



# Small Farm News

Small Farm Center • Cooperative Extension • University of California



Small Farm Advisor Aziz Baameur, center, discusses leafy greens production with Professor Qingguo Wang and grower Mike Lee.

## New director joins Small Farm Program

On July 1, Dr. Shermain Hardesty began her term as the Small Farm Program's director.

"We are delighted to have Shermain join our Small Farm Program team," said ANR Program Leader Maxwell Norton in a recent announcement. "She has a long association with the program, and her research should contribute greatly to the mission of the program."

Hardesty is also a Cooperative Extension specialist at the Department of Agricultural and Resource Economics at UC Davis.

Her current projects include the development of a multi-species processing marketing firm for small-scale livestock producers, evaluation of California producers' marketing opportunities to local colleges and universities, comparison of the costs of marketing through different channels, and assessment of the role of alliances in the success of producers of value-added agricultural products.

"I'm looking forward to interacting with smaller producers and working more closely with the Small Farm Program core advisors," Hardesty said.

One of her primary interests in working with small-scale farmers is exploring more efficient distribution systems—going beyond farmers markets, which can be labor-intensive for growers to participate in.

Hardesty takes the reins 11 months after Desmond Jolly retired as the director.

Norton expressed gratitude to Dr. Marita Cantwell, interim director of the Small Farm Program since August, for the important role she served in keeping the program going "full-speed ahead" between permanent directors.

"This is a very difficult thing to do, and Dr. Cantwell assumed a big responsibility in addition to her own program," he said. "We look forward to her continued association with the program through her vegetable postharvest physiology work."

Hardesty can be reached at her Small Farm Center office at UC Davis, (530) 752-7774 or [sfpdirector@ucdavis.edu](mailto:sfpdirector@ucdavis.edu).

## SFP advisor expands outreach in Chinese languages

By Brenda Dawson, Communications Coordinator

Becoming a member of a community—whose language you don't speak—is never easy. Just ask Aziz Baameur, UC Cooperative Extension small farm advisor, whose clients include small-scale, ethnic Chinese growers.

Or ask any of the Chinese-speaking growers on California's Central Coast.

In 2005, the Central Coast Water Quality Control Board began an agricultural waiver program for water discharge, which required farmers who use irrigation techniques learn how to manage water quality. To earn the conditional waiver, farmers were required to complete educational courses—all of which were offered in English. After a few years, courses were also offered in Spanish. The only

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## Opportunities abound in Small Farm Program

As I sit in my new office to draft my first column for this newsletter, I realize how grateful I am to assume my new half-time position as Director of the Small Farm Program. There are many bright spots in the Program's future—both externally and internally. A growing number of consumers are shopping at farmers markets and becoming aware of locally grown agricultural products. California is a highly diverse state, in regards to its agricultural production, its growing conditions and its population. Under the past leadership of Desmond Jolly and Ron Voss, the Program developed a national reputation and is regarded as a role model within the land grant university system. The Center has a small but highly dedicated staff. The six core Small Farm advisors are focused on the development of new specialty crops and of production techniques to maximize efficiency, reduce costs and improve the sustainability and profitability of smaller operations. The Interim Director, Marita Cantwell, left the program with considerable momentum. Specifically, a new Communications Coordinator is working to update the Center's web site and strengthen the Program's communications, translations of key Center publications are being completed, research and outreach efforts are continuing

on urban agriculture and agritourism issues, and a \$156,000 grant proposal has been submitted to USDA for outreach programs to reduce smaller producers' risks in production, management and marketing.

While I did not grow up on a farm, I have had a broad variety of agricultural experiences. After completing my Ph.D. in the Department of Agricultural and Resource Economics at UC Davis, I joined the faculty at Michigan State University where I had my first exposure to small farms (and a multitude of wonderful tasting apple varieties!). I eventually returned to California to work in several capacities at the Rice Growers Association of California, a rice marketing cooperative. In 1991, I founded a consulting firm, Food Marketing and Economics Group, which specialized in assessing market opportunities for a diverse range of commodities, including pears, cherries, mushrooms, pomegranates, wild rice, salmon and oysters.

I rejoined the University in 2002 as Director of the Center for Cooperatives and transferred in 2004 to the Department of Agricultural and Resource Economics as a Cooperative Extension Specialist. I am retaining my Specialist position on a half-time basis to conduct research and outreach regarding alternative

marketing systems and cooperatives. My continuing work on niche meats marketing issues with UC livestock

advisors follows the recommendations of the Small Farm Review Committee. Also, my expertise in agricultural marketing and finance should complement the Core Advisors' production expertise very nicely.

The Small Farm Program's mission is to develop and extend the use of research-based knowledge for the benefit of smaller producers, their consumer clientele and the natural and renewable resources they use. Eighty-five percent of the state's 80,000 farms are classified as small farms (with annual sales of \$250,000 or less). The Program is faced with many opportunities; as Director, one of my main responsibilities is to prioritize the Program's efforts to ensure that our limited resources are utilized effectively.

I look forward to working with you and hearing your concerns. Working together, we can ensure a promising future for California's small- and medium-sized family farms.

*Shermain D. Hardesty*



Shermain Hardesty

## program news

**Small Farm Workgroup funding** The University of California Small Farm Workgroup has been awarded \$10,250 for the 2007-2008 fiscal year. These funds will allow the workgroup to co-sponsor top-priority activities, including the 2008 annual workgroup meeting, a greenhouse and hydroponics production short course, and a technology and certification program. For more information, contact co-chairs Ben Faber, bafaber@ucdavis.edu, or Ramiro Lobo, relobo@ucdavis.edu.

**New communications coordinator** Joining the Small Farm Center team is **Brenda Dawson** as the program's communications coordinator. Her main duties will include updating and maintaining the SFC website, as well as writing and editing publications—including *Small Farm News*. Dawson grew up in rural Siskiyou County and worked most recently as the editor of the *Placer Herald* newspaper in Rocklin. She can be reached at (530) 752-7849 or bldawson@ucdavis.edu.

**Legislative Ag Tour** Small Farm Advisor **Richard Molinar** participated in a tour of Fresno County agricultural sites on June 15 with approximately 35 representatives from city council, county supervisor, state assemblyman, state senator and Congressional offices. In addition to a brief presentation by Molinar, the tour included stops at four small-scale agricultural operations.

**Solarization demonstration** Small Farm Advisor **Benny Fouché** organized the Solarization Field Demonstration Day on July 2 near Lodi, with approximately 60 participants. The day included information about solarization, mulches and weed control—and a presentation by Small Farm Advisor **Richard Molinar**.

**New contact information** Please update your address books for Small Farm Advisor **Ramiro Lobo**, located in San Diego County. His current address is 334 Via Vera Cruz, Suite 152 in San Marcos, CA 92078. He can also be reached at (760) 752-4716 or by fax: (760) 752-4725.

**SFP in the news** Small Farm Program Representative **Kristin Reynolds** was interviewed as a small-farms expert for an Associated Press article regarding the Agriculture and Land-Based Training Association. She was also interviewed for a segment aired to California viewers of CNN Headline News and for articles about agritourism and CalAgTour.org in the *Santa Maria Times*, *Riverside's Press Enterprise* and *Fruit Growers News*.



Marita Cantwell, far left, presents on postharvest technology with the help of a translator.

## Chinese languages — FROM PAGE 1

major population in the Central Coast region not to have access to the water quality courses were the ethnic Chinese, who operate an estimated 80 percent of Santa Clara County's small-scale farms.

"One of the problems we have with Chinese (language) is that there are people who speak the language, but to find people who know the technical terminology and the language (to translate)—that was a challenge," Baameur said. (Of his own attempts at learning a Chinese language, he says: "I tried, and I failed.")

Nevertheless, Baameur spearheaded a cooperative effort to organize classes, translate and create new printed materials, and interpret live presentations, with help from UC Cooperative Extension, the Small Farm Program, the Santa Clara agricultural commissioner, California Farm Bureau, Santa Clara Valley Water District and USDA Natural Resources Conservation Service.

From October 2006 through May 2007, Baameur held a series of five water quality short courses with materials printed in Chinese and spoken interpretations in Cantonese. But his work with the community—which normally sees about two workshops per year for growers—didn't stop there.

Baameur said that the need for water quality short courses spurred not only further outreach to Chinese growers, but also an increase in farmers' interest in the courses.

Besides the water quality courses, he's held four additional educational meetings in 2007 for the central coast's ethnic Chinese growers, including two on postharvest handling of Asian vegetables and one on the Light Brown Apple Moth.

Marita Cantwell, postharvest technology specialist and then-interim director, shared her expertise with the group for the postharvest meetings.

Cantwell said she viewed the slew of Chinese-language workshops as an intersection of opportunities. For example, the postharvest meetings brought together visiting scientist Professor Qingguo Wang, with a timely topic, and recently translated documents. The Small Farm Center also produced the Chinese-language version of "Food Safety at Farmers Markets and Agritourism Venues" translated by Joanne Zhao, a UC Davis student worker who hails from the area's farming community. Additional copies of the 36-page translated publication are available from the Small Farm Center, (530) 752-8136.

Cantwell noted that the meetings weren't just technical workshops, "but also an opportunity for the community to get together," and was pleased by the audience's participation.

"I remember at earlier meetings, we would ask, 'Any questions?' And nobody would move or say anything," Baameur recalls. "At the last series of meetings, we had so many questions. I'm very, very pleased with the numbers and the interaction with the speakers."

Though he speaks English as well as Mandarin and Cantonese, farmer Mike Lee attended some of this year's workshops. He grows vegetables such as bok choy, water spinach, lettuce root, yam greens, and snow peas on 10 acres near Morgan Hill and said the information was helpful, especially when it came to fertilizer and water.

"If they have some more workshops ... I definitely would go," he said.

The next course Baameur has planned is on weed management with Cooperative Extension Specialist Steve Fenimore, to be held August 17 with Cantonese interpretation. For more information, call Baameur at (408) 282-3127.



Additional copies of the Chinese translation of "Food Safety at Farmers Markets and Agritourism Venues" are available from the Small Farm Center, (530) 752-8136.



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The Small Farm Center links those who need information on small-scale farming with those who have the information. The center produces publications in addition to this newsletter; sponsors conferences and seminars; holds a library of periodicals, reports and books; gives referrals; and answers numerous requests for information.

Readers are encouraged to send us information, express their views, and contact us for assistance. Mention of a specific product is intended for readers' information or as an example of a similar product—not as a recommendation of that specific product.

Director: Shermain Hardesty, [sfpdirector@ucdavis.edu](mailto:sfpdirector@ucdavis.edu)  
 Administrative Assistant: Birgit Hempel, [sfcenter@ucdavis.edu](mailto:sfcenter@ucdavis.edu)  
 Office Manager: Linda Vieira, [lmvieira@ucdavis.edu](mailto:lmvieira@ucdavis.edu)  
 Program Representative: Kristin Reynolds, [kareynolds@ucdavis.edu](mailto:kareynolds@ucdavis.edu)  
 Communications Coordinator: Brenda Dawson, [bldawson@ucdavis.edu](mailto:bldawson@ucdavis.edu)

## Farm conference takes on issues 'ripe' for today's small farmers

By Kristin Reynolds, Program Representative

More than 400 registrants attended the 2007 California Farm Conference, held March 4-6 in Monterey. Participants included farmers and ranchers, farmers market managers, UCCE staff, representatives from non-profit organizations, and agricultural students. The theme of this year's conference was "The Time is Ripe," and the conference reflected this theme by addressing a diversity of timely issues facing small-scale farmers today.

### Save the date!

The next California Farm Conference is scheduled for February 24-26, 2008 and will be held in Visalia. Registration, scholarship, and Ilic Award information will be posted on the Small Farm Center web site as the date approaches, so check back with us regularly!

Half- and full-day short courses were conducted on Sunday, preceding the main conference, giving participants opportunity to learn about strawberry or blueberry production;

transitioning to organic production; and biofuel opportunities. Other events such as the Mediterranean Tour, the Ag History Project Tour, or the Carmel Valley Wine Tour were also offered for those interested in experiencing the agricultural landscape of the Central Coast.

The main conference began Sunday evening with a food and wine tasting reception featuring local producers and their products. Monday's and Tuesday's events included an array of workshop topics. Small Farm Program advisors played key roles in organizing workshops and short courses on blueberry production (**Mark Gaskell, Benny Fouché, and Aziz Baameur**); specialty crops (**Mark Gaskell**); season extension (**Manuel Jimenez**), and a dialogue about serving the changing demographics of California farmers (**Richard Molinar**). Other sessions focused on agritourism, animal production on the farm, cut flowers for direct sales, farm injury prevention, worker well-being, food safety, and water quality compliance.

Chris Banthien, far left, took Mediterranean Tour participants through her Aptos farm, Olio delle Colline, where she produces olive oil and associated products.



In addition to workshop sessions, conference participants also had the opportunity to hear plenary addresses by Michael Dimock (Roots of Change Fund), Michael Olson (author of MetroFarm and host of Food Chain radio talk show), and SFP then-Interim Director Marita Cantwell. Cantwell also presented the Pedro Ilic Award (see full article on p. 5) to farmer Tchieng Fong and Small Farm Advisor **Mark Gaskell**.

About 100 of the participants received scholarships offered by the conference planning committee, with funding from USDA Risk Management Agency.



One of Sunday's tours, lead by Deborah Greig at right, explored the UC Santa Cruz Farm and Arboretum.



Attendants were able to sample local produce at Sunday's tasting reception, including Ojai pixie tangerines served up by George Thacher and Emily Ayala, center, fifth-generation owners of Friend's Ranch in Ojai.

## SFP honors Pedro Ilic Award recipients at conference

By Jeannette Warnert, Sr. Public Information Representative

The 2007 Pedro Ilic Agriculture Awards have been presented to Fresno County farmer Tchieng Fong and Mark Gaskell, a University of California Cooperative Extension farm advisor.

Tchieng Fong, a member of the Hmong ethnic group, came to the United States in 1988 from Laos as a Vietnam War refugee. He farms specialty crops on 20 acres at two Fresno County sites growing a variety of Asian vegetables—such as gailon, bittermelon, sinqua, moqua, lemongrass, sugarcane, mustards, water spinach, yam leaves, snow peas and bok choy—and American mainstream crops—such as blackberries, blueberries, strawberries, artichokes, asparagus and broccoli.

Fong was nominated for the “outstanding farmer” award by Richard Molinar, the UC Cooperative Extension small farm advisor in Fresno County.

“Tchieng is a progressive Hmong farmer,” Molinar said. “He isn’t just sticking with traditional Southeast Asian crops. He’s diversified his crops to cater to the tastes of a diversity of customers.”

Fong sells his produce at two farmers markets, three Fresno packing houses and to several Hmong markets. At his popular roadside stand adjoining the farm—on Fowler Avenue north of Olive Avenue in Fresno—customers line up to purchase his blackberries and blueberries each spring. Fong is now looking into direct marketing his produce to San Francisco restaurants.

Molinar said Fong has shown a keen interest in improving his production practices by attending farmer education courses offered by UC Cooperative Extension and consulting frequently with Molinar. In addition, Fong has been open to sharing his knowledge with others. He speaks to newspaper reporters and opens his farm for tours on a regular basis.

The “outstanding educator” award went to Gaskell, a small farm advisor for UC Cooperative Extension in Santa Barbara County for 12 years. He is a leader in the development of cropping opportunities for small-scale growers on California’s Central Coast, according to nominators Molinar and Benny Fouché, UC Cooperative Extension farm advisor for San Joaquin County.

“Mark is truly an exceptional small-farm educator,” they wrote in the nomination. “His research and educational meetings are focused on California small farm issues and he is always willing to share his information at meetings throughout the state.”

Gaskell is undertaking a long-term study of slow-growing lychee and longan trees. The fruit, popular among Asian consumers, is sometimes imported from the Far East illegally, potentially carrying unwanted pests. Local production will reduce the threat and provide California farmers a new farming opportunity. A major part of Gaskell’s work has been in developing the berry industry at the Central Coast and particularly working with growers to find fruit that will fit precisely in a lucrative market window. With blueberries and blackberries becoming well-established crops on the Central Coast, Gaskell is beginning research on gooseberries, and red and black currants.

The Pedro Ilic Agriculture Awards were presented March 5 at the California Farm Conference in Monterey. The awards are named for the Fresno County small-scale farm advisor whose untimely death in 1994 prompted the UC Small Farm Program to annually honor those who carry out his legacy of personal commitment to small-scale and family farming.



Fresno farmer Tchieng Fong receives the “outstanding farmer” award from Marita Cantwell, then-interim director of the SFP.

From left, Pedro Ilic Award winners Tchieng Fong and Mark Gaskell pose with one of their nominators, Richard Molinar, at the California Farm Conference.

## Carrots are orange—Not! Colors key to popularizing nutritious carrots Part 1—Field Data



Samples of pigmented carrots show external and internal color.

**Introduction and Rationale** Colored carrots or pigmented carrots are showing up at local farmers markets and grocery stores, in a wide range of colors (white to almost black) and flavors to accommodate more tastes.

The wide range of colors not only appeals to consumers but also provides them nutritious produce, packed with healthful and nutritious substances. For instance yellow carrots would provide xanthophylls that benefit eyesight and were reported to lower lung cancers risks. Red carrots contain lycopene that helps prevent heart disease and some cancers including prostate cancer. Purple carrots contain anthocyanins, pigments that act as powerful antioxidants to help bodies eliminate harmful free radicals. They also regulate blood clotting, a helpful factor in preventing heart diseases. White carrots lack pigment, but may contain other health-promoting substances called phytochemicals.

The underlying basis for researching these varieties is as follows: The wide palette of colors is more attractive to consumers and is more inviting to consume more of the produce, a recommendation that is supported by nutritionists and dieticians. Producers of these special crops—who tend to be smaller and more specialized—would also have the opportunity to add a wider window of choices to their offerings.

Table 1. Yield and Root Size of 15 Pigmented Carrot Hybrids-- S Cruz, 2006

Entry Code	Entry UC Name	Color	Plot Weight	Root Count/Plot	Average Root Weight	Extra-polated Yield	Root Size Length - in			Root Diameter--in		
			Kg	Ounces	Lbs/A	Average	Max	Min	Average	Max	Min	
1	USDA 445-1	Purple	0.94	54.50	0.61	7,220	4.3	6.1	3.1	0.6	0.9	0.6
2	Purple	Purple	0.76	6.50	4.12	5,837	9.2	20.0	4.0	0.8	1.7	1.2
3	USDA 218-7	Purple	1.97	24.00	7.64	15,131	10.0	15.0	9.0	1.3	1.8	1.2
4	Yellow	Yellow	2.55	52.20	11.16	19,585	6.8	10.5	6.5	0.9	1.3	0.8
5	Nutired	Red	2.46	60.00	14.67	18,894	7.4	11.0	7.0	1.0	1.4	0.9
6	USD 209-1	Red	1.8	30.00	18.19	13,825	7.7	9.0	6.0	1.1	1.4	0.9
7	USDA 303-2	Red	1.24	23.75	21.70	9,524	6.6	9.0	3.0	1.1	1.3	0.8
8	USDA 105-2	White	2.48	42.00	25.22	19,048	10.8	16.0	8.0	1.3	1.8	1.0
9	White Satin	White	5.89	81.50	28.74	45,238	8.3	10.0	7.0	1.2	1.5	0.9
10	Crem de Lite	Yellow	4.57	64.00	32.25	35,100	10.8	14.0	7.5	1.4	1.7	1.0
11	Rainbow	Mixed	4.22	58.25	35.77	32,412	8.2	10.0	6.5	1.1	1.4	0.9
12	USDA 218-8	Yellow	2.45	46.25	39.28	18,817	10.1	14.0	6.0	1.2	1.5	1.0
13	USDA 310-1	Yellow	2.75	63.75	42.80	21,121	8.0	11.0	5.5	1.2	1.6	1.0
14	Mello Yello	Yellow	4.45	60.25	46.31	34,178	8.5	10.5	7.0	1.3	1.7	1.1
15	USDA 211-1	Yellow	2.35	50.75	49.83	18,049	9.1	12.5	7.0	1.3	1.5	1.1
DMR - 5%			0.92	19.78		776.30	1.83			0.12		

**Field Study Parameters** We undertook this field and sensory evaluation of 15 carrot hybrids to provide growers with information on potential yield and consumer acceptance of these carrots. I will report here on the field data. In the next issue of the newsletter, I will report on the results of sensory information.

On June 26, 2006, we seeded the carrot entries in replicated plots at the UC Santa Cruz Agroecology Center. All plots were harvested on October 27.

Jim Leap, farm manager, and Balyn Rose, a UCSC student, participated in the sowing, maintenance, harvest, and filing of data collection.



**Aziz Baameur**

UC Coop. Extension Advisor,  
Small Farms & Specialty Crops,  
Santa Clara, San Benito,  
and Santa Cruz Counties

1553 Berger Drive, Bld. 1, San Jose CA 95112  
TEL (408) 282-3127 FAX (408) 298-5160  
e-mail: azbaameur@ucdavis.edu

Data collected reflected physical information such as carrot's color, length, diameter, plot weight, and root count. These data are reported in this article.

Dr. Philipp Simon, USDA carrot breeder in Madison, WI, provided the entries that included USDA accessions and some lines.

Comparing plot yield on the basis of color, the following ideas emerged.

**Summary Results** Two entries were **white**, White Satin and USDA 105-2. White had the highest yield of all entries. It averaged 81 carrots per 2-rows of linear feet. Entry 105-2 ranked seventh by weight, but had longer roots exceeding 10.8 inches. Root length ranged from 8 to close to 11 inches and width around 1.3 inches.

Four out of six **yellow** entries ranked high based on their yield. Top yielders in this group were Crème de Lite, Mello Yello, and USDA 3101-1. Yellow entries produced roots that exceeded 10.5 inches in length between 0.9 and 1.4 inches in diameter.

Three of the included entries were **red** or dark orange. Actually a couple were described as raspberry in color. These entries placed in the mid to lower rank for yield. They are, by decreasing order of yield, Nutired, USDA 209-1, and USDA 303-2. Root length averaged 6.6 to 7.7 inches, while diameter average ranged from 1 to 1.1 inches.

**Purple color** entries did not fare well in this trial. Entry USDA 218-7 yielded about one-third of the white entry, Satin. The entry "Purple" had the biggest roots, as long as 20 inches and as wide as 1.7 in diameter. This color group also included the smallest carrots, produced by USDA 445-1. On average, the roots were less than 4.5 inches and as small as 3 inches, while diameter was less than 1 inch.

**Final Words and Contacts** Overall, pigmented carrots yields were average. They showed similar adaptability as regular orange ones. With exception of USDA 445-1, all entries produced roots ranging between 6.6 and 10.8 inches long. Few entries had very long roots exceeding 16 inches. Some of these may not be as attractive to consumers as smaller and smoother roots.

## Bell and specialty pepper variety trials

Lead Author: Debra Boelk

To examine which new and specialty varieties grow best under conditions in the San Joaquin region, Benny Fouché and Debra Boelk conduct pepper variety trials. This year's pepper plants were recently transplanted; here are the results of their 2006 trials.

### Benny Fouché

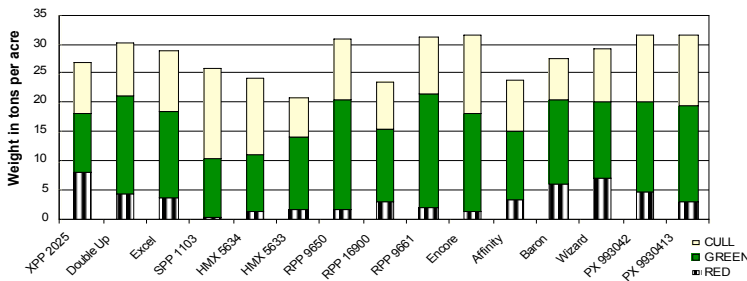


UC Cooperative Extension  
Small Farm Advisor  
San Joaquin County

420 S. Wilson Way, Stockton, CA 95205  
TEL (209) 468-9491 FAX (209) 462-5181  
e-mail:bfouche@ucdavis.edu

The bell pepper variety and specialty pepper trials were transplanted on May 8, 2006. The field variety was Baron. The soil type at the trial site was a Stockton adobe clay and the trial field was drip irrigated throughout the season. The resulting crop stand was excellent with vigorous plant growth.

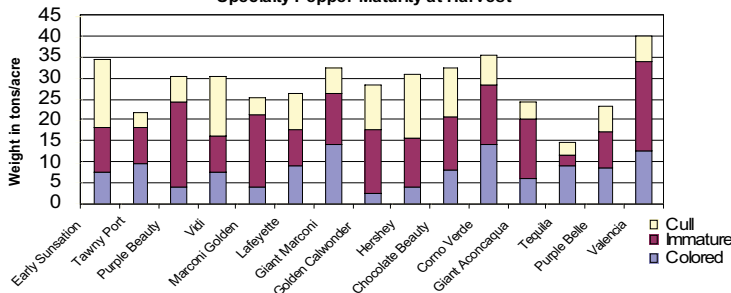
Fig. 1. Bell Pepper Yield  
Crop Maturity at Harvest



An extended and very cool, wet spring caused late planting of early crops, and a subsequent heat wave in early May and again in July caused some loss of fruit set and a delay in fruit maturity. The trial contained 15 replicated varieties on a randomized complete block and 15 non-replicated, observational varieties. Hand harvest of the trail was on August 15, 2006, which may have been too early for some of the specialty peppers to put on the maximum amount of colored fruit, as their maturity dates varied widely.

In addition to marketable red and green yield figures for bell peppers and colored and immature yield figures for specialty peppers, data on crop maturity, fruit size and wall thickness were taken.

Fig. 2. Specialty Pepper Yield  
Specialty Pepper Maturity at Harvest



In the trial, highest yield of red plus green marketable fruit was achieved by Syngenta's RPP 9661, followed by Double Up, Baron and RPP 9650. Unfortunately, Syngenta has decided not to pursue release of 9650 and 9661.

Best quality fruit, including blocky shape, and good fruit color and size (Extra-large to Large) was led by RPP 9650. RPP 9661 and Sakata's SPP 1103 also showed well in both size categories. Those peppers that prolifically produced Large fruits, but were lagging in Extra-large fruit production were Baron, Wizard, Excel, Affinity, Harris Moran's HMX 5634 and Seminis' PX9930413. Fruit size for most of the lines evaluated was predominately Extra-large and Large.

There was a fair amount of fruit sunburn and some blossom end rot, but very little cat-faced fruit. There was virtually no worm damage in the trial, but stink bug damage was present. Very little of the fruit from any of the cultivars had Pepper Spot (STIP).

## Berry trials continue on Central Coast

Mark Gaskell has field trials underway with blueberries, raspberries, blackberries, currants, and gooseberries. Spring is a busy time for maintaining the plot and marking plots for data collection. Normally blueberries are

in production during the early spring period, but an unusually hard freeze in late January caused abortion of fruits and flowers, and set harvest back over two months.

The other plots also required pruning, weeding and thinning, and fertilizing.

Data collection on blueberry trials began in mid-May, and blackberry and raspberry plots began harvest in June. Blueberry varieties will be compared by both weekly yield and berry size, and data is also being collected for the second year on planting density. The gooseberry and currant trials are new and will need one or two more years before any evaluation can begin.

This has been an unusual year for berry growers along the coast—all of whom have been affected by the unusual freeze. The trial plots have also been affected.

### Mark Gaskell



UC Cooperative Extension  
Small Farm Advisor  
Santa Barbara and  
San Luis Obispo Counties

624 W Foster Rd., Suite A Santa Maria, CA 93455  
TEL (805) 934-6240 FAX (805) 934-6333  
e-mail: mlgaskell@ucdavis.edu



More than 80 people attended a blueberry field tour May 12 in San Luis Obispo for growing blueberry plants.

Mark led a field tour of the blueberry variety plot at CalPoly State University in San Luis Obispo on May 12, and more than 80 people attended to hear about critical cultural practices for growing blueberries on Central Coast small farms.

Mark also presented a poster display of research results at Manuel Jimenez's field day at the Kearney Agricultural Center in Parlier on May 16. This poster illustrated data from last season's blueberry harvest of trial plots



Farm Advisor Mark Gaskell discusses blueberry production.

comparing different in-row plant spacing and planting density. The overall cold spring has slowed blueberry harvest statewide, and late freezes have reduced production also in some of the southeastern states so that overall prices are remaining good relatively late into May. Overall, growers are continuing to expand new plantings of blueberries along the coast and some growers have responded to the freeze by adding high tunnels to help protect the high-value, off-season fruit.

### Papaya trials begin, blueberry trials in fifth year

At the end of March, Manuel Jimenez held a meeting with growers from Tulare and Fresno Counties to distribute papaya transplants for grower trials. More than 30 growers have received plants, and most will work to grow a green crop this fall. Some are planning to try the plants in hoop houses, to try to produce more ripe fruit.

After five years of observational trials of papaya, the research indicates that papaya trees can produce a small green crop 12 months after seeding. The trees produce mostly seedless fruit. Depending on the variety, trees produce 10 to 20 fruit the first year and 15 to 25 fruit the second year. However, fruit size for most varieties may be too large. In the spring of 2006, trees grown under hoop-house culture did produce ripe fruit. The fruit however, appeared to demonstrate postharvest quality problems.

Manuel was honored April 14 with the H. O. Sargent Award at the California conference of the Future Farmers of America in Fresno. Sargent Award winners are chosen for their success in promoting diversity in agricultural education and outreach.

Blueberry trials were initiated in 1997 at the Kearney Research and Extension Center in Parlier, and mid-June marked the fifth year of the blueberry replicated trials. The trials include: variety comparison, plant spacing study, plant size evaluation, mulch study and irrigation.

Harvest for the replicated blueberry trials has been underway. It looks like this will be the first year



**Manuel Jimenez**

UC Cooperative Extension  
Small Farm Advisor  
Tulare County

4437 S. Laspina St. Suite B, Tulare, CA 93274  
TEL (559) 685-3309, ext 216 FAX (559) 733-6720  
e-mail: mjjimenez@ucdavis.edu

that there will be sufficient information to produce a report this fall on the more straightforward trials, including plant spacing and plant size.

Manuel also hosted a Blueberry Field Day in May at Kearney, where nearly 200 farmers and agricultural representatives attended. For more information on the field day, see the full story on page 11.



Manuel Jimenez, small farm advisor, welcomes participants to the Blueberry Field Day May 16 at Kearney Agricultural Center

### January freeze highlights risks of growing specialty crops in California

Ramiro Lobo's research on specialty crops, including the pitahaya or dragon fruit plant, was affected by this year's freeze.

Freezing temperatures that occurred over several days during January 2007 caused significant losses to the agricultural industry throughout the state of California. According to the California Department of Food and Agriculture, total losses near an estimated \$1.4 billion, with Tulare, Ventura, Kern, San Diego and Fresno counties reporting the highest losses among the impacted counties. The damage and losses to major agricultural commodities such as citrus, avocados, strawberries, olives, nursery and flower crops are well documented and got most of the attention. However, losses to small scale producers of specialty crops in Southern California were also significant, but did not get the same level of attention.

The impact of the January freeze reminded growers of specialty crops in Southern

California of the risks associated with growing these crops. Growers of crops such as pitahaya or dragon fruit lost an estimated 90 percent of their plants based on anecdotal reports from several growers in the region. Blueberry growers in coastal areas also lost the early crop that would have been ready for market in mid-February. This delayed production for over two months until mid-April and caused growers to miss the most profitable market window for that crop. Losses were also significant for other specialty crops such as guavas, proteas and other Australian natives, and numerous nursery and flower crops.

Also lost in the process was the impact that the January freeze had on ongoing research projects conducted by UC farm advisors and specialists in San Diego and other coastal counties. A pitahaya or

#### Ramiro Lobo



UC Coop. Extension,  
Small Farms & Agricultural  
Economics Advisor  
San Diego County

334 Via Vera Cruz, Suite 152 San Marcos, CA 92078  
TEL (760) 752-4716 FAX (760) 752-4725  
e-mail: relobo@ucdavis.edu





Left photo: Some early crops of blueberries were lost to January's freeze. Right photo: Pitahaya trials in Irvine suffered significant losses.

dragon fruit variety evaluation trial at South Coast Research and Extension Center in Irvine, suffered significant losses and several of the varieties under evaluation will need to be replaced entirely. Blueberry variety evaluation trials in Carlsbad also suffered significant losses and will impact the quality of the data collected for the current year because some varieties will be impacted more severely than others. Research projects with avocados, mandarins and guavas were also impacted by the freeze. Assessing the damage to research projects is ongoing and may never be complete.

However, one positive outcome is that the freeze also allowed us to screen cultivars based on their susceptibility to freeze. Most importantly, the January freeze highlighted the risks involved with growing specialty crops and the steps growers must take to manage these risks in order to minimize their impacts.

### Strawberry evaluations in Fresno County

Over the past 12 years, we have conducted eight strawberry variety trials in Fresno County looking for the ideal variety for the Central Valley conditions. In almost all of those trials, Chandler always ranked number one comparing Brix (sweetness), yield, and consumer acceptance. Chandler was always followed closely by Camarosa, which generally yielded about 10 percent more than Chandler, but was not as sweet, especially in the early part of the season.



Several strawberry varieties in Fresno County have been tested consistently over the last 12 years.

Varieties that have been evaluated over the years have included Selva, Diamonte, Red Crest, Sweet Charlie, Totem, Cuesta, Gaviota, Irvine, Aromas, Pajaro, Seascape, and Carlsbad. Some

were lower yielding, some were lower in soluble solids (sugar), some were too small or split, and others just did not taste very good.

In 2006 we evaluated

#### Richard Molinar



UC Cooperative Extension  
Small Farm Advisor  
Fresno County

1720 S. Maple Ave., Fresno, CA 93702  
TEL (559) 456-7555 FAX (559) 456-7575  
e-mail: rhmolinar@ucdavis.edu

seven varieties, several of which looked very promising. We evaluated for Brix, berry size, total yield, marketable yield, and miscellaneous characteristics such as splitting or fruit rot.

From Table 1, Camino Real yielded exceptionally well, followed by Treasure and Andana.

Table 1. Marketable Yield - Total

Variety	lbs/plot	Lbs/acre	% marketable
Andana	64.58	25,031	79
Chandler	59.70	23,139	78
Festival	63.70	24,690	78
Camarosa	63.28	24,527	81
Treasure	66.45	25,756	80
Aromas	60.44	23,426	77
Camino Real	70.18	27,202	82

Andana was also the largest sized berry from Table 2, followed by Aromas. Both of these varieties, however, were somewhat low in sweetness (total Brix). The variety Treasure was still a good-sized berry, had

Table 2. Berry Size and Sweetness (Brix)

Variety	Berry Ave gms	Brix
Andana	21	7.8
Chandler	21	8.7
Festival	20	7.9
Camarosa	23	8.5
Treasure	22	8.5
Aromas	24	6.9
Camino Real	27	7.2

a season overall sweetness average comparable to Chandler and Camarosa, and as pointed out above, had a good season average.

We will look at Treasure again for the 2007-08 season and also a new variety called Albion. Observations in a grower's field in 2007 look exceptionally good from a flavor, size, and sweetness standpoint.

### Specialty melon production

Cantaloupes and watermelons—the mainstays for summer treats—may be substituted with some of the specialty melons. A favorite over the years has been an Uzbek, or Russian melon that at one time was grown on about 200 acres in Fresno County.

In 2006, 13 different melons were evaluated for production, color, sweetness, and size.

The data is being analyzed; however, preliminary results show very good marks for Uzbek, Hami, Piel de Sapo, Cleo, and Esmeralda.

These and the personal watermelon varieties will be tested again in 2007.



A variety trial of specialty melons continues this year.

### Study of urban agriculture under way

Kristin Reynolds continues to examine urban and peri-urban agriculture.

Urban and peri-urban agriculture can be defined as production and marketing of food, fodder, fuel, or livestock in or around cities. It includes community gardens, urban farms, and farms on the edges of cities. Many of these operations produce vegetables for nearby urban consumers, and may provide access to these foods to low-income individuals.

Urban producers face many of the same production-related challenges as those experienced by small-scale rural farmers, such as drought or pest pressure. However, proximity to cities introduces additional challenges related to rising land prices and social factors such as conflicts between farming and non-farming neighbors.

As farming and urban areas increasingly intersect, awareness of the numerous issues confronting small-scale, limited resource urban and peri-urban growers can enhance programming designed to serve this diverse group of producers. To this end, Kristin is conducting an assessment of urban and peri-urban farmers and gardeners in order to identify useful areas of extension outreach. The research is being conducted in Alameda County, which is home to at least 40 urban gardens, and 424 farms, the majority of which are less than

200 acres in size (NASS, 2002). Findings will be shared locally through culturally appropriate formats, and summarized on the Small Farm Program website.

In addition to the urban/peri-urban agriculture assessment, Kristin and then-Interim Director Marita Cantwell attended the Agriculture at the Metropolitan Edge symposium in April. The two-day event was hosted by the Agriculture at the Metropolitan Edge program at UC Berkeley, under the directorship of Sibella Kraus. The symposium brought together decision-makers, academics, and advocates working in agriculture, food systems, and land use to discuss issues confronting agriculture in urbanized areas, along with some innovative approaches used to negotiate these issues. Presenters included land use planners, agricultural scientists, and food security advocates, as well as Agricultural Secretary A.G. Kawamura, who spoke of his own experience as a specialty crop producer at an afternoon plenary session.

Kristin Reynolds



Program Representative  
UC Small Farm Program  
U C Davis

1 Shields Ave, Davis, CA 95616  
TEL: (530)752-7779 FAX: (530)752-7716  
e-mail: kareynolds@ucdavis.edu

## 2007 Census of Agriculture

Make sure you are counted!

The USDA Census of Agriculture is conducted every five years, and is the most comprehensive source of statistics about the nation's agricultural system. The USDA defines a farm as "any place from which \$1,000 or more of agricultural products were produced and sold (or would have been sold)" including farms, ranches, nurseries, and greenhouses.

The last Census of Agriculture was conducted in 2002. Out of a total 2,128,982 farms in the United States, 59 percent received less than \$10,000 from

sales of agricultural products, and 79,631 farms were located in California. Census information is used to enable policymakers to make informed decisions concerning farm policies and services, including those which affect smaller farms.

The USDA National Agricultural Statistics Service (NASS) will mail out surveys in late December of this year, and operators will also be able to submit their information online at that time. To be sure that your farm is included in the 2007 Census, visit <https://www.agcounts.usda.gov/cgi-bin/counts>.

This USDA-NASS AgCounts Web page includes a short form that you may submit online to make sure that you receive a survey as part of the Ag Census. Instead of using the Internet, you could also call toll-free (800) 892-1660 and ask to receive an Ag Census survey. Information that you provide is kept confidential by law, Title 7, U.S. Code.

The 2002 Ag Census included statistics about the ethnicity, race and gender of California's farmers, see table below.

California Operators by Ethnicity, Specified Race, and Gender Distribution*						
(Source: 2002 Census of Agriculture: <a href="http://www.nass.usda.gov/Census_of_Agriculture/index.asp">www.nass.usda.gov/Census_of_Agriculture/index.asp</a> )						
White	Spanish, Hispanic, or Latino Origin	Asian	American Indian or Alaska Native	More than One Race	Black or African American	Native Hawaiian or Other Pacific Islander
112,321	11,985	5,379	1,560	899	388	354
Male 84.2%				Female 15.8%		
* Note that numbers will total more than 79,631 (the number of farms in California) because these statistics describe the number of operators, and one farm may have multiple operators.						

## More than 200 gather to discuss, taste southern highbush blueberries

By Brenda Dawson, Communications Coordinator

A chance to touch and taste a wide variety of blueberries at Kearney Agricultural Research Center brought nearly 200 people to the Blueberry Field Day and Tasting held May 16 at the UC facility in Parlier.

“The highlight is always when the growers get to go out and see the blueberry plants and taste the berries,” said Manuel Jimenez, Cooperative Extension small farm advisor in Tulare County, who planned the event. “It’s one thing for us to tell them about the varieties, but at least in the field, they can see how happy the plants are or how weak.”

Among the day’s participants were farmers, potential farmers and ag industry representatives—some traveling from as far away as Colombia and Australia to attend. The program’s information was well received by many California farmers considering planting blueberries.

“All of the information from the field trials, from the nurseries and the professor from the University of Georgia—to get all of this information in one day is very valuable,” said Norma Cordova, who attended with her husband. The couple own approximately 800 acres near Denair and plan to try planting an acre of blueberries in October, in addition to the grains and almond trees they currently farm.

Florencio Govea participated in the field day and said he hopes blueberries could be a

profitable option for growing on his 6 acres in Riverdale while he maintains his current job.

“I think it’s promising,” he said.

He also planned to share the information he gained at the field day with his Spanish-speaking parents who currently farm a variety of vegetables.

One of the day’s speakers was Scott NeSmith, from the University of Georgia’s blueberry



Jose Ochoa, of Sakumus Brothers in Turlock, exams the scar-end of a blueberry during the Blueberry Field Day May 16 at Kearney Agricultural Research Center.



Allan Lombardi, a citrus and plum grower from Tulare, checks out a poster on soil pH at the Blueberry Field Day May 16 in Kearney.

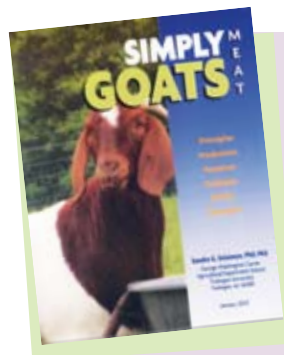
breeding program. Jimenez asked NeSmith to speak as someone who is directly involved in the evolution of southern highbush blueberries.

Other presenters included UC researchers as well as representatives from the California Blueberry Growers Association, blueberry nurseries and the U.S. Highbush Blueberry Council.

For more information on growing blueberries and future field days, visit [www.sfc.ucdavis.edu](http://www.sfc.ucdavis.edu) or contact your local small farm advisor.

### Grocery chain starts loan program for growers

Whole Foods Market recently announced it is seeking farmers and other food producers who are interested in participating in its new Local Producer Loan Program. As part of a company-wide initiative, the company plans to provide up to \$10 million annually in low-interest loans to small producers in the United States. The loans are designed to aid producers in capital expenditures and expansion, and eligible growers must meet Whole Foods’ quality and animal compassionate standards. For more information, visit [www.wholefoodsmarket.com/products/locallygrown/lplp/index.html](http://www.wholefoodsmarket.com/products/locallygrown/lplp/index.html).



### New guide advocates meat goats for small farmers

The United States is the largest goat meat importer in the world, and California has more dairy goats than any other state—according to a new book in the Small Farm Center’s agricultural library, *Simply Meat Goats*. Written for the new goat producer and published by George Washington Carver Agricultural Experiment Station at Tuskegee University, the book delves into the principles, production, practices,

problems, profits and potential of the goat market. Author Sandra G. Solaiman, Ph.D., hopes that the manual will not only introduce basic concepts, but also “encourage small and mid-size farmers to consider goats as an alternative agricultural enterprise.” Solaiman, an associate professor of animal and poultry sciences at Tuskegee University in Tuskegee, AL, also wrote the 2005 Small Farm Center research report “Outlook for a Small Farm Meat Goat Industry for California.” Her current research focuses on varieties of goat production systems.

For more information about the book or to order copies, contact Solaiman at 105 Milbank Hall, Tuskegee University, Tuskegee, AL 36088 or [ssolaim@tuskegee.edu](mailto:ssolaim@tuskegee.edu).



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