

# News & Notes of the UCSC Farm & Garden

Issue 163, Winter 2020

# Seed Starting Tips with UCSC Farm Manager Christof Bernau

Whether you're a first-time seed starter or a seasoned propagator, there's a sweet satisfaction that comes with raising your own garden seedlings—browsing seed catalogues and seed racks, dropping tiny seeds into moist soil, watching seedlings emerge, and planting out the starts you've raised. By starting your own seeds you can also save money, experiment with a wider range of varieties, and support small, independent seed companies.

As manager of the gardens at the UC Santa Cruz Farm, Christof Bernau has honed his propagation skills over 30 years of greenhouse work and gardening. Here he offers some tips for home gardeners as we look toward the 2020 gardening season.

#### What are options for home scale growers in terms of greenhouse facilities?

A home greenhouse can be as simple as a PVC frame with a poly plastic covering that includes a series of shelves to hold planting trays. You can find these online or at local garden stores. Other options include small kit greenhouses, though the small size means they can quickly overheat. They're great for winter frost protection and early season seed starting, but be careful with them in warm weather.

The smallest, cheapest option is a plastic cover called a propagation dome/humidome, designed to fit over a 10"x20" seeding tray. For about \$8, a humidome and 1020 tray offers a small, portable, easy to store option and can last for years. You can raise hundreds of seedlings in them. And if you're really starting small, say with just a few six packs of seedlings, then a bright, sunny windowsill offers plenty of light and warmth.

Whatever option you choose, sanitation is important: if you're re-using containers, wash them in a mild bleach solution (1 part bleach:10 parts water) to reduce the chance of transmitting diseases.

#### What do you look for in a commercial seed starting mix?

Look for a certified organic mix that includes seed starting, propagation, or seedling mix in the description. These usually feature ingredients that balance drainage, aeration, and water retention but often don't provide much fertility. If fertility is lacking, you can enhance a commercial mix with about 25% good quality compost, or mix in 1 tablespoon of bloodmeal per gallon of soil mix to provide readily available nitrogen.

If your seedlings are growing slowly or appear stunted, water daily with a soluble nutrient mix such as a diluted solution of fish emulsion and/or kelp that will provide a quick boost to developing plants.

#### What do you recommend when selecting seeds?

Be aware of your neighborhood's microclimate when selecting seeds – a tomato variety that thrives in the heat of Bonny Doon may not mature in the cool coastal conditions on West Cliff. Beyond climate considerations, be aware of the opportunities and limitations of your gardening site. Read varietal descriptions carefully to make sure they fit your soil conditions and fertility, light availability, and other on-site factors.

Most gardeners want to harvest crops over a long period of time, so look for varieties that promise a long yield. For example, you can find broccoli varieties that produce side shoots after the main head is harvested, offering a weeks-long harvest period. Renee's Garden Seeds offers an "all seasons" blend that mixes several varieties so that you can have staggered maturation In some cases, such as making tomato sauce, look for a determinate variety that matures all at once. For salad tomatoes, pick indeterminate varieties that produce fruit throughout the growing season.

Other things to pay attention to on seed packs include planting depth and the range of planting densities. If your soil is well amended and particularly fertile, you can place plants closer together, while choosing a wider spacing if soil fertility is limited. If you've had disease issues in the past, you may want to space plants farther apart to increase air circulation. Seed packs will also provide days to germination and days to harvest, so that you can plan your plantings accordingly.

#### What are some of your seed planting tips?

Fill your planting containers (six pack or other container) to the top – the soil will settle once it's watered. Make sure it's moist but not saturated – you can add water to the mix gradually if it's too dry.

Make a small hole for the seed with the tip of a pencil, your fingertip, or a chopstick, then drop the seed into the center of the hole. The hole depth should be twice the seed's width or circumference, or check the seed pack for recommended planting depth.

Sift a layer of soil over the top of the seeds to cover them and make sure there's good soil to seed contact, but don't bury them too deep.

#### What are best irrigation practices?

Maintain high relative humidity and fairly continuous soil moisture from sowing through germination. Exceptions include cucurbits and sunflowers; these larger seeds are more prone to rotting, so you should let the soil dry to the depth of the seed before watering again.

Once seeds germinate, then think about less frequent but deeper watering—as roots develop, provide moisture to the roots' depths, then let the surface dry before watering again.

Use a watering can or hose end that provides a gentle stream of water to avoid dislodging or overburying your seeds and reduce soil compaction and crusting. You can also "float" your six packs or planting trays in a shallow pan or cookie sheet to water from the bottom up.





How do you know when a seedling is ready to transplant to the garden?

If you're growing in a cell or plug type tray, look for above-ground characteristics – at least 2 – 4 sets of true leaves. The root system should be developed enough so that when you pull out the individual cell, you can see the "root knit," with the roots holding the root ball and soil together. A seedling that lacks well-developed root knit may experience stress when planted out.

The less you handle your seedlings, the better—ideally, you should sow and grow in a container large enough that it can accommodate the seedling to plant-out size. If you can't get your starts transplanted in time and they start to become rootbound or fade in vigor due to waning fertility, move them into a larger cell size so that you have continued and uninterrupted growth. That step requires extra effort, space, soil, etc., but will ultimately make for a healthier seedling.

Wherever you have started your seedlings in terms of environmental conditions, you want to transition them to the outdoors before transplanting in a process known as "hardening off." This will help condition the plants and minimize transplant shock.

Expose seedlings to outdoor conditions for up to a week before transplanting. A longer hardening off period is preferable for those that are more heat dependent, such as tomatoes, peppers, and eggplants, or where conditions are more extreme between indoor and outdoor settings.

During this acclimation period the day/night temperature fluctuation will build the seedlings' carbohydrate reserves, and exposure to full sun and wind outdoors will strengthen cell walls so that the plants are better able to tolerate outdoor conditions.

When your seedlings are ready to transplant, ideally you will choose a cool, windless day, and plant out either early or late in the day when light intensity is less pronounced. Transplanting during more mellow environmental conditions will reduce stress and the possibility of transplant shock. Once your seedlings are in the ground be sure to follow up with a thorough watering in, and continue to provide water as weather conditions and seedling development warrant.

—Martha Brown

See page 6 for seed sources and a vegetable planting guide

## Winter/Early Spring 2020 Calendar

#### Free Fruit Tree Q&A Sessions

Saturday, January 4, 10:00 am – 12:00 pm San Lorenzo Garden Center, 235 River Street Saturday, January 25, 10:00 am – 12:00 pm The Garden Co., 2218 Mission Street

Join Orin Martin, manager of the Chadwick Garden at UCSC, and Matthew Sutton of Orchard Keepers for these free Q&A sessions on fruit trees. Bring your questions about fruit tree selections, soil preparation, and more!

#### **Getting Started with Fruit Trees**

Saturday, January 11, 9:30 am – 12:00 pm Hay Barn / UCSC Farm, UC Santa Cruz

Alan Chadwick Garden Manager Orin Martin will show you how to select, plant, grow and manage healthy, productive deciduous fruit trees organically.

*Register online or by check—details at*: startingfruittrees2020. bpt.me

#### **Pruning Deciduous Fruit Trees**

Saturday, January 18, 9:30 am – 12:00 pm Hay Barn / UCSC Farm, UC Santa Cruz

Alan Chadwick Garden Manager Orin Martin and former CASFS apprentice Ryan Silsbee will explain how to prune and shape trees and give a live winter pruning demonstration.

*Register online or by check—details at*: winterpruning2020. bpt.me

#### **Ecological Farming Conference**

*January* 22–25

Asilomar Conference Center, Pacific Grove, California Apprenticeship alumni and CASFS staff are well represented at the upcoming EcoFarm Conference, an annual gathering of organic farmers, gardeners, and policy makers that offers a wide range of workshops, keynote sessions, vendors, exhibits, a seed exchange, and much more. See registration details at eco-farm.org/conference.

# Vandana Shiva: Poison Free, Fossil Free Food & Farming

Sunday, January 26, 10:00 am - 4:00 pm Cowell Ranch Hay Barn, UC Santa Cruz Register online: \$10 student tickets, \$40-\$80 sliding scale general admission. Lunch included. Visit rightlivelihood. ucsc.edu for details.

#### **Sowing Spring Seeds**

Sunday, February 9, 9:30 am – 12:30 pm Cowell Ranch Hay Barn, UC Santa Cruz

CASFS staff will discuss best practices for sowing, cultivating seedlings and transplanting. Attendees will sow seeds and work with seedlings to take home and cultivate in the garden. Whether this is your first time sowing seeds or you have been stewarding your garden for years, this will be a great way to spring into the growing season.

Register online or by check—details at: seedstarting.bpt.me

#### **Caring for Roses**

Saturday, February 15, 9:30 am – 12:30 pm Alan Chadwick Garden, UC Santa Cruz

Orin Martin will discuss the basic steps involved in cultivating a healthy rose plant. Organic pest and disease control options are addressed, but the emphasis will be on selecting, establishing, and caring for your roses in a way that gives them the best chance to thrive in an organic setting. Orin will also review the various classes of roses and weigh in with some of the "greatest hits" from each class to give you ideas for plants that will best suit your taste and garden.

Register online or by check—details at: roses2020.bpt.me

Also coming up —

- Orin Martin at Bookshop Santa Cruz January 30
- Growing Berries February 23rd
- Growing Herbs March 7
- Organic Seedling Production Field Day March 25
- Beginning Beekeeping March 29
- Spring Plant Sale April 25 & 26

For more 2020 events, see Upcoming Events at casfs.ucsc.edu If you'd like more information about these and other upcoming events, need directions, or have questions about access, please call 831.459-3240 or email casfs@ucsc.edu.

#### New Grants and Gifts Support the Farm & Garden/CASFS

We are extremely grateful for support for the Farm & Garden, CASFS, Apprenticeship scholarships, and special projects in 2019 from the following foundations and donor-directed funds.

We continue to benefit from a multi-year gift from the Will & Helen Webster Foundation that brought \$200,000 to CASFS this year, matched by an anonymous foundation, and a \$100,000 allocation from the Chancellor's discretionary fund.

Other recent CASFS grant support has come from the M&T Fantastic Family Foundation for \$25,000, UNFI Foundation for \$15,000, and Newman's Own Foundation for \$20,000.

Other multi-year grants for special projects resulted in the Ida and Robert Gordon Foundation 2019 grant of \$50,000 for the No-Till Organic Agriculture Research Project and Gaia Fund's \$50,000 grant in 2019 for the new Cooperative Extension Specialist in Organic Farming, also supported in 2019 by \$10,000 from the Thirty Petals Fund and \$5,000 from CCOF.

The Food Justice and Equity Scholarship Fund of the Apprenticeship Program received a third payment of \$50,000 in 2019 from an anonymous foundation. Other Apprenticeship scholarship funding came from AgaDino Foundation's \$7,000 gift and Henry Chang's \$8,000 in gifts. We are grateful for the grants and gifts from these foundations and from all our other supporters in 2019.

#### **Giving Day**

April 22, 2020 is Giving Day, a 24-hour online fundraising drive to support UC Santa Cruz students, faculty, and campus programs. This year, your Giving Day donations can support student employees at the Farm & Garden! With your help, CASFS can employ UCSC undergraduates at the UCSC Farm and Alan Chadwick Garden, where they will learn valuable skills in plant propagation, marketing organic produce, planting, bed preperation, and much more.

Help cultivate the next generation of farmers and food systems leaders. To donate, visit giving-day.ucsc.edu on Aprill 22.

#### Marshall's Amazin' Apple Pie

Here it is, folks: the winning pie recipe from the 18th annual Apple Pie Bake Off at the 2019 Harvest Festival, courtesy of Marshall Bishop.

Note: Makes a large pie, use a 9.5 inch pie plate

Preheat oven to 350 degrees

#### *For the double-crust:*

- 16 tbsps (½ lb.) salted butter, very cold (almost frozen)
- $2^{\frac{1}{4}}$  cups all-purpose flour
- 3 tbsps sugar
- $\frac{1}{2}$  cup ice water, or a bit more

Cut the butter into half-inch pieces. Using the paddle attachment on a standard mixer, blend the flour, butter, salt, and sugar at low speed. Leave  $\frac{1}{4}$  to  $\frac{1}{2}$  inch chunks of butter. Add the ice water and blend until the dough comes together. Add just a touch more water if the dough is too dry to hold together. Remove dough from mixer and divide into two even rounds. Wrap the rounds in plastic wrap and put them in the refrigerator while you make the pie filling.

#### For the filling:

- 5 or 6 peeled and cored large crisp sweet/tart apples such as Braeburn
- <sup>3</sup>/<sub>4</sub> cup sugar
- 2 tsps cinnamon (or more to taste)
- 1 ½ tbsps lemon juice
- 4 tbsps butter, cut into bits
- 5 tbsps minute tapioca

Slice apples, drizzling lemon juice onto the slices as you cut them. Mix all ingredients throughly.

Roll out one pie crust. Line the pie plate so that the crust hangs over the edge of the plate. Fill the crust with the pie filling, mounding it in the center. Wet your fingers with water and moisten the edge of the first pie crust. Roll out the second pie crust to cover the filling and the edge of the first crust. Crimp the crust together to seal in the filling (feel free to make a decorative pattern!) Use a fork or other utensil to cut steam holes in the top crust (you can also do this in a decorative pattern).

Bake at 350 degrees for one hour or until pie filling starts to bubble up and out. Remove from oven and let cool. Serve with whipped cream and experience bliss!

### UCSC receives \$1.5 million from state for 'Basic Needs' programs

An infusion of state funds is enabling the campus to expand its "basic needs" programs, including initiatives to make free food available on campus seven days a week and to help students who need emergency housing assistance.

"Addressing housing security is our top priority," said Brian Arao (Oakes College, '00, molecular, cellular, and developmental biology), associate dean of students and chief of staff to Dean of Students Garrett Naiman. "A plethora of programs address food insecurity, and we will scale those up, but we have had limited infrastructure to make the community rental market more secure, more stable, and more safe for students. We want students to know that if their housing becomes unstable, they can come to us for resources."

The UC system, like universities across the country, is recognizing the prevalence of food insecurity among students. At UCSC, 48 percent of undergraduates and 31 percent of graduate students experience food insecurity, which encompasses both insufficient food and insufficiently nutritious food, according to the latest survey of students. Systemwide, 44 percent of undergraduates and 26 percent of graduate students are food insecure.

"Santa Cruz is above average because of housing precarity," said Tim Galarneau (Rachel Carson College, '05, psychology and community studies), a research and education specialist at UCSC's Center for Agroecology and Sustainable Food Systems (CASFS) and co-chair of the Basic Needs Committee. "Tuition isn't the issue. The cost of attendance is skyrocketing because of the cost of rent."

#### Meeting basic needs supports student academic success

The Basic Needs Center is co-led by the Dean of Students Office, which provides direct student services, and CASFS and the Blum Center on Poverty, Social Enterprise, and Participatory Governance. CASFS and the Blum Center are rooted in the academic mission and bring research and educational opportunities to the mission of addressing basic needs. In addition to providing direct services to students, the Basic Needs Center oversees education and outreach efforts, and campus leaders advocate systemwide for resources.

"This isn't a one-time problem," said Galarneau, who has spearheaded efforts within the UC system to increase the amount of local, organic food purchased by campus dining programs and to create learning opportunities for students interested in how they can help improve the food system. "This is a permanent change on the educational landscape, and universities and colleges are having to address the basic needs of their students."

Blum Center Director Heather Bullock, a professor of psychology and co-chair of the Basic Needs Committee,

said supporting students' housing and food-security needs is crucial—and it's central to UC's core mission of education.

"We know meeting students' basic needs makes a significant difference in terms of degree completion, academic success, and student well-being," she said.

The impact of "basic needs insecurity" on academic performance translates to a .3 drop in GPA for undergraduates; graduate students take 3-6 months longer to complete their degree, according to systemwide data.

#### Funding housing, staff positions and student opportunities

The new state funding includes more than \$350,000 that is mandated for the "rapid rehousing" of students who are homeless or at immediate risk of becoming homeless, said Arao. Funds will support a program that provides temporary housing in hotels for students facing a housing-related emergency, and the money will also shore up the campus's emergency housing supply; 12 beds at Family Student Housing were set aside last spring for students in need, said Arao.

"The rapid rehousing money is going to be a game changer," said Arao. "We've never had dedicated funds to help students facing a housing crisis. We've always had to patch together resources."

The \$1.5 million in state funding will also build up the corps of Basic Needs staffers on campus. It will double the number of full-time Slug Support case managers who do crisis intervention, fund a Basic Needs Coordinator in the Dean of Students Office, and support a new half-time position in the Financial Aid Office that will help direct students to resources, including scholarships linked to



Undergraduate interns harvest produce at the UCSC Farm for campus food pantries and produce pop-ups

#### News & Notes

#### Seed Starting Tips, from page 2

Vegies         Arugula         X         7 to 14         40         Sept - May           Beets         X         7 to 10         55         Aug - Sept - May           Bok chol family         X         X         7 to 10         55         Aug - Oct           Broccoli         X         7 to 10         63         July - Aug           Cabbage         X         7 to 10         65         July - Aug           Cabbage         X         7 to 10         65         July - Aug           Carrots         X         10 to 20         70         July - Aug           Chard         X         X         7 to 10         66         July - Aug           Chard         X         X         7 to 10         55         Aug - Sept           Endive         X         X         7 to 10         55         Aug - Sept           Endive         X         X         7 to 10         55         Aug - Sept           Fennel, bulbing         X         X         7 to 10         25         Aug - Sept           Kale         X         X         14 to 21         90         July - Aug           Mache         X         X         14 to 21 <t< th=""><th>Sow in ground</th><th>Start indoors</th><th>days to germination</th><th>approximate days to harvest/Maturity</th><th>Months to start fro seed</th></t<>	Sow in ground	Start indoors	days to germination	approximate days to harvest/Maturity	Months to start fro seed
Beets					
Solit chol family	х		7 to 14	40	Sept - May
Broscoli	х		7 to 10	55	Aug - Sept
Brussels sprouts	х	х	7 to 10	45	Aug - Oct
Cabbage		х	7 to 10	63	July - Aug
Carrots		х	7 to 10	95	July - Aug
Cauliflower		х	7 to 10	65	July - Aug
Collards	х		10 to 20	70	July - Aug
Collards		х	7 to 10	60	July - Aug
Endive	х	х	7 to 10	50	Feb - Sept
Fennel, bulbing		х	7 to 10	55	Aug - Sept
Acade	х	х	7 to 14	80	Aug - Sept
Acade		х	14 to 21	90	
Acetic   X	х	х	7 to 10	25	
Mache	х	х	14 to 21	110	
Mache         X         14 to 28         90         Sept - Feb           Mustard         X         X         7 to 14         38         Feb - Sept           Onion         X         X         7 to 10         95         Sept - Oct           Peas         X         X         7 to 10         60         July - Aug           Agadishes         X         X         5 to 7         28         Apr-May           Scallions / green onion         X         X         10 to 20         65         Aug - Sept           Spinach         X         X         5 to 10         39         Aug - Sept           Stir fry greens         X         7 to 10         45         Feb - Sept           Turnips         X         7 to 9         45         Aug - May           Agrostemma         X         14 to 21         1/4"         Sept - Nov           Alyssum         X         10 to 14         1/4"         July-Sept           Bulbs         X         X         12 to 15         1/4"         July-Sept           Bulbs         X         X         12 to 14         1/4"         Aug-Oct           Cerinthe         X         X         7 to 14					
Mustard					
Decision   X		х			· ·
Peas					
Scallions   Start   Sto   St					
Scalilions   green onion   X		^			
Spinach		x			
Stir fry greens					
Turnips					
Sow in ground   Start ground   Store   Store   Store   Store   Store   Store   Store   Store   Store   Start ground   Store   Store   Store   Start ground   Start ground   Store   Store   Start ground   Start groun					
Planting depth   Seed		Start		45	
Alyssum		indoors	germination		seed
Bishop's Lace		Х		·	
Sept					
Aug-Oct   Aug-Oct   Aug-Sept   Aug-Oct   Aug-Sept   Aug-Oct   Aug-Sept   Aug-Oct   Aug-April		Х		·	
Cerinthe					i i
Clarkia					
X				·	
X				·	
Nigella	Х		7 to 14		Aug-Oct
Pansies			14 to 21	1/4"	
No	Х			1/4"	Aug - Oct
Poppies				1/4"	July-Aug
X		Х	N/A	varies	Plant Aug - Nov
X	Х		7 to 14	barely cover	Oct - Dec
Sept - March   Sept - March   Sept - March   Sept - April   Months to start from seed		Х	14 to 21	barely cover	Aug-April
Wildflower mix   X   9 to 16   1/4"   Sept - April		Х	7 to 14		Oct-April
Sow in ground   Start indoors   Start indoors   Planting depth   Months to start from seed	Х	Х	12 to 28	1"	Sept - March
Herbs   ground   indoors   germination   Planting depth   seed				1/4"	
Chervil   X				Planting denth	
Cilantro         X         X         10 to 20         1/2"         Sept           Parsley         X         X         18 to 21         1/4"         Aug-Oct           Watercress         X         X         7 to 10         don't cover         Aug - Sept           Sow in ground         Start indoors         days to germination         application rate         Months to start seed           Cover crop         Fava beans         X         5 to 10         1/2# per 100 sq'         Oct-Nov           Bell beans         X         5 to 10         1/2# per 100 sq'         Oct-Nov           Hairy Vetch         X         5 to 10         1/2# per 100 sq'         Oct-Nov           Winter rye         X         7 to 10         1/2# per 100 sq'         Oct-Nov	ground		_		
X	~				
Watercress X X X 7 to 10 don't cover Aug - Sept  Sow in ground Start days to indoors germination  Cover crop  Fava beans X 5 to 10 1/2# per 100 sq' Oct-Nov  Bell beans X 5 to 10 1/2# per 100 sq' Oct-Nov  Hairy Vetch X 5 to 10 1/2# per 100 sq' Oct-Nov  Winter rye X 7 to 10 1/2# per 100 sq' Oct-Nov	_ ^				
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Hairy Vetch         X         5 to 10         1# per 100 sq'         Oct-Nov           Winter rye         X         7 to 10         1/2# per 100 sq'         Oct-Nov					
Winter rye         X         7 to 10         1/2# per 100 sq'         Oct-Nov	х		5 to 10		Oct-Nov
	х				
Mustard         X         5 to 10         1 oz. per 100 sq'         Oct-Nov	x x		5 to 10	1/2# per 100 sq'	Oct-Nov
	x x x		5 to 10 5 to 10	1/2# per 100 sq' 1# per 100 sq'	Oct-Nov Oct-Nov
Fava beans Bell beans Hairy Vetch Winter rye		ground  X X X X X X X X X X X X X X X X X X	ground   indoors	ground         indoors         germination           X         7 to 14           X         7 to 10           X         7 to 14           X         7 to 10           X         7 to 10	ground         indoors         germination         harvest/Maturity           X         7 to 14         40           X         7 to 10         55           X         X         7 to 10         45           X         7 to 10         63         7 to 10         95           X         7 to 10         65         70         70           X         7 to 10         60         70         70           X         7 to 10         50         70         70           X         X         7 to 10         55         70         70           X         X         7 to 10         25         X         X         7 to 14         80         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70         70

Seed Sources		
Large Traditional	Phone	URL
Burpee	1-800-888-1447	https://www.burpee.com/
Gurney's	(513) 354-1491	https://www.gurneys.com/
Harris Seeds	800.544.7938	https://www.harrisseeds.com/
Park Seed	1-800-845-3369	www.parkseed.com/
Stokes	1-800-396-9238	http://www.stokeseeds.com/
Thompson & Morgan	0 844 573 1818	https://www.thompson-morgan.com/
Specialty or small		
Baker Creek	(417) 924-8917	https://www.rareseeds.com/
Evergreen Seeds		http://www.evergreenseeds.com/
Fedco	(207) 426-9900	https://www.fedcoseeds.com/
Johnney's Select Seeds	1-877-564-6697	www.johnnyseeds.com/
Kitazawa	(510) 595-1188	https://www.kitazawaseed.com/
		https://www.nicholsgardennursery.
Nichols Garden Seeds	(800) 422-3985	com/store/index.php
Renee's Garden Seeds	1.888.880.7228	https://www.reneesgarden.com/
Territorial Seed	800-626-0866	http://www.territorialseed.com/
Wood Prairie Farm	207 - 429 - 9765	http://www.woodprairie.com/
Seed exchanges & Organic		
Southern Exposure	(540) 894-9480	http://www.southernexposure.com/
Seed Savers Exchange	(563)382-5990	https://www.seedsavers.org/
High Mowing Seeds	866-735-4454	https://www.highmowingseeds.com/
Seeds of Change	888-762-7333	https://www.seedsofchange.com/
Cover crop		
Peaceful Valley Farm Supply	(888) 784-1722	https://www.groworganic.com/
Green cover seed		https://www.greencoverseed.com/
Urban Farmer	1-317-600-2807	https://www.ufseeds.com/cover-crops/
Seed Libraries		
SANTA CRUZ GROWS at Live Oak Library	Live Oak Public Library, 2380 Portola Drive, Santa Cruz 831-427-7711	https://timebanksantacruz.org/seed- library
Demeter seed library @ UCSC CASFS	Demeter Seed Project at Oakes College, 1156 High Street Santa Cruz, CA 95064	https://casfs.ucsc.edu/farm-to- college/demeter-seed.html

Fall Planting Guide and Seed Sources provided by Delise Weir



Happy holidays from all of us at CASFS!

# Apprenticeship Updates

This past October, the 1988-89 apprentices gathered at the Farm & Garden to celebrate their 30th anniversary reunion. Alumni came from as far as Colorado, Texas, and Alaska. They spent the evening in the Farm Center and shared good conversation over homemade pizza and apple pie. The following morning, they gathered at the Alan Chadwick Garden for a lesson from their old teacher, Orin Martin.

Reunion organizer Gary Crandall writes, "Everyone seemed to enjoy the time together celebrating the experiences that resulted in rich relationships that have lasted all these years."

Here are some updates on what the apprentices have been up to:

**Kevin Loth (1988)** lives in Nebraska where he and his partner run a successful creamery operation, Dutchgirl Creamery. He recently began transitioning away from farming vegetables, offering an employee a chance to lease the farm with money gained from the farm's CSA and wholesale marketing.

Ann Lindsey (1988) lives in Anchorage, Alaska. She continues to help support the Farm & Garden doing special projects, writing grants, and other fundraising.

Heidi Renteria (1988) retired from UCSC but still mentors students from difficult family backgrounds. She also teaches mindfulness meditation and life skills to incarcerated people. She continues to grow vegetables and flowers in her garden.

Nancy (Maxwell) Saldich (1988) continues to work part time growing California natives and drought-tolerant perennials for San Francisco-based architect Ron Lutsko.

**Betta & Ken Bunzel (1989)** have spent the last 20 years growing food in Moscow, Idaho for the local farmers' market, food coop, and various food banks.

**Diane Caudillo (1989)** is a counselor for housing and food insecure students at College of the Redwoods in Eureka, California.

**Brian Dick (1989)** works at Bill White Farms in Park City, Utah, raising chickens, growing a garden, running a farm stand, and other tasks. During the winter, he works as a ski patroller outside of Salt Lake City.

Gary Crandall (1989) works as the maintenance foreman for a landscaping company in Pleasant Hill, California. He recently interviewed managers of teaching gardens along the California Coast from Point Reyes to

Santa Cruz and recorded them for a film called "Growing Edge."

**Eric Johnson (1989)** lives in Boulder, Colorado. He manages an apple orchard for a local CSA, teaches others to graft, and works to disseminate apple biodiversity.

Mary Poxon (1989) lives in East Oakland and works full time with children at a preschool in Berkeley. She grows vegetables in deep raised beds in her quarter-acre lot.

Mary Lynn Morales (1989) lives in Berkeley. She recently received a doctorate in acupuncture and integrative medicine. She teaches tai chi four times a week and continues to grow fruit, flowers, and herbs for people and pollinators in the meditation garden behind the dojo and in her backyard garden.

Lyn Talkovsky (1989) and her husband Kirk recently began building a house on their land in Mendocino County. The two of them sing in the community choir and work with their neighbors on watershed protection of their local creek.

Norman Stolzoff and Tiana Melquist (1989) run Ethnographic Insight, a research and training firm that uses anthropology to address real world problems. They continune to grow food in their backyard garden in Bellingham, Washington.



1988-89 apprentices pose with Orin Martin at the Chadwick Garden

# Friends of the UCSC Farm & Garden Board Updates

This year's slate of Friends of the Farm & Garden Board officers was unanimously accepted at the Annual Meeting in November. They include President Delise Weir, Vice President Sarah Thorne, Secretary Sandra Morishige, and Treasurer Dan Dion.



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UCSC receives \$1.5 million for 'Basic Needs,' from page 4 academic achievement.

In addition, a new full-time supervisor will be hired for the Cowell Coffee Shop for the Peoples to oversee food services and an educational food truck that will begin operations after the position is filled; that search gets underway this fall, said Galarneau.

At CASFS, a part-time Basic Needs coordinator will oversee production on the Farm of fruits and vegetables destined for dining halls, pantries, and other campus sites, and a half-time position will support the integration of basic needs curriculum into courses. The funding will relieve the budgets of some existing campus programs that redirected resources to address urgent needs, and it will expand a part-time, CASFS-based co-coordinator position to full-time.

For students, the funding will provide opportunities to work in the Cowell Coffee Shop, food pantries, pop-up food markets, and the Dean of Students Office. Opportunities for students to engage in research and evaluation with the Blum Center are also being supported.

"This ongoing support from the state builds our collective capacity to address these problems," said Arao, noting that some programs will get augmentations in subsequent years, including the food pantry run by the Student Union Assembly (SUA). "Students are doing amazing work supporting each other. SUA is a great partner."

#### Education and outreach

In addition to helping current students, the funds will support outreach to admitted students even before they arrive on campus to build awareness and literacy about resources to help them meet their basic needs. A medical emergency can quickly escalate, noted Arao.

"If a student has a medical copay, or suddenly needs to have their wisdom teeth out, they might not have money for food or a roof over their head," he said.

Arao would also like to pilot new programs, including one in financial capability to help students learn to build a budget, plan their spending, and assess appropriate levels of student debt. A food literacy program could focus on nutrition and food preparation, and housing literacy could include information about security deposits and lease agreements. Students have used their spring financial aid checks to put down a security deposit on housing for fall quarter, and then lacked money for meals and books, said Galarneau.

"We've been so focused on crisis response that we haven't been able to talk proactively with students," said Arao. "We want to help them become educated about what's in their sphere of influence in terms of basic needs."

The state support will bolster programs, bring new leadership to campus, and allow staff to focus on program delivery, but Arao, Galarneau, and Bullock agree that the need continues to exceed available resources, and they hope the campus continues to try new and creative strategies. For example, doctoral students now receive a \$1,500 grant, through a systemwide program, to help them meet the cost of moving to Santa Cruz, said Galarneau.

-Jennifer McNulty