



Small Farm News

Small Farm Program • Cooperative Extension • University of California

Growing cherries: How to avoid pits, reap juicy rewards

By Shermain Hardesty, Program Director

Editor's Note: This article is based on presentations made by farm advisor Joe Grant with UCCE San Joaquin County, Extension specialist Beth Mitcham with UC Davis, and Shermain Hardesty for the cherry short course at the 2009 California Small Farm Conference. Presentations are available on the Small Farm Program's web site: <http://www.sfp.ucdavis.edu/events/09cherry.html>.

As the first tree fruit of summer, sweet cherries are of considerable interest to small producers. Sweet cherry plantings in California began to increase significantly in 1993, and have grown steadily since, from 12,000 acres to 32,500 acres in 2008.

This growth has been accompanied by diversification in varieties and growing areas. While San Joaquin County is still the state's leading producer, much of the new acreage is in Fresno, Tulare and Kern Counties, where harvesting begins in early May.

Weather conditions have a significant impact on yields. For example, cherry orchards in California averaged 1.6 tons per acre in 2006 compared to 3.2 tons per acre in 2008.

Varieties

Bing remains the dominant variety in California; it comprises 60 to 70 percent of the state's shipments. The fruit is large, firm and durable; however, the Bing variety is susceptible to spurs, doubles, suturing, and rain cracking. Bings also have a high chilling requirement. New plantings in California are focused on early-bearing varieties, particularly Brooks and Tulare, which are usually



Photo courtesy USDA-ARS

Miss the workshops?

In this edition of Small Farm News, we've summarized some of the information from key workshops and tours at the 2009 California Small Farm Conference—on the topics of cherries, urban agriculture, specialty potatoes, garlic, dry beans for direct marketing, growing pomegranates, olives for olive oil, and seed saving for heirloom tomatoes.

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Siskiyou County producers Greta Hockaday, left, and Carol Crebbin examine vegetables for sale at the Sacramento Farmers Market during a conference short course.

Small Farm Conference a 'stimulus' for farmers

More than 500 farmers and agricultural professionals participated in the 2009 California Small Farm Conference, held March 1-3 in Sacramento.

The three-day event included 25 workshops related to farm transitions, specialty crops, agricultural marketing, farm equipment and other topics. Optional tours on the first day of the conference highlighted cherry production, urban agriculture,

small-scale livestock, regional marketing, transitioning to organic, and farmers market innovations. The UC Small Farm Program is an ongoing sponsor of the conference, which this year included more than 20 speakers from UC Cooperative Extension, UC Davis, and UC Berkeley.

"These next two days offer you our version of a stimulus package," said Allen Moy, conference president, to an audience of small farmers, farmers market managers, students, beginning farmers, and experienced farmers before a day of work-

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Director's Message

Serving California's 68,536 small farms for 30 years

The UC Small Farm Program officially began in 1979, amid concerns that small-scale and family-operated farms were endangered. New mechanization combined with the economics of the time encouraged farmland consolidation, and saw the number of farms dropping nationally.

In the "Family Farm Viability Study" that preceded the creation of our program, authors from state agencies and the university system encouraged policies that would promote the family farm "as indispensable to a sound agriculture and a prosperous rural society." Chief among the recommendations was university research and education, specifically for the needs of small-scale farmers—and shared with a larger number of family farmers.

Today, 30 years later, the arguments put forth in the Family Farm Viability Study sound eerily familiar. Developing marketing alternatives and identifying new niche crops are still pressing needs. The challenges for which the UC Small Farm Program was created clearly continue today.

But 30 years later we are in the midst of an up-swell of public support and awareness—driven by consumer demand and met by entrepreneurial, small- and moderate-scale farmers.

Consider, for example, that California agritourism operators re-



Shermain Hardesty

ported almost \$6.6 million in gross receipts in 2002, according to USDA. Only five years later, California agritourism reported more than 5 times those earnings, nearly \$35 million. Consumers are spending more money—and paying more attention to—connecting their food with individual farmers.

Look again at the headline: 30 years and 68,536 small farms.

An entire generation fits into 30 years, a fact reminded us by 28-year-old Thaddeus Barsotti's speech at the California Small Farm Conference. When his mother, Kathleen Barsotti, helped start the Davis Farmers Market, sold directly to chefs, and began a CSA—the ideas were groundbreaking. Today's small farmers, like Thaddeus and brothers, continue to break ground with more competitive crops and marketing structures.

68,536 represents the importance that small scale farmers play in California agriculture—approximately 85 percent of the state's farms, as reported by the USDA Census in February—and a success, when viewed in light of those concerns 30 years ago of disappearing small farms.

What hasn't changed in 30 years is our mission to enhance the long-term viability of small farms through research-based, scale-appropriate solutions. California's 68,536 small farms represent our ongoing challenge to share information with an ever-changing and highly diverse farming population.

Shermain D Hardesty

program news

New agritourism coordinator Penny Leff has joined the Small Farm Program team. Her primary duties will include working with the UC Agricultural and Nature Tourism workgroup, agritourism-related education, and the CalAgTour.org database. Leff recently worked with the Growers Collaborative as part of Community Alliance with Family Farmers and has co-authored a direct marketing study with SFP director Shermain Hardesty. Leff can be reached at (530) 752-7779 or paleff@ucdavis.edu.

Preliminary research brief on urban agriculture is online at www.sfp.ucdavis.edu/docs/urban_agriculture09.pdf. Written by **Kristin Reynolds**, the paper "Urban Agriculture in Alameda County, CA: Characteristics, Challenges and Opportunities for Assistance" includes preliminary results from a survey of urban agriculture operations in Alameda County.

Niche Meats Marketing Conference held March 26-27 in Modesto was sponsored by the UC Small Farm Program. SFP director **Shermain Hardesty** presented information about impacts of a niche meat processing facility on a local economy.

Helping family farmers comply with labor laws is the topic of a recently published UC Delivers article, which highlights the work of SFP advisor **Richard Molinar** and assistant **Michael Yang**, available online at http://ucanr.org/ucdelivers/molinar_labor.

A strawberry workshop held March 18 in Fresno was lead by SFP advisor **Richard Molinar** and assistant **Michael Yang**. The meeting included presentations from SFP director **Shermain Hardesty**, as well as farm advisors **Chuck Ingels** and **Maxwell Norton**.

Introduction to labor management issues was the topic of a workshop attended by approximately 60 farmers, mostly ethnic Chinese, Feb. 19 in San Jose. Organized by SFP advisor **Aziz Baameur**, the workshop included presentations from **Richard Molinar** and **Howard Rosenberg**.

Conferencia para Agricultores took place Feb. 11 with 45 farmers attending and covered topics from fumigation to food safety. The annual conference for Hispanic farmers at Kearney Ag Center is organized by SFP advisors **Manuel Jimenez** and **Richard Molinar**.

PlacerGROWN Conference was held Feb. 7 in Lincoln, and included a display from the UC Small Farm Program and a workshop taught by SFP director **Shermain Hardesty** on "Understanding and Managing Your Marketing Costs."

Fond farewells were bid to **Kristin Reynolds**, who has moved on from her position with the Small Farm Program to focus on completing her doctoral program.

UC Santa Cruz farm manager, Placer County farmer honored

The 2009 Pedro Ilic Awards were presented to Dan Macon, a Placer County farmer and community organizer, and Jim Leap, a farm educator with UC Santa Cruz Center for Agroecology and Sustainable Food Systems (CASFS). The awards were presented by Shermain Hardesty, director of the UC Small Farm Program, March 2 at the California Small Farm Conference in Sacramento.

The Pedro Ilic Award for Outstanding Farmer was presented to Dan Macon, owner of Flying Mule Farm in Placer County. He and his family grow vegetables on 3.5 acres with power supplied by a mule named Frisbee. The family leases an additional 600 acres to raise grass-fed lamb. They sell their products primarily to farmers markets, but also to local restaurants, retail stores and the newly formed Sierra Foothills Meat Buying Club.

One of Macon's nominators was Roger Ingram, director of UC Cooperative Extension in Placer and Nevada counties.

"Dan is not only a successful producer, but an active and contributing member of the agricultural community," Ingram wrote. "He has been the creative force behind the development of many successful programs that serve agriculture in Placer County."

Macon's agricultural leadership has helped foster Small Farm Progress field days, the Placer Ag Futures Project, and Placer County Farm and Barn Tour, an annual county-wide agritourism event. He was also instrumental in developing a mobile poultry processing unit and is a member of the Placer County Agricultural Commission, Foothills Farmers Markets board, and Gold Country Sheep Producers Association.

In accepting the award, Macon paid



Dan Macon, left, and Jim Leap, right, were honored with the 2009 Pedro Ilic Awards, presented by Shermain Hardesty, center, at the California Small Farm Conference.

homage to his fellow farmers. "I'm really lucky to be amongst a community of farmers in Placer County that I learn from each day," he said.

Honored with the Pedro Ilic Award for Outstanding Educator is Jim Leap, manager of the UC Santa Cruz Farm, part of CASFS. His role over the last 19 years—besides managing the university farm—has included teaching in its six-month apprenticeship program, overseeing the farm's research trials, cooperating with outside researchers, contributing to training publications, and sharing information with visitors, students and farmers.

Leap was nominated by Martha Brown of CASFS, who called him a "gifted educator" in the apprenticeship program.

"His classes on starting a farm give apprentices the 'reality check' they need as they plan their futures in agriculture," she wrote. "He is able to offer students

the type of practical knowledge born of countless hours spent on the seat of a tractor, fretting over the weather, walking the fields, nurturing and harvesting produce, and marketing what he grows."

Former apprentices and current farmers Nancy Vail and Jered Lawson, of Pie Ranch near Pescadero, also nominated Leap.

"We, along with many other past UCSC apprentices

who are now small-scale farmers, owe so much to Jim Leap," Vail wrote.

Before working for the University of California, Leap spent 15 years farming in Fresno where he also worked closely with farm advisor Pedro Ilic. He credits Ilic "almost single handedly" for encouraging him to pursue a college degree and a career in agricultural education.

"I'm being honored here as an educator thanks to Pedro Ilic," Leap said in accepting the award. He also thanked Tom Haller (a founder of the California Small Farm Conference) and his father for their career guidance.

The Pedro Ilic Awards are named for the Fresno County small 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. Ilic was one of the original advisors of the Small Farm Program, when it was established in 1979.

More Info:

Nominations for the Pedro Ilic Awards are accepted year-round. For more information, visit www.sfp.ucdavis.edu/awards



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The Small Farm Program is a statewide research and outreach program that serves the needs of California's small-scale farmers.

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Conference — *FROM PAGE 1*

shops began.

One of the featured speakers during the conference was Thaddeus Barsotti, who grew up on his parents' farm in Capay Valley and now operates Farm Fresh to You with about 10,000 active customers in the greater Bay Area. He discussed his family's work with early farmers markets, selling directly to chefs, and starting a CSA—as well as their current business model, which is a flexible CSA where customers receive deliveries direct to homes and offices.

"I'm here making a plea to continue the food revolution," Barsotti said. "The next major step is to overhaul the way in which food is distributed."

A.G. Kawamura, secretary of the California Department of Food and Agriculture, also gave a keynote address at the conference. He shared his experiences as a grower in Southern California, working with more than 25 different commodities over the years, and watching friends go out of business.

"We failed to plan for our agricultural future in Orange County," he said. "[We've learned the] horrible lesson of taking some of the best properties ... and watching them get paved over."

Kawamura focused on what he called "predictability" as a way for farmers to increase their odds of succeeding and to manage their risk—through planning, securing agricultural resources, and investing in infrastructure.

The Small Farm Program also presented the Pedro Illic awards during the banquet. See p. 3 for full story.

Above left: Brian Fitzpatrick, of Fitzpatrick Winery, discusses his wines and vinegars made from organic grapes with Lorrie Scott, a farmers market manager from Escondido. Scott was exploring the Sacramento Farmers Market as part of a short course.

Above right: Randy Stannard, far right, food access coordinator at Soil Born Farms, leads short course participants on a tour of the organization's Rancho Cordova location.

At right: Patrice Dreckman, of Rainbow Heithers Nursery & Research, signs up for a Small Farm News subscription at the Small Farm Program's display board during the conference.



"Our mission is to create predictability for producers," he said. "But the rest of the public has to endorse our predictability too."

During a banquet March 2, a third keynote address by food writer Ann Evans looked at some of the community efforts in the city of Davis to connect with farmers. Another important part of the banquet were awards presented to farmers, agricultural educators and agricultural advocates.

Tom Haller, one of the founding organizers of the conference, presented the second annual award in his name to Judith Redmond, co-owner of Full Belly Farm and recent president and former executive director of Community Alliance with Family Farmers.

"Judith is the ultimate practitioner of

See you in San Diego!

Mark your calendars for next year's California Small Farm Conference Feb. 28 – March 10, 2010. The 23rd California Small Farm Conference will be in San Diego. More information about the 2010 event will be available as it is planned at www.californiafarmconference.com.

sustainable agriculture and family farming but is also one of its most powerful visionaries and leaders," Haller said in presenting the award.

Casey Anderson, with Farm Bureau in San Diego, introduced the audience to next year's conference location: San Diego. San Diego County, he noted, is No. 1 in the United States in terms of the number of small farms and number of organic farms. More information about next year's conference will be available at www.californiafarmconference.com and in future editions of this newsletter.

Specialty potatoes, garlic scapes offer new niches

Ron Voss, vegetable specialist emeritus and former director of the Small Farm Program, offered several suggestions to conference participants for niche crops in the world of specialty potatoes and alliums.

One of his suggestions for a niche in potatoes is seed potatoes for home gardeners.

“There has almost been a vacuum of home garden seed potatoes,” he said. “There are more now, but this has some potential for farmers who live at higher altitudes and in relative isolation.”

Other niches include potato varieties differentiated by color, flavor, maturity, culinary use, and market. Some marketing options for potatoes not yet widely explored in the United States include specially packaged potatoes, grower- or regionally branded potatoes, and ready-to-eat potatoes that are partially processed. Voss noted that in Europe, individual potatoes are identified with a sticker that names the farm, variety, and eating qualities.

He also shared a wide variety of potato types that are functional foods, particu-



Ron Voss presents information about specialty potato varieties to conference participants, including red- and purple-fleshed varieties.

larly red and purple varieties that are very high in anthocyanin, an antioxidant.

Alliums

Voss explained that there are two basic, but important facts to know about alliums, the family that includes garlic and onions. First, varieties are day-length sensitive, and as such can provide a niche based on a farm's latitude. Second, alliums are biennial, which means it takes

two seasons to go from seed to bulb to seed.

Garlic seed stalks—called scapes—can be harvested and sold in the spring as greens. Voss said that scapes are a common green sold in China, and can be steamed or stir-fried. A conference participant suggested that scapes can also be used in flower arrangements.

Specialty onion varieties can include Bermuda, Vidalia, Maui, Walla Walla, grano, granex, sweet Spanish, yellow globe, torpedo, cipollini, Japanese bunching onions, shallots, and Chinese chives. Voss noted that viruses make it important to plant certified seed, or to use a tissue culture process through a seed company.

Saving best fruits for seed is farmer's advice for heirloom tomatoes

Rather than presenting ideas for specific new varieties, Nigel Walker of Eatwell Farm talked to conference participants about his practice of seed saving to “acclimatize” heirloom tomato plants to his farm.

Eatwell Farm in Dixon has a 900-member CSA, but is also renowned for its heirloom tomatoes sold at the Ferry Plaza Farmers Market, where customers taste and argue about the best varieties of the day.

Walker says his secret for selling great heirloom tomatoes is to never sell his best heirloom tomatoes—but to save those for seed.

“It pays you back year after year to not pick your best fruit,” Walker said. “I think of this as acclimatizing the plants to our farm.”

To save seeds, Walker requires harvesters to tag the best tomato plant in each row with fluorescent tape and not to pick from that plant. He reviews each of the tagged plants to determine if



Nigel Walker, Eatwell Farm

the plant and its fruit have desirable qualities. Plants that pass muster are staked with a code number for identification, and that code stays with the seeds until they are replanted. To harvest the seeds, all of the fruit from an identified plant are picked at once. The seeds are squeezed out of the tomatoes, fermented naturally in mason jars for one to three days, and then strained to remove the germination inhibitor. The seeds are then dried in a shed for three to four days before

being stored for planting.

Walker says he keeps seed going back three years, in case some of the saved seeds don't yield as expected.

“I'm just doing what farmers have done for eons, which is to save the best for seed next year,” Walker said. “I'm not quite sure of all the science behind it. All I know is they're doing well.”

But with vegetables...

Ron Voss, presenter above, noted that viruses can be a problem when it comes to applying this same idea to vegetative propagation, as for garlic and potatoes. He said farmers can save their own garlic and potatoes, but it is important to ensure they are disease-free.

Dry beans show potential for direct marketing

Steve Temple, Cooperative Extension specialist with UC Davis, shared information with conference participants from a university project that examined the potential for growing and direct-marketing dry heirloom beans.

Some of the advantages of growing beans, Temple explained, are that they are easy to produce organically, and can be produced on any size of farm. Dry beans are also non-perishable, so they can be sold year-round and provide for flexibility in direct marketing, whether via mail order, CSA box or farmers market.

For the trial project, five bush-type varieties of beans were grown: Andino, Holstein, sugar bean, Flor de Mayo and Jacob's Cattle.

One of the significant challenges to beginning a small-scale bean business is the specialized equipment needed for cutting, threshing and cleaning beans—and the start-up costs involved in purchasing the equipment. Temple suggested purchasing rare smaller machines secondhand from Midwestern farmers, but noted that availability of such equipment can be a challenge. Another option might be to share the costs of threshing and clean-



Five dry bean varieties, above, were used in the direct marketing project. Photo by Ann Prentiss of UC Davis International Agricultural Development graduate group.

ing equipment with other growers.

Additional concerns or challenges that Temple noted was the precise management and timing that goes into cutting and threshing beans. Also, though their nutritional value has been well reported, he observed there seems to be an inelastic demand for beans.

After growing and selling the beans for the project, both consumers and producers were surveyed about their percep-

tions of the beans. Temple explained that growers expected consumers to be more concerned with the appearance and “product experience” of the beans than the consumers actually were.

Instead, consumers reported that they were more interested in nutritional value, the beans' non-perishable qualities and the fact that the beans were organic—three qualities growers did not expect consumers to rank as highly.

Among the audience during this presentation was Steve Sando of Rancho Gordo, who sells heirloom bean varieties online, at farmers markets, to chefs and

to specialty retail stores. Sando objected to Temple's opinion that the market for beans is “inelastic.”

“I think [the market] is inexhaustible,” he said. “At this point, it's definitely kind of a ‘foodie’ market. We sell 90 per-

cent of our beans on the Web; the more people who do this, the more it's going to raise [consumer] awareness.”

Sando said his company currently works with four farms, but is interested in working with more small farmers.

“The more people who do this, the more it's going to raise [consumer] awareness.”

—Steve Sando,
Rancho Gordo



Sample of olive varieties. Photo by Paul Vossen. Copyright © 2007 Regents of the University of California.

For ‘boutique’ oils, choose olive varieties carefully

Paul Vossen, farm advisor for UC Cooperative Extension Sonoma County, introduced conference participants to the olive oil industry.

The United States has increased olive oil consumption per capita by 485 percent between 1990 and 2005. California produces only about 0.7 percent of U.S. consumption, with about 20,000 acres currently planted with olive trees.

“So the market is huge,” Vossen said. “And people are willing to pay more for the ‘California-ness’ of olive oil.”

Vossen explained that large olive oil orchards planted recently in California are likely to be adopting super high

density planting, which is a considerably different system than the boutique olive options for smaller farms. Super high density planting allows for over-the-row mechanical harvesters, but is limited to three main varieties: Arbequina, Arbosana and Koroneiki .

With super high density orchards, the cost of production is about \$13 per gallon for a product that is likely to be priced in bulk at \$30 per gallon. In contrast, California's boutique olive oil industry has production costs of about \$80 per gallon for product that retails around \$300 per gallon.

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Pomegranate prices down as more growers enter market

"You're not going to be able to jump on the pomegranate bandwagon with your pockets bulging with gold without a lot of hard work," said Kevin Day, farm advisor with UC Cooperative Extension Tulare County, at the beginning of his conference presentation about pomegranates.

In general, pomegranate trees do well in hot and dry conditions with high alkaline soil. Frost and rain can wreak havoc on pomegranates, including cracked fruit, *Alternaria* rot (commonly called "black heart") and other issues. Pests to think about for pomegranates include flat mite (*Brevipalpus*), aphids, and in some locations filbert worm. Day noted that the leaf-footed plant bug can also infest pomegranate orchards, though he hasn't witnessed actual fruit damage caused by this pest.

The primary varieties of pomegranate planted commercially in California are Foothill Early, Early Wonderful and Wonderful. Day noted that the two early varieties can be harvested 6-8 weeks earlier, but aren't as sweet as Wonderful.

A pomegranate orchard can contain between 150 or 200 trees per acre, with about 18-20 feet between rows, and a tree every 12 or 18 feet. Day said that though he's heard talk about machine harvesting pomegranates, he's not very optimistic about the possibility.

For fertility, Day recommended a nitrogen application at around 50 lbs/acre. He noted that farm advisor Jim LaRue used to recommend dormant spraying of Zinc, but he doesn't necessarily agree with that recommendation.

Day said that the original use for pomegranate juice was grenade, but new juice products like Pom Wonderful have stimulated consumers' and growers' interest in pomegranates.

He noted that from 2006 to 2009, the number of acres in California planted with pomegranate trees has increased from



Kevin Day shows a photo of a healthy pomegranate tree during his presentation. Cold winters, frost and rain can wreak havoc on pomegranate fruit.

12,000 or 15,000 acres in 2006, to 29,000 acres in 2009.

"We've double in three years, and that's a lot of young pomegranate trees," he said.

Increased competition often means lower prices for growers. In Tulare County prices were reported in 2006 at \$350-\$450 per ton for any variety. In 2008, prices were reported at \$100-\$150 per ton—with many lots rejected and one variety (Wonderful) almost the only variety successfully sold.

Day suggested that another option for pomegranate growers is to do the processing themselves in order to sell pomegranate juice concentrate.

However, prices named for pomegranate concentrate (at 65 degrees Brix) have also become more competitive, sliding down from \$45 per gallon of concentrate in March 2008 to \$23-\$27 per gallon of concentrate in March 2009.

"You're going to have to do the value-added (processing) yourself, I think, in order to make money," Day said.

More Info:

Kevin Day recommended the article "Growing Pomegranates" by Jim LaRue as a reliable source for more information. Read it online at <http://ucanr.org/larue/poms>

Olives — FROM PAGE 6

Such potential price premiums come with a caveat, however.

"It is almost impossible on a small farm to profit with olive oil that is not direct marketed," Vossen said.

Boutique olives are mainly grown in California's coastal and foothills regions. Without using over-the-row harvesters like the larger farms, smaller farms can differentiate themselves with a wide array of olive varieties to choose from.

Some of the varieties that Vossen

highlighted for their potential included Ascolano, Coratina, Frantoio, Hojiblanca, Kalamon, Leccino, Mission, Picual, Pudo, Sevillano. He pointed out one variety in particular—Picual de Jaén—as "the one I'd look at first in California." Vossen recommended tasting lots of olive oils from different olive varieties before choosing which to plant.

As for olive production, trees are best planted in conditions that do not encourage high vigor. It is a myth, Vossen said, that olive trees need good soil and organic matter. What they do need is well-drained soils, and no extreme

winters. Too much water to an olive tree will reduce the fruitiness, bitterness and pungency of its olives.

Olive trees shouldn't be pruned during the first 4-5 years, other than to keep the trunk clean. In the fifth year, pruning should open up the tree to let sun come in evenly. An optimal size for mature olive trees is about 14 feet tall by 14 feet wide.

In conclusion Vossen ended with a five-point rule for producing good olive oil: Start with good fruit; handle carefully; process quickly; store correctly; and sell within a year.

Sweet cherries — *FROM PAGE 1*

harvested in early May while the marketing season for Bings usually spans mid-May through June. Late-harvest varieties, such as Van and Sweetheart, are of interest to small farmers engaged in direct marketing.

Recommended rootstocks include Mahaleb and Mazzard. Mahaleb is less vigorous, less upright and more precocious than Mazzard, and tolerates drought; however, it is more susceptible to phytophthora and gophers than Mazzard. The Gisela 6 and 12 varieties have potential in California, but they require care to maintain balance between growth and fruit production.

Production management

Cross-pollination is required for most varieties; however, Bing, Royal Ann and Lambert will

not cross-pollinate each other. Cherries favor

well-drained soils; they are susceptible to ring, root rot and root lesion nematode. Although there are variations among varieties, in general, cherries do not like very low or high pH soils, salts, lack of chilling, or frost or rain at bloom or harvest. Trees are usually pruned into an “open vase” structure, but “Spanish bush” training is popular with dwarf rootstocks.

According to a University of California cost study for sweet cherries, marketable production begins in the fourth year at 0.9 tons per acre and rises to 2.4 tons by the

sixth year. Costs (planting, cultural, harvest and overhead) less sales revenues to establish a sweet cherry orchard

in the San Joaquin Valley through the sixth year totaled \$14,371 per acre. Once the orchard is established, harvest costs comprise an estimated 69 percent of total costs, and expected yield at maturity is 5.1 tons (before sorting).

Harvest and Postharvest Handling

To maximize quality, cherry harvesting should be done early in the day when the fruit is cool. Harvested fruit should be kept in the shade.

Table 1. Cherry damage

Symptom	Damage Origin
Pitting	Pedicle, packinghouse.
Surface marking	Picking container, lug side, compression damage.
Bruising	Pickers, buckets w/out padding, long hauling, high drop on the packingline.

For Bings, the color of the cherries is closely related to the flavor and soluble solids content. Quality standards in California require a minimum of 14 to 16 percent soluble solids, depending on variety. Fruit size can increase by up to 40 percent from when the fruit can first be picked until it is fully ripe. Fruit quality does not improve after harvest, although color will change during storage. Research results indicate that spraying the orchard with gibberellic acid at a late stage of fruit

development has a significant impact on retention of fruit firmness. Cherries that are marketed quickly can be harvested in a more mature, flavorful condition. However, cherries that are harvested too late will be too soft and have increased susceptibility to rapid decay, shrivel, stem browning and pitting.

Packinghouse operations have cluster cutters that separate cherry clusters to allow for sizing. The cherries are sorted to remove under-ripe, damaged and decayed fruit in a very labor intensive process. The fruit is then hydro-cooled before packing to maximize the shelf-life.

Historically, cherries were packed in wooden crates. Many packaging options have been developed recently for cherries. In addition to 16- or 18-pound boxes with a liner, they are now often packed in one- or two-pound plastic bags, or clamshell containers of varying sizes. The packed fruit should be cooled quickly and stored at 32 degrees with high relative humidity (90 to 95%). As indicated in the table 1 above, harvested cherries need to be handled with care; there are various sources of damage to cherries

Modified atmosphere packaging is ben-

Table 2. Cherry prices

Average Prices Paid to Producers California Cherries, Per Pound		
	Fresh	Processed
2006	\$1.87	\$0.21
2007	\$1.13	\$0.12
2008	\$1.42	\$0.10

eficial if storage is expected to exceed 15 days; it slows fruit ripening and decay and helps maintain the green stem color. This method involves packing the fruit in a breathable plastic bag and introducing gas.

Marketing

Per capita consumption in the United States of fresh cherries tripled between 1996 and 2007, when it reached 1.25 pounds according to the USDA Economic Research Service. The popularity of cherries has been enhanced by their antioxidant properties.

Approximately one-third of California's sweet cherry production is exported, including the majority of the early season harvest. Historically, Japan has been the largest export market, followed by Canada and Taiwan; shipments to Korea are growing rapidly.

Growers and shippers earn high premiums for their early season shipments; for example, the high price for 16-pound boxes of Brooks at the Los Angeles terminal market in 2008 was \$65 in early May and dropped subsequently by late June to \$22 (from USDA-AMS Market News).

Cherries are sorted by size at a packing house and marketed by standardized “row sizes.” A “row size 13” package contains about 1800 cherries per 20-pound box, while a “row size 10” package contains half as many cherries per box. Higher prices are paid for larger cherries.

The differences in season average prices during 2006 through 2008 displayed in table 2 reflect the significant impacts of both fruit quality and total crop size.

Producers can earn even higher prices for their cherries by direct marketing, such as selling them at a certified farmers market or farm stand. However, it is important to recognize that packing, transportation, selling and liability costs are incurred in direct marketing.

More Info:

Pest and disease management guidelines for sweet cherries:
<http://www.ipm.ucdavis.edu/PMG/selectnewpest.cherries.html>

View the entire cost study at
<http://coststudies.ucdavis.edu/files/cherryvn2005.pdf>

Urban agriculture practitioners share their challenges and success

Urban agriculture was the focus of a tour and workshop during the California Small Farm Conference, highlighted by information from a new research brief published by the Small Farm Program.

The preliminary research findings in the paper “Urban Agriculture in Alameda County, CA: Characteristics, Challenges and Opportunities for Assistance” are a result of a survey of urban agriculture operators, including commercial farms, food justice organizations, community gardens, and urban homesteaders. Information presented in the paper includes descriptions of agriculture currently practiced in Alameda County’s urban and urban-edge settings, unique challenges to urban agriculture, and potential ways in which Cooperative Extension programs might better assist urban agriculture operations.

Kristin Reynolds, author of the paper and one of the tour organizers, explained that the paper as well as the conference events help describe what urban agriculture looks like and how it works.

“Presenters shared that they have had success over time by trying different arrangements in getting land, finding a production arrangement that works toward their goal, and finding a mix for marketing and distribution,” she said. “I hope that participants gained a more in-depth understanding of the diversity of operations that can be described as urban agriculture.”

The day-long tour was planned to include three stops at different types of urban agriculture operations, but was cut short at the second stop where the tour bus was stuck in mud.

The first stop on the urban agriculture tour was one site of Soil Born Farms, where Sean Hagan, farm manager, and Randy Stannard, food access coordinator, showed participants around the 25-acre farming site, including greenhouse, in Rancho Cordova. With 15 employees and help from volunteers, Soil Born Farms sells its products through farmers markets, a CSA, produce stands, retail outlets and restaurants. The Sacramento nonprofit organization focuses on education and food access, which they define as: “Individuals have the resources, financial or other, necessary to supply themselves and their family with the food needed for a healthy and vibrant lifestyle.”

Stannard explained that though the fruit and vegetables grown on their two urban farms is “just a drop in the bucket when it comes to the food needs” of the Sacramento metropolitan area, they also are interested in raising awareness.

“Hopefully putting [a farm] here will raise the level of consciousness, and raise support for other farmers,” he said.

During the urban agriculture workshop the following day, Shawn Harrison also shared information about Soil Born Farms. Besides the American River Ranch visited during the tour, farming also takes place at a site adjacent to a school in Sacramento. Harrison discussed how his organization gained access to the land for urban agriculture.

Also during the workshop, Jason Uribe from People’s Grocery gave an overview of the Oakland-based organization’s strategies to grow, distribute, and sell healthy foods in West Oakland. The



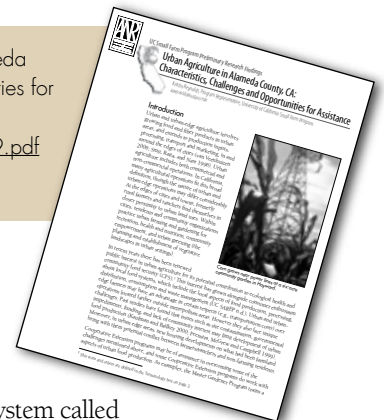
Sean Hagan, right, shows participants, including Arnold Ward, the greenhouse at Soil Born Farms.

Below, Kristin Reynolds and Ramiro Lobo gave presentations during the urban agriculture workshop.



The 12-page research brief “Urban Agriculture in Alameda County, CA: Characteristics, Challenges and Opportunities for Assistance” is available online at http://www.sfc.ucdavis.edu/docs/urban_agriculture09.pdf

Limited print copies also available, (530) 752-8136.



organization has several gardens around Oakland where they grow produce, in addition to a 2-acre parcel at Sunol Agricultural Park. The organization distributes through a CSA-style system called the Grub Box. Low-income residents of West Oakland can purchase a box of produce for around \$12 per week, which is offset by higher prices paid by other customers who act as sponsors. Uribe also discussed challenges and successes the organization has experienced.

Workshop connects farmers with buyers, distributors, restaurateurs

Connecting small-scale farmers with grocery store buyers, restaurateurs and produce distributors was the goal of a meeting held January at the Solano County Cooperative Extension office in Fairfield.

A gathering of about 60 members of the local food community met at the event organized by Mario Moratorio, small farms advisor for UC Cooperative Extension in Solano and Yolo counties.

"You can be successful at growing [produce], but in order to be economically sustainable, you have to sell your stuff," Moratorio said about the meeting's topic. "Since farmers are often so busy working on the growing side of the farm, they need guidance, contacts and names of people who are interested in buying what they grow."

Presentations at the meeting included information about Solano County agricultural regulations, tips for packaging and distributing product, and techniques for working with grocery and restaurant produce buyers. Farmers also discussed their experiences selling at farmers markets and through community supported agriculture (CSA) programs.



Mario Moratorio

One of the meeting's main messages was summed up by Paul Muller, a farmer and co-owner of Full Belly Farm in Capay Valley.

"Growing is not the hardest part," Muller said. "But the farmer who will stay in this business is the one who can market it—and can market it at a fair price."

Farmers and potential farmers at the event said they took home valuable tips.

It was two years ago at the same workshop that Sylvia and Jon Fadhl of Jovia Groves Olive Oil in Dixon first met with buyers from Raley's. Today their olive oil, made from Solano County-grown olives, is sold in Raley's stores. Saturday's meeting helped them make additional connections with distributors and restaurant owners.



Abraham Ramirez, Raley's produce manager; speaks with Paul Muller, an owner of Full Belly Farm.

"It's invaluable. We make contacts and leads at these meetings," Sylvia Fadhl said. "Each time we do something like this, it gives us more ideas. That's growing the business."

The group was treated to lunch at Fresh Choice Restaurant in Fairfield, a privately owned chain that is now sourcing many of its fruits and vegetables directly from Suisun Valley farmers.

"We believe in the farm-to-fork movement," Sandy Boyd, owner of Fresh Choice Restaurant, told farmers in the workshop. "We love you, and we love your fruits and

vegetables the way they are."

Representatives from three grocery store companies shared their advice for small-scale farmers interested in breaking into a new market.

Bill Fujimoto, owner of the independent Monterey Market in Berkeley, makes an effort to embrace seasonality, frequently buys directly from farmers and generally requests fruit that is riper than what might be sold wholesale.

"If the product is distinct, it will demand a premium," he said. "What you need is product recognition. Once you have your own pedigree you can leave the market behind (and get a premium price)."

Raley's representatives also attended the meeting and expressed interest in connecting farmers with their customers.

"One of the really important things that our customers want is your product—they want local product," said Robert Contrares of Raley's.

Anticipating the question of "what to grow," presenter Heidi Rayher of Whole Foods encouraged farmers to remember that the international produce market has access to any fruit or vegetable at any time. Local farmers, she suggested, would be most competitive growing something specific they know they can grow better than anyone else.

"Grow what grows well in your region," she said. "Try growing things that you're passionate about. Try growing things that resonate with you."

What about boxes?

For small farmers transitioning out of selling only at farmers markets or farm stands, a necessary yet easily overlooked component of marketing produce to wholesalers, distributors and retailers is the box to sell those fruit and vegetables in. Speakers at the workshop noted that boxes are a tool in a farm's marketing strategy.

Annie Rato, of Thumbs Up Distributing Inc., suggested that every box have an easily recognizable label with a name that is easy to spot. She suggested also including "a piece of the farm's story."

Paul Muller, of Full Belly Farm, shared information about the Yolo County boxes which are used by several different farms to share costs and to strengthen their regional recognition. His boxes include basic information about where Yolo County is in California—with a map—and have one panel that is personalized with each farm's name and logo.



Boxes from top, Solano County Employee CSA, Full Belly Farm, Thumbs Up Distributing



Organic Production Survey

The U.S. Department of Agriculture is conducting the first-ever Organic Production Survey as a follow-up to the 2007 Census of Agriculture. Highlighting the changing face of agriculture, the Census showed 20,437 U.S. farms engaged in organic production. This survey will give those organic producers an opportunity to share their voices and help ensure the continued growth and sustainability of organic farming.

By participating in the Organic Production Survey, producers will be providing valuable information that will help improve production methods, marketing tactics and plans for the future of the organic industry.

Look for the Organic Production Survey in your mailbox this May. As with the Census of Agriculture, the Organic Production Survey is your voice, your future and your responsibility.

CENSUS OF AGRICULTURE
YOUR VOICE. YOUR FUTURE. YOUR RESPONSIBILITY.

United States Department of Agriculture
National Agricultural Statistics Service
www.agcensus.usda.gov

Coming up: Blueberry field day and packing house tour

Farmers interested in learning more about growing blueberries or blackberries can learn from the experiences of other growers and UC researchers at two days of berry-themed events this May.

This year's blueberry field day events will begin May 19 with the Blueberry Field & Packing House tour. The tour will begin 1 p.m. at Kearney Agricultural Center and will visit different blueberry farming operations. The tour will focus on the packing operations used by different growers, from automated systems used by larger-scale producers to other options used by smaller-scale growers in their blueberry packing houses.

On May 20, the Blueberry & Blackberry Field Day will be held 8 a.m. to 2:30 p.m. at Kearney Agricultural Center. Final results of several of the blueberry field trials originally planted in 2001 will be discussed, including trials focused on variety, mulch, irrigation, plant spacing and plant size.

Manuel Jimenez, Small Farm Program advisor with UC Cooperative Extension in Tulare County, is organizing the event that has become an annual gathering for potential and successful blueberry growers of all sizes.

"My focus for small growers is really trying to find cultivars that are conducive to resale and farmers markets," Jimenez said. "Large growers are looking for high yield, but the really good-tasting varieties don't yield as much."



In addition to hearing the latest news about blueberry trials, tasting blueberry varieties has become a regular part of the annual Blueberry Field Day at Kearney Agricultural Center.

Blueberry & Blackberry Field Day & Tour

Farm & Packing House Tour

When: 1–5 p.m., May 19
Where: Kearney Agricultural Center, 9240 So. Riverbend Ave., Parlier
How much: \$20 registration

Field Day

When: 8 a.m. – 2:30 p.m., May 20
Where: Kearney Agricultural Center
How much: \$35 registration

Registration: Mary Bejarano, mbejaran@co.tulare.ca.us or (559) 685-3309, ext. 202

More information before & after:
www.sfp.ucdavis.edu/events/09blueberries

Blackberries will also be on the agenda for the day. Jimenez noted that a primary topic for blackberries will be a rotating trellis system to prevent sunburn for late-season blackberries.

"Historically, we've grown early varieties of blackberry pretty successfully, like ollalie and sylvan. Varieties that ripen in June and July usually sunburn," he explained. "We have a system that we think may prove to help minimize the sunburn on blackberries, especially if they're looking to produce later in the season."

Registration for Blueberry & Blackberry Field Day on May 20 is \$35. Registration for the Blueberry Field & Packing

House bus tour on May 19 is \$20.

To register, contact Mary Bejarano at mbejaran@co.tulare.ca.us or (559) 685-3309, ext. 202.

More information about the event—including a wrap-up of select presentations, for those who cannot attend in person—will also be made available at www.sfp.ucdavis.edu/events/09blueberries.

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