they also make excellent cut flowers. The Austin roses are a highly successful attempt to bridge the chasm

between repeat-blooming modern roses (veritable flower factories) and old garden roses (once-blooming shrubs). They embody the full, soft, delicate, shrub-like nature of old garden roses (OGR) with similarly heavy-petaled, old-fashioned flower forms and a strong yet subtle set of fragrances. From their modern rose parentage, they receive "remontant" or repeat blooming qualities and some disease resistance. These English shrub roses, like old garden roses, reach their peak of perfection when the flowers are half to fully open. Unlike modern roses, which rapidly lose any grace of form after opening, the Austin roses hold their form, petals, and color. The flowers are at their peak half–fully open. They have a soft textural effect and enticing scents. The numerous small petals (often > 70–140) cause the light between the petals to emanate a warm glow.

Just a few of my favorite David Austin roses:

'Queen of Sweden'
The blooms of this charming rose start out as the softest apricot-pink and then turn to soft pure pink. It lasts well as a cut flower. A columnar plant 3' x 2 ½'. Long, strong flower stems.

'Jude the Obscure'
Named for a character in Thomas Hardy's novel. A somewhat spreading 4' x 4' shrub bearing very large chalice-shaped blooms that have a soothing buff yellow color on the inside and a paler yellow on the outside petals. The visual effect is more buff/creamy than actual yellow. Fruity (subtropical fruits) fragrance.

'Graham Stuart Thomas'
This shrub, 5–8' tall/ 4–5' wide, is one of Austin's signature roses. Many blooms and many (3–5) rounds of blooms of a rich, pure yellow with the classic fresh, rich tea fragrance. It lasts well as a cut flower.

'Clair Austin'
'Clair Austin' bears pleasingly cupped buds of a pale lemon shade, which gradually open to form large, creamy white flowers. They have a strong fragrance based on myrrh with dashes of meadowsweet, vanilla, and heliotrope. Graceful arching shrub (4 ½' x 4').

'Ambridge Rose'
A powerful but short rose (3' x 2'). Both tough and disease resistant. Gives rise to free-flowering, mid-sized apricot (infused with a soft pink) blooms with a myrrh scent.

'Shropshire Lad'
A vigorously growing, repeat bloomer of a shrub that is nearly thornless. Waxy leaves impart disease resistance. Lovely peach-pink blooms.

How to Grow Roses

Among the myriad requirements for successful rose growing is picking the "right" spot in the garden. Roses require a minimum of 6–8 hours a day of full sun during the growing season (more is better). Exceptions to this rule are hybrid Musk roses. This intriguing class of roses, developed in the early 20th century, is capable of growing and blooming prolifically in moderate (40%) shade. in warm, interior locations, roses prefer morning sun; in coastal locales the warmth of afternoon sun pushes growth and can keep foliage dry going into foggy evenings. In most species of plants, heat activates scent, so to a certain extent the warmer the spot the more you will avail yourself of fragrance. A wind-protected location will enhance both scent and growth.

Roses grow best in well-drained soils. Poor drainage will trigger or compound many minor and a few major (and potentially fatal) problems. Before planting your roses, perform this test: dig a sample planting hole two feet wide and 18 inches deep; fill it with water. It should drain within an hour (20–30 minutes is ideal). While any textural class of soil (sand, silt or clay) can grow roses (with assistance), medium-textured silts and well-drained, improved clays have more "grow power."

Along with sun and soil considerations, give some thought to your rose view shed. Where do you walk, sit, or pause in the garden? Roses show off their blooms best when viewed from slightly above or below eye level. You really should stop and smell the roses now and again.

I hope you can join us in the Alan Chadwick Garden, Saturday, January 21 (9:00-noon), for a lively workshop on growing roses organically. For the price of admission, you will get a free copy of my *Rose Primer: An Organic Approach to Rose Selection and Care.* Also included will be a handout of my greatest hits of annual rose care.

The new year is a chance for great beginnings. Join us—it should be a fun time.

Friends Board Update

Members voted to elect Sandra Morishige as board president, Cathy Murphy for another term as secretary, Patti Barnett for another term as treasurer, and Johno Turner for vice president. Special thanks to past president Delise Weir, who remains on the board and will continue to lead our workshop planning. Thank you for your vote and for being a Friend of the Farm & Garden!

Reflections on CSA and Farmstand

Seasons greetings from the CSA / Farmstand student staff!

I'm writing to you today in celebration and gratitude for a fantastic CSA and Farmstand season. It was our absolute pleasure to have the opportunity to greet you all every week this summer. The student staff thoroughly enjoyed getting to know you all and keeping up with your lives and activities throughout the year. To our members who had tiny tots at the beginning of the summer, it was so fun getting to watch them grow every week.

What I appreciate and enjoy most about our CSA program is the community that it creates and the way in which the community revolves around the seasons. Our weekly markets provide field and garden students the opportunity to contextualize the work we do all week and provide each customer the opportunity to contextualize the work that went into their food. It is, I believe, this juncture that is the foundation of the UCSC CSA community. While kale was omnipresent throughout the year, and some of you probably got a little tired of broccoli…the weekly variation of crops, and the changes of the season brought what I hope was a good opportunity to experiment in the kitchen and expand your palates. Trading recipes and techniques every week gave each of us such diverse exposure to different cuisines and cultures and taught all of us so much.

My favorite month of the season is September, when our annual crops start to make their way onto the tables. The emergence of corn, winter squash, onions, potatoes and beans really changed the way that each market felt, and brought countless smiles through the doors. I hope you all savored those while they lasted, and I hope you stocked up on winter squash to get you through the off season! Now that we are truly into winter, I wish warmth and respite from the rain for everyone. Happy holidays to those who celebrate, and thank you to you all for choosing to spend your summer with us up at the farm. I look forward to rendezvousing with everyone in June for the new season.

Thank you for your support and kindness this season!

—Madeline (Maddie) Holtkamp, Center for Agroecology student staff member

Gratitude for Grants & Gifts

Seventy-six people answered the call to help fund the Chadwick Garden fence and Chalet repairs, with $23,300 raised between UCSC Giving Day and related donations. Many thanks to all of these Chadwick Garden fans and also to the Friends of the UCSC Farm & Garden for the previous $25,000 allocation for these projects. If you take a winter stroll in the Garden, you'll see a rebuilt back porch on the Chalet and will soon see new fencing along the bottom of the main slope.

Photo: Jim Clark

A grant of $80,000 from the Gaia Fund will support education and training in sustainable, organic farming through the Student Leadership Development Program (LDP) in the UCSC Farm fields. The grant will pay for student staff and field staff positions in the LDP who are trained in our organic crop production and lead crews of students in field planting, weeding, harvest, and delivery of crops to our CSA, Farmstand, and produce donation sites on campus that are part of our student basic needs program.

The Ida and Robert Gordon Family Foundation has awarded a grant of $50,000 for a project entitled "Supporting student research at the intersection of climate and agroecology." This funding will support student positions to assist with research at the UCSC Farm, in conjunction with the new UC Cooperative Extension Specialist in Agroecology and Climate Change who will start in spring 2023.

An anonymous foundation granted $30,000 in general support for the Center for Agroecology, its twentieth grant in more than two decades, with the funds mainly used to support Farm and Garden staff salaries over the years.

UC Partnership Will Prepare the Next Generation of Leaders in Organic Agriculture

A grant of more than $700,000 from the U.S. Department of Agriculture will support a University of California collaboration to improve and expand undergraduate education in organic agriculture, with an emphasis on supporting underrepresented students. The project will be led by UC Santa Cruz, in partnership with UC Berkeley, UC Davis, and UC Agriculture and Natural Resources (UC ANR).

Each partner campus and UC ANR will bring unique academic strengths and distinct regional knowledge and networks to the collaboration, in an effort to broaden the student educational experience beyond what any one campus could offer.

Over the next three years, the project will establish new options for courses and advising across the three partner campuses and provide students with more opportunities for experiential learning and research internships with UC ANR. These efforts come at a time when organic production has been growing rapidly, resulting in increased demand for professionals trained in organic-centered research, extension, and grower services. The new programs will prepare students for these roles and will be especially focused on underrepresented students.

"We need more diverse voices in organic agriculture leadership if we ultimately want to improve the agricultural system," said UCSC Professor Stacy Philpott, faculty director of the Center for Agroecology and project director on the new grant. "Diversifying the field and making sure that the experiences and knowledge of many different communities are represented will push us to new places in the future." UCSC Center for Agroecology Research and Education Coordinator Damian Parr is among the grant's co-leaders.

Expanding course and internship offerings

To better support students in becoming the next generation of organic agriculture leaders, the grant project will combine the best educational offerings from across the UC system. A new intercampus exchange program will be developed to guide students in the UCSC Agroecology B.A., the UC Davis Sustainable Agriculture & Food Systems B.S., and the UC Berkeley Food Systems Minor to take courses at any partner campus and apply the credits toward completion of their organic agriculture-related degree program. This will help students follow their interests across the biophysical science and social science aspects of organic agriculture.

UC Santa Cruz will also lead development of a new seven-week, system-wide field quarter program, with a supercourse in organic agriculture. The supercourse cohort of students will travel together to farm operations, UC campuses, and UC ANR field stations statewide for experiential fieldwork focused on organic agriculture production, research, and policy. The Center for Agroecology will serve as the primary host site for the initial supercourse offering in 2024, and the Environmental Studies Department will lead instructional development, with administrative support for the fieldquarter program provided by UC ANR.

Additionally, UC ANR will launch a new program to connect students from partner UCs with internships, paid student staff fieldwork opportunities, and professional development and mentoring, through participation in UC ANR Cooperative Extension-led organic agriculture research projects. Joji Muramoto, a UC ANR Assistant Cooperative Extension Organic Production Specialist based at the Center, is the system's only extension agent focused specifically on organic agriculture, and he will contribute to designing the internship program to meet the needs of both students and the state's organic farmers.

Muramoto says California leads the country in organic production, with one-in-five U.S. organic farmers located in the state. Yet specialized organic extension services have historically been lacking. Training more students in this field could help to fill the need.

"Both production-wise and in terms of history, California is one of the states leading the organic movement, and our organic farmers deserve to have more public support," Muramoto said. "We need to respond to their unique needs and provide more extension services. Connecting extension specialists with student interns is a win-win, because the extension gets highly motivated assistants, and students gain experience with different types of agricultural research across the state."

As part of the new internship program, UC ANR researchers will receive specialized training to build their mentoring capabilities for working with underrepresented student populations. And all of the new grant programs will strive to demonstrate how farmers and community stakeholders can have direct influence in setting research agendas, defining problems and solutions in organic agriculture, and shaping policy and extension services.

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Supporting student success

Advising services associated with the new grant programs will be designed with the needs of underrepresented students in mind, and a Student Leadership Development Program will use federal work-study funds to provide mentored fieldwork opportunities in organic production at the UC Santa Cruz and UC Davis campus farms for students with financial need. UC ANR internship opportunities will also connect students with scholarship and fellowship funding. And campuses will host career panels featuring alumni from underrepresented groups to help students build professional networks and explore possibilities for their futures.

Damian Parr, research and education coordinator with the Center for Agroecology and a lecturer in the Environmental Studies Department, is a co-lead on the new grant and says the project ultimately seeks to not only respond to the needs of students but to also take its lead from the many dedicated underrepresented students who have found creative ways to chart their own educational journeys in organic agriculture over the years.

"The core inspiration for this work has really come from watching students who are minoritized and underrepresented on campus innovate and take advantage of resources across campuses in ways that they see as being best-suited to their needs," he said. "Pretty much everything this proposal is putting forward has been done before by students who took it upon themselves to figure out how to do it, but until now, they haven't had the programmatic structure and support to make this as accessible to them as it should be."

Parr says there's a long history of student passion driving advances in organic agriculture research and education at the University of California. In the 1970s, student-led organic farms at UC Santa Cruz and UC Davis were established to draw attention to the environmental and social costs of conventional agricultural production methods. Those efforts laid the foundation for the University of California to become a global leader in organic agriculture today.

"UC organic agriculture has matured to a point where we have entire degree programs, centers, and institutes dedicated to this," Parr said. "We've hit a threshold where we can now design UC system-wide partnerships, like this grant project, to offer even more powerful educational programming for future generations of leaders in the field."

—Allison Arteaga Soergel, UC Santa Cruz

Friends Membership Renewals

Need to renew your Friends of the UCSC Farm & Garden membership? You can find renewal information and a secure donation link online at connect.ucsc.edu/joinffg. Contact us at agroecology@ucsc.edu with any questions. Thank you for your support!!