



Small Farm News

Small Farm Program • Cooperative Extension • University of California

Affiliation, restructuring discussed for future of Small Farm Program

In an effort to continue pursuing the mission of the UC Small Farm Program, administrators are exploring a potential affiliation between the statewide program and the Agricultural Sustainability Institute at UC Davis.

On Oct. 2, 2009, the University of California's Division of Agriculture and Natural Resources (ANR) announced its intentions to close the Small Farm Program in partial response to a division-wide \$9 million budget shortfall.

More specifically, administrative functions performed by the Small Farm Program would be re-assigned to division-wide support units by Dec. 31, 2009. The small farm advisors and other academics associated with the program would continue to work with small-scale farmers. Projects with existing grant funds would still be completed.

The statewide Small Farm Program was first allocated funds in 1979 to serve small-scale farmers and limited-resource farmers. According to the most recent Census of Agriculture, California has 68,536 small-scale farmers, comprising 85 percent of all farms in the state.

"For many new farmers, immigrant farmers and small-scale growers, the Small Farm Program's advisors have been the trusted first links to university research over the last 30 years—in a food system often more conducive to large-scale production," said Shermain Hardesty, director of the program.

Letters and petitions from farmers, agricultural organiza-



"Hard data said that small farmers could be viable: They just had to be innovative and stay one step ahead. And that's what they did."

Program has evolved many times over 30-year history

By Brenda Dawson, SFP Communications Coordinator

Since its official beginning 30 years ago, the UC Small Farm Program has transitioned between focusing on community development, vegetable crops, economics, specialty niche crops and marketing, but one thing has stayed the same: Serving California's small-scale farmers.

"As things changed, we have evolved with them," said Manuel Jimenez, small farm advisor since 1980. "The interest of the growers—the small-scale producers in California—has always been the focus and still is."

A movement to focus public agricultural resources on small-scale and ethnic-minority farmers found a voice in the early 1970s, in the face of declining numbers of farms and increased mechanization.

In 1977, a statewide taskforce submitted the "The Family Farm in California: Report of the Small Farm Viability Project" as a series of policy recommendations to the state on matters affecting the vitality of small farms in relation to marketing, finance, training, technology, natural resources and community services.

The taskforce 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 related specifically to the needs of small-scale farmers and increased outreach of that information to limited-resource and family farmers.

In a 1978 column for the California Agriculture journal, UC Cooperative Extension's then-vice president stated that farmers, no

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*Director's message***Full-speed ahead, as best we can**

Only days after the surprising announcement of the Small Farm Program's imminent closure, the program was awarded a grant to connect small-scale farmers with WIC vendors and low-income consumers.

This new project, though small, seemed to be a shining example of everything the program could be. The project is multi-disciplinary, with cooperation between experts in farms, food safety and nutrition. The project could help open a new direct market for some farmers, where small-scale, minority farmers could find a competitive niche.

The inherent conflict in these two pieces of news—a red light for the program, but a green light for a new project—seemed at first discouraging.

But then a conference call with the Small Farm Program's advisory board put these issues into perspective. They wanted to know: Can we appeal this decision? They could certainly try. They also wanted to know: Could the program find other funding, or is there an alternative way to structure the program?

Since then, letters of support have poured into my office, as have ideas for future funding and alternative structures. In the meantime we have continued to move forward with the Small Farm Program's work with the resources we still have, even as the structure and administrative support of the program changes.

University officials have clarified that they do not want to reduce the academic footprint of the Small Farm Program; their intentions are that research and education for small-scale farmers and limited-resource farmers continue, within the context of their larger Strategic Vision. Much of the

Small Farm Program's work can fit under the new Sustainable Food Systems Initiative, as described in the Strategic Vision.



Shermain Hardesty

But the changes are not without losses. Our long-time office manager will no longer work directly for the program, but rather for the centralized Program Support unit that the division is organizing. Additionally, we are losing our highly energetic and innovative communications coordinator, who has done so much to strengthen our communications program. Renewing contracts that expire in the future for other program employees is not guaranteed. How the program will continue to function in the changes going on throughout the division is not clear yet.

However, it is important that you know the small farm advisors are still working for you through their Cooperative Extension offices—and to the extent that they are able, through us too.

Since the closure announcement, we have moved forward with many of our pre-existing plans. The first two Profitable Niche Farming Regional Workshops were held in December along the North Coast. These workshops brought experts from throughout the statewide Small Farm Workgroup to the region to discuss specialty crops, production strategies, marketing ideas and management techniques. We intend to hold more of these regional workshops elsewhere in the state, to better share the strengths of the Small Farm Workgroup professionals with farmers and ranchers throughout California.

We are just now in the process of applying for a four-year, multi-million dollar grant through USDA to research reduced

water use for specialty crops, and the impacts on postharvest quality, consumer appeal and grower returns. This grant could help continue to support the small farm-focused work of the small farm advisors.

We are upholding our commitment to this year's California Small Farm Conference, by providing administrative leadership as well as organizing workshops and speaking throughout the three-day event.

Our agritourism program is going strong, with a new e-mail newsletter and listserv. Renovating CalAgTour.org, our statewide agritourism database, is an important component to plans for the coming year, and multiple grant applications could yield funding for future projects.

I will continue to work with the small farm advisors and other Cooperative Extension academics to seek grant funding for research and outreach. But it is uncertain how we can maintain our website and other communications efforts, support our agritourism program, and cover travel expenses to the Small Farm Conference and other outreach efforts. We are exploring other support options, including a potential alliance with the Agricultural Sustainability Institute, corporate funding and a broad-based fundraising program involving consumers who support CSAs, farmers markets and/or grocery cooperatives.

The question now is: How can we sustain this work? This is a question we are working diligently to answer, even as we continue (as best we can) to help small farms be sustainable too.

If you have ideas to share, please e-mail them to me at: sfpdirector@ucdavis.edu. I would truly appreciate hearing from you. Also, please check our website, www.sfp.ucdavis.edu, for any updates as they happen.

Blessings for the New Year,

Shermain D Hardesty



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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.

www.sfp.ucdavis.edu

Remember pesticides, air, water, workers for regulatory compliance

In this possible last issue of “Small Farm News” I wanted to discuss an issue that has become more prevalent and disturbing to many small farmers in Fresno and the rest of the state. That issue has to do with compliance with state, county, and federal laws.



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Pesticides: Any farmer that uses pesticides, organic or synthetic, must comply with laws enforced through the ag commissioner’s office in each county. A farmer that grows any product for commercial purposes (to sell) must obtain an operator identification number for pesticide use from the ag commissioner (California Code of Regulations, Title 3, Division 6. 6622. Operator Identification Numbers).

Air Quality: Districts in California may have different laws regarding burning. In the San Joaquin Valley (SJV) most agricultural burning is prohibited with certain exceptions until June 2010, including prunings from certain fruit trees, or orchard farms of less than 20 acres. For the SJV see the following web page http://www.valleyair.org/BurnPrograms/Ag_Burning.htm.

Water Discharge: If you own or operate irrigated lands, or if you manage irrigation water supply, and water drains from your property, you are a Discharger and must be covered by the Irrigated Lands Conditional Waiver or by Waste Discharge Requirements (WDRs) to comply with the California Water Code http://www.waterboards.ca.gov/centralvalley/laws_regulations/.



Field assistant Michael Yang, left, and farmer Tchieng Fong discuss farming issues in the field.

Department of Industrial Relations: For the last four years this California department has been in the media extensively concerning their regulations and the impact on small family farms. The two main divisions under this department are Labor Standard Enforcement and Occupational Safety and Health (OSHA). There are at least 15 posters that must be made

available to employees, accessible at all times. These are available for downloading at <http://www.dir.ca.gov/wpnodb.html>. These two divisions frequently conduct unannounced “sweeps” of farms to inspect for compliance. There are usually no warnings given—and fines can range from \$3,000 to \$36,000 per farm depending on the severity of the non-compliance issue.

The main considerations to be aware of with labor are workers compensation insurance, minimum wage, wage statements

and minors working on the farm.

All farms who have workers, whether paid or not, must have a workers compensation policy. The only person(s) exempt from this are the farmer himself/herself, and/or the legal partners of the farm. Legally, the spouse and children are not exempt unless they are listed as partners. An employee can be paid in cash or by check, but wage statements must be given to the employee. A sample wage statement is available at <http://www.dir.ca.gov/dlse/PayStub.pdf>.

OSHA will inspect for drinking water quality, quantity for the workers, disposable single-use cups, bathroom facilities, water for washing, soap, single-use towels, distance to restrooms, number of restrooms based on the number of workers and gender, shade and heat illness training, first aid kits, injury and illness prevention programs (IIPP), emergency action plans, and other safety related issues. More information can be obtained from their website, <http://www.dir.ca.gov/dosh/dosh1.html>.

A closer look at many of these compliance issues is available in an online report at <http://ucanr.org/molinar/legal.pdf>

New cost studies for citrus, stone fruit, leafy greens

New studies showing costs of establishing and producing fresh market oranges, nectarines, peaches and plums in the Southern San Joaquin Valley are now available from the University of California Cooperative Extension. Also available are new cost studies of iceberg lettuce and romaine hearts on the Central Coast.

Each analysis is based upon hypothetical farm operations using practices common in a particular region. Input was provided by farm advisors, researchers, growers, accountants and consultants.

Assumptions used to identify current costs for the individual crops, cultural and material inputs, cash and non-cash overhead are described. A ranging analysis table shows profits over a range of prices and yields. Other tables show the monthly cash costs, the costs and returns per acre and hourly equipment costs.

These and other cost studies can be found online at <http://cost-studies.ucdavis.edu>, at local UC Cooperative Extension offices or by calling UC Davis at (530) 752-1515.

Survey: Food safety costs doubled for California leafy greens growers

By Shermain Hardesty, SFP director and
Yoko Kusunose, graduate student researcher

California's Leafy Greens Products Handler Marketing Agreement (LGMA) was created in 2007 as a response to the 2006 E. coli outbreak attributed to spinach grown in the Salinas Valley. The marketing agreement is a voluntary program for California handlers of lettuce, spinach and other leafy greens. According to the LGMA website, approximately 99 percent of leafy greens grown in California are sold under the LGMA requirements.

Arizona has also adopted an LGMA, and Florida is considering doing the same. In June 2009, a proposal for a national leafy greens marketing agreement was submitted to USDA's Agricultural Marketing Service.

Although the LGMA is an agreement between handlers, many of its compliance requirements fall upon growers to implement. Many small-scale leafy greens growers who only sell directly to consumers, chefs and independent grocers are not part of the LGMA.

In 2008 and 2009, we surveyed California's leafy green growers to measure the costs of implementing and complying with LGMA and other food safety programs—and to determine whether costs varied by farm size or by other characteristics. Our survey questions pertain specifically to the 2006 and 2007 seasons, before and after the creation of LGMA.

Results from this survey were presented in September at USDA hearings in consideration of a national LGMA.

Survey methods

We compiled a list of 192 leafy greens growers in Monterey and Fresno counties, from agricultural commissioners' records. Monterey County leads the nation in the production of head, leaf and romaine lettuce, and spinach; Fresno County growers often supply LGMA signatories with leafy greens during the fall and spring seasons when the primary supply regions shifts between Monterey and Arizona's Yuma County.

We sent a questionnaire to these 192 leafy greens growers in June 2008 and again in August as a follow-up. We also conducted phone interviews to increase



Farm workers spray disinfectant on cut ends after harvesting head lettuce, a practice not required by LGMA.

More about LGMA

Three aspects of California's Leafy Greens Marketing Agreement account for its large impact on California growers of lettuce and leafy greens: its wide scope, its enforceability, and its extensive industry coverage.

The 14 leafy greens products covered by the LGMA are arugula, endive, red leaf lettuce, baby leaf lettuce, escarole, romaine lettuce, butter lettuce, green leaf lettuce, spinach, cabbage, iceberg lettuce, spring mix, chard and kale.

The LGMA is funded by an assessment on members; the initial assessment rate of 2 cents per 24-pound carton was recently lowered to 1.5 cents. The California Department of Food and Agriculture conducts audits using a 273-item checklist.

Each signatory member is required to have a compliance plan that addresses guidelines for best practices covering five main risk categories: growing environment, water, soil amendments, worker practices and field sanitation. Growers must compile their own compliance manual and document that compliance is verified for all procedures on a regular basis. All records must be kept for at least two years. Additionally, the California Department of Food and Agriculture must verify compliance through periodic field- and paperwork audits.

The complete set of requirements is available at the LGMA web site, <http://www.caleafygreens.ca.gov/members/resources.asp>.

the response rate. The survey results are based on responses from the 49 growers who responded, agreed to participate, and confirmed that they did indeed grow leafy greens.

Key findings

Growers' costs for one-time modifications made specifically to comply with LGMA averaged \$21,490, or \$13.60 per acre. Growers also reported their seasonal food safety costs more than doubled after the implementation of the LGMA, increasing from a mean of \$24.04 per acre in 2006 to \$54.63 per acre in 2007.

It is important to note, however, that some of these increases in seasonal costs may have been incurred in order to comply with food safety programs other than the LGMA.

The sum of the average modification costs and 2007 seasonal food safety costs—\$68.23—represents almost 1 percent (0.93%) of growers' average lettuce revenues. Since it appears that growers may have systematically excluded certain kinds of costs when reporting their seasonal food safety costs, a combined per acre cost of approximately \$100 could be a more accurate average per acre cost.

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Updates from the agritourism program

by Penny Leff, SFP Agritourism Coordinator

Building connections between farmers, visitors and organizers

The UC Small Farm Program is helping facilitate the sharing of agritourism news and information among California farmers, ranchers, agritourism operators, advisors, organizers, promoters, regulators and others involved in the business of agritourism. Here are some of the communication channels provided by the Small Farm Program:

- **Promote your business:** CalAgTour.org is an online statewide directory of agritourism operations, which allows viewers to search for a farm or ranch to visit. Listing is free. Sign your farm or ranch up: <http://ucanr.org/agritourism/sign-up>.

- **Get news and new ideas:** AgTour Connections is an e-mail newsletter for agritourism operators, advisors, organizers, promoters, regulators, and everyone else involved in the business of California agritourism. Check out previous issues and subscribe: <http://www.sfp.ucdavis.edu/agritourism/emails>.

- **Join the conversation:** Agtour-connect listserv, hosted by UC Davis, is a discussion group for everyone involved in California agritourism. This list is for posting thoughts, events, questions, solutions, news or updates to other list members. Sign up here: <http://ucanr.org/subscribe/agtour-list>.

Changing the rules: Permitting and regulating agritourism

Further analysis of the 2009 survey of agritourism operators (see articles in Vol. 2, 2009 newsletter) will determine what type of extension training or workshops would be most useful to operators.

One clear message received from operators through the survey was that county permitting and regulations are a major challenge. In response to this, we searched and obtained planning documents and sample zoning ordinances related to agritourism from as many counties as possible. Now on our website, at www.sfp.ucdavis.edu/agritourism/planners, are examples of various county general plan updates, proposed amendments, winery and ranch marketing ordinances and even background reports and notes from advisory committee meetings. We hope these resources help county staff, officials, farmers

and ranchers find examples of policies and regulations that streamline the process and ease the regulatory burden for agritourism operators.

Liability Research: Second to permitting and regulations, liability and insurance issues were the biggest challenge reported by agritourism operators in the recent survey. At least ten other states have passed state-level legislation that limits liability for agritourism operators, as long as they register their operations and follow certain rules. We have begun to study how these laws were passed, how effective they are, how they benefit agritourism operators and communities in their respective states, and how California agritourism operators and communities might benefit from similar legislation in California.

Food safety costs — FROM PAGE 4

To evaluate the effects of farm size on compliance costs, we separated respondents into three groups based on their 2007 gross revenue—farms with less than \$1 million in sales, those with \$1 million to \$10 million, and those with more than \$10 million. The middle group of growers had the highest modification costs per acre (\$18.05), followed by growers with revenues under \$1 million (\$14.82) and, lastly, growers with revenues over \$10 million (\$8.29).

Seasonal food safety costs per acre fol-

lowed the same pattern, with the costs for medium-size growers being 159 percent higher than the average for the largest growers.

“In California, we see that smaller farms are at a cost disadvantage under LGMA to the largest leafy greens growers — specifically those that have annual revenues over \$10 million.”

—Shermain Hardesty,
SFP director, in news articles

Previous research findings indicate a high degree of consolidation in the U.S. grocery sector; thus it is unlikely that growers have been able to obtain higher prices for their leafy greens in order to cover these increases in food safety compliance costs.

Since growers with revenues over \$10 million benefit from significant economies of size in

complying with the LGMA and other food safety provisions, they have the greatest capacity to absorb these costs. Furthermore, growers with revenues over \$10 million tend to hire food safety specialists to manage their compliance programs, while the owners/managers of operations with revenues under \$1 million need to manage these complex programs themselves.

It is essential that the proliferation of public and private food safety standards in the leafy greens industry be addressed, while at the same time recognizing that a one-size-fits-all approach does not take into account the fact that leafy greens growers are a highly diverse group.

How to best manage seedless watermelon: Spacing and ratios

Watermelon is a very popular summer fruit. It's nutritious, appealing, cooling, and savory. Growing watermelon brings up several questions and strategies. It offers growers several opportunities to manipulate its physiological and genetic abilities.

Planting spacing and pollinator ratio offer the best opportunities to impact fruit size and plant productivity and yield.

Plant spacing

Plant spacing is the amount of land area allocated to each plant in the field. Generally speaking, square spacing would be the most "beneficial"



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configuration to plant growth, where the space between plants in the bed or row (in-row) and between beds is the same. It gives each plant same amount of space for top and root growth.

However, because of the quasi-fixed set up of equipment, it is easier to manipulate in-row spacing while keeping between rows at fixed distance. Plants per acre, or plant density, is another way to look at this concept.

How does plant spacing affect watermelon production? Watermelon plants responded in very elastic way to spacing by correlating fruit size and fruit numbers to spacing.

A field study comparing plants spaced at 2, 4, and 6 feet apart indicated that fruit size increased as plant had more spacing. Seedless melon size went from 16.8 pounds to 18.8 pounds. Other studies have shown significant fruit size increases. More significant is the impact of spacing on the number of fruit produced per plant, or plant productivity. Plants spaced at 2-foot intervals produced about three melons. Plants at 4-foot intervals produced four melons, and those spaced 6-feet apart produced five fruit per plant (Table 1).

The results tend to vary among fields and management practices. One salient aspect of managing population densities is the level of input needed for different population density. As plant densities increase, water and nutrient inputs should also increase. In the example given in Table 1, there are three times as many plants per acre at 2-foot spacing than

at 6-foot, but the yield at the 2-foot treatment is only 54 percent higher than at 6-foot spacing, not three times higher. Fields with higher plants population require more water and nutrients, but plants are very adaptable and respond to their conditions in non-linear way. The concept goes from area-based inputs to plant population-based input calculations. Plants at wider spacing

Table 1. Seedless watermelon response to plant spacing

Spacing (ft.)	Plant productivity (melons/plant)	Fruit size (lbs.)	Yield (tons/acre)
2	2.8	16.8	59.3
4	4.2	18.0	46.5
6	5.0	18.8	38.5
LSD (5%)	0.81	NS	9.3

Guide to select cucurbit physiological defects

By Aziz Baameur

Physiological problems are those caused by non-pathogenic factors and affect fruit quality. Usually aesthetic quality is degraded. The factors in question can be either or combination of environmental, genetic or nutritional factors.



Poor pollination

Poor pollination is characterized by poor fill at the stem end. This gives the fruit (watermelon) a pear-shaped appearance.

Manage: Increase bee hive numbers in the fields



Splits & cracks

Growth splits in melons and in the skin of cucumbers.

Manage: Avoid stress: cold or drought. Potential nutritional stress or pesticide damage.



Cold damage*

Cold temperatures may result in short misshapen fruit.

Manage: Temperature control, where possible. Avoid cold temperatures around fruiting period.



Light belly color+

Light yellow to pale green color develops on the fruit. Most common on fruit in contact with moist soil.

Manage: Trellising, plastic mulch.

tend to produce more fruit per plant and larger melons than those in crowded setting.

Seedless to pollinator ratios

Under conventional planting system up to one-third of acreage is planted to seeded watermelon as pollinator. To raise the seedless margin, researchers experimented with increasing the number of seedless rows per each seeded, from 2:1 to 5:1 ratios of seedless to pollinator. Experiments in California increased the odds up to seven rows seedless for each pollinating row (7:1).

Results were disappointing at high ratio levels, above 7:1. Plant productivity (fruit/plant) dwindled due to the large number of un-pollinated or unfertilized triploid fruit.

Other experimenters attempted to abandon the segregated row

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Un-pollinated

Fruit (ovary) that is not pollinated may increase in size for a few days, then turn yellow, shrivel and die.

Manage: Provide adequate number of bee hives.



Sun scald

The exposed tissue to the sun becomes dehydrated and overheated which leads to tissue damage.

Manage: Good vine growth to protect the fruit. Shade or straw mulch.



Crack in the heart of fruit

Accelerated growth due to ample water and temperatures. Usually associated with crown-set fruit. More common in seedless.

Manage: Tolerant cultivars. Control growth condition.



Blossom end rot**

Exposure of young tissue to water fluctuation. Low calcium levels leads to tissue breakdown

Manage: Even moisture supply. Adequate nitrogen. Added calcium.

Photos by Aziz Baameur, except:

* Compendium of Cucurbit Diseases.

** Unknown photo source.

+ Photo by Richard Molinar

Watermelon — FROM PAGE 6

and adopt a mixed planting at specific ratios. Under this pattern, several triploids are planted in sequence before a diploid or pollinator is planted in the same row. Predetermined ratios dictate different geometric designs of this inter-planting.

We tested ratios of 2:1, 3:1, 4:1, 5:1, 6:1 and 7:1 in the field under differing climatic areas. The trial was prematurely terminated due to an onset of fusarium disease in the field. However, our general results support other field study trends. Data indicate that up to 5:1 ratio, production increased accordingly. Results were not conclusive, but showed yield increases as ratios increased: 2:1 (17.7 tons/acre), 3:1 (17.8 tons/acre), 5:1 (23.8 tons/acre), and 7:1 (26.3 tons/acre). These correspond to yield increases of 1 percent, 34 percent, and 48 percent over the yields at the 2:1 ratio planting. Increases of 34 percent and 48 percent far exceed the expected theoretical threshold.

Table 2. Seedless watermelon response to pollinator ratios

Plant ratios	Melon size (lbs.)	Productivity (melons/plant)	Yield (tons/acre)
2:1	15.6	2.3	17.7
3:1	15.7	2.1	17.8
5:1	17.3	2.5	23.8
7:1	16.8	2.6	26.3
LSD (5%)	NS	NS	2.1

Table 3. Yields from combined ratios and spacing (tons/acre)

		Seedless:Pollinator ratios			Average by spacing
		2:1	3:1	5:1	
In-row spacing (ft.)	1.5	17.78 B	13.95 B	39.5 A	23.7
	3	22.7 AB	11.6 B	23.9 AB	19.4
	5	16.3 B	12.1 B	17.1 B	15.2
Average by ratios only		14.9	12.5	26.8	

As in the case of plant spacing, growers have to adopt additional strategies in adjusting water and nutrient inputs. In successful adoption of higher ratios, seedless fruit production per area should increase at certain mathematical rates. For example, when the ratio goes from 2:1 to 3:1, 4:1, 5:1 or 7:1 seedless production should increase by 13 percent, 20 percent, 25 percent or 30 percent respectively, to be economically feasible. This is to provide adequate cost recovery due to added expenses for plant, harvest, and other related labor inputs. In addition, to ensure that production increases proportionally, ample beehives should be provided. Bee management and movement in the field is a key determinant of successful pollination.

Combining both strategies

Successfully combining both plant spacing and differential ratios in the field requires more attention. In a different field study of seedless watermelons, we combined both strategies. We used three in-row plant spacings (1.5, 3 and 5 feet) in combination with three seedless-to-pollinator ratios (2:1, 3:1 and 4:1). The results from this study indicate that ratios taken had significant impact on yield. The highest ratio contributed the highest yield. Spacing was consistent with previous results. Higher densities gave higher yields as seen in Table 3.

Final words

Watermelon growers have more options to coax additional fruit and total yield from their fields by manipulating plant densities in rows and by inter-planting seedless and pollinator varieties in the same row at pre-determined frequencies. However, any time population density goes up, inputs have to increase to meet the new population level needs. Each field manager needs to experiment in their own environment to determine the optimal input and ratio combinations suitable for their local conditions.

Defining California's small farms with Census of Agriculture data

By Courtney Riggle, SFP Program Representative

Final results from USDA's Census of Agriculture—collected throughout 2007 and released earlier this year—indicate some interesting trends for farming in California, and specifically for small-scale farming.

In California, small farms comprise 85 percent of the state's 81,033 farms, numbering 68,536 small-scale operations in 2007. USDA defines "small farms" as those with annual gross revenues below \$250,000. By far the largest income category of farms in the state is made up of very small farms with annual sales of less than \$10,000. This growing sub-group of small farms currently represents almost half (47 percent) of all California farms.

Ag in the middle is suffering

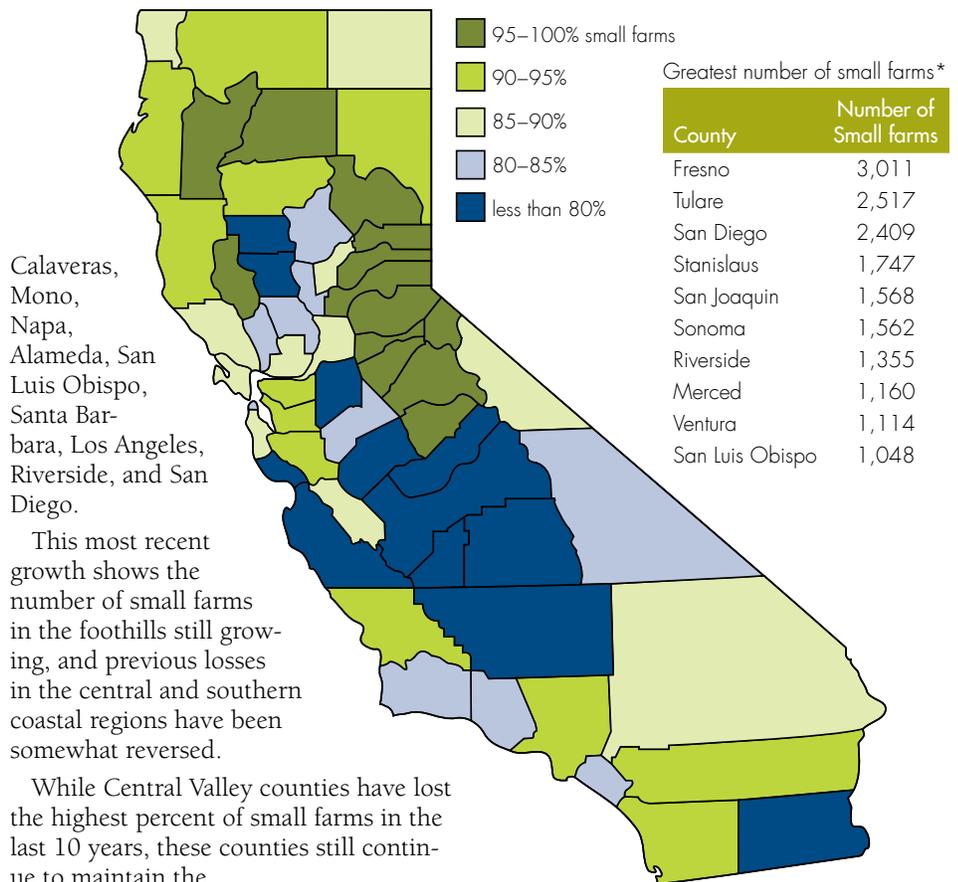
While the numbers of very small farms and very large farms have been growing over the last 10 years, the number of mid-sized farms have been declining during this period. The decline can be most easily noticed for farms with revenues between \$50,000 and \$2.5 million. It is important to remember a full 57 percent of this very wide "middle" group of farms are officially classified as "small farms" by USDA.

Between 2002 and 2007 specifically, the total number of farms in California increased by 1,402, with 700 more farms falling into the income categories above \$2.5 million in 2007. During the same period, mid-sized farms decreased by 1,830. If we assume all of the 700 new large operations were mid-level farms moving up, then at least 1,130 of these "middle" farms dropped to a lower revenue bracket, were consolidated into larger entities, or ceased production entirely.

Where are California's small farms?

The last 10 years have held big changes for California's small farms. The small operations that were lost in the late '90s and early '00s have been partially replaced by 2007, but not always in the same locations. The state as a whole still has 9 percent fewer small farms than in 1997. But in the last five years, 14 counties have gained 10 percent or more small farms. These counties include Trinity, Shasta, Tehama, Nevada, El Dorado,

Figure 1. Small farms in California, by county*



Calaveras, Mono, Napa, Alameda, San Luis Obispo, Santa Barbara, Los Angeles, Riverside, and San Diego.

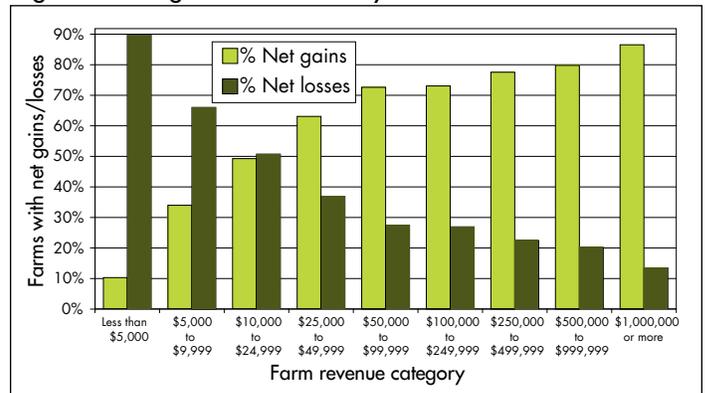
This most recent growth shows the number of small farms in the foothills still growing, and previous losses in the central and southern coastal regions have been somewhat reversed.

While Central Valley counties have lost the highest percent of small farms in the last 10 years, these counties still continue to maintain the largest numbers of small farms. In the Central Valley, 10 counties each have more than 1,000 small farms, and three of those counties have more than 2,000 small farms (see Fig. 1).

Who are the small farmers?

California has one of the most diverse farming populations in the country, and the diversity continues to grow. While 82 percent of the state's principal farm operators are white, there are 11 percent Hispanic, 5 percent Asian, 1.5 percent Native American, and less than 1 percent each of black, Hawaiian/Pacific Islander, and multiple races. The demographics of small farmers is not statistically different

Figure 2. Net gains and losses by farm income*



*Data for figures 1 and 2 from 2007 USDA Census of Agriculture.

from California's farmers overall.

Demographics on the county level show that ethnic groups are often concentrated in specific areas. For example, Asian farmers in the past have been concentrated on the Central Coast, and now are increasingly located in the Central

— CONTINUED ON PAGE 9

Join us at the 23rd statewide conference for small-scale farmers and their supporters

Approximately 15 farm advisors, specialists and staff from throughout the University of California will share their expertise with hundreds of participants at the 2010 California Small Farm Conference in San Diego.

More than 400 small-scale farmers and their supporters are expected to attend the conference, Feb. 28 to March 2 in San Diego. The UC Small Farm Program is an organizing sponsor of California Small Farm Conference, the state's premier gathering of small farmers and those who support them.

Keynote speakers for the event will include USDA Deputy Secretary Kathleen Merrigan, LA Times food columnist Russ Parsons and SlowFood USA President Josh Viertel.

New topics addressed in workshops will include social media marketing for farms, restaurant partnerships with farmers markets, urban beekeeping, alternative energy options and niche crops such as coffee and tea.

The conference will include 25 workshops in five tracks organized around themes of resource management, marketing, production strategies, farmers market management and agricultural hot topics.

Short courses at this year's conference will address topics related to agritourism, greenhouse production, water conservation strategies, organic certification and value-added products at farmers markets.

ANR experts, including Ramiro Lobo, Penny Leff, Mark Gaskell, Ben Faber, Laura Tourte, Gary Bender and Shermain Hardesty will be speaking on topics from new crops to agritourism to niche meat production. Hardesty and Linda Vieira serve on the conference's board of directors.

For more information about the California Small Farm Conference, visit www.californiafarmconference.com.

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Spanish and Hmong translation available

Census — FROM PAGE 8

Valley and in the Sierra Nevada foothills. USDA uses "Asian," which is a very broad category. Farm advisors have more often identified ethnic Chinese, Japanese, and Filipino farmers in coastal regions, while the Asian farmers in the Central Valley are more likely to be Hmong, other Southeast Asian groups, and also Punjab.

The proportion of Hispanic farm operators has grown throughout the state, and principal farm operators in Tulare and San Benito counties have grown to more than 20 percent Hispanic in 2007. Fresno and Tulare counties both have more than 1,000 Hispanic principal farm

operators.

Difficulty making money

The majority of small farms in California (64%) did not report a profit from their farming operations in 2007. Whether or not a farm is profitable appears to correlate with a farm's economic size (see Fig. 2). Higher revenue operations are more likely to report net gains (profits), and lower revenue operations are more likely to report net losses. On average, an economic sustainability threshold for California farms is near \$25,000 in annual revenues. Moreover, this relatively low profitability threshold indicates that small-scale farming operations can indeed be profitable.

Conclusion

California is seeing growth in very large and very small farms, with indications that farms with more than \$25,000 in annual revenue meet a basic economic sustainability threshold. The numbers of small and minority farmers are also shifting geographically within the state. The Small Farm Program's work has historically focused on working with these groups of minority ethnic, limited-resource, and small-scale farmers. Future work with small-scale farmers would be well informed to take these shifting factors into consideration.

From the cover

Affiliation, restructuring — FROM PAGE 1

tions, farmers market managers, and others were sent to ANR administrators, appealing the closure announcement.

“The restructuring of the Small Farm Program office has been seen by some as a retreat from the issues that face California’s small-scale farmers. That assertion is not true,” wrote Barbara Allen-Diaz, ANR associate vice president in response to many of the letters. “UC is committed to serving small and large farms.”

The program is currently discussing the possibility of becoming an affiliate program within the Agricultural Sustainability Institute.

ASI is part of the

“UC is committed to serving small and large farms.”

—Barbara Allen-Diaz,
associate vice president,
UC Division of Agriculture & Natural Resources

UC Davis College of Agricultural and Environmental Sciences, and includes the statewide Sustainable Agriculture Research and Education Program, the Russell Ranch Sustainable Agriculture Facility and the UC Davis Student Farm.

“Part of the institute’s vision is to promote prosperity and

equity for people working in agriculture and the food system,” said Tom Tomich, director of ASI. “Small farms are a vital and integral part of that vision. We look forward to looking at what opportunities there might be for the Small Farm Program and ASI.”

No matter the outcome of the affiliation discussion, the small farm advisors will continue to serve local small-scale farmers through UC Cooperative Extension.

“We have to make the best of a difficult situation and use this as an opportunity to really examine and reform the key practices of the Small Farm Program,” Hardesty said. “This challenge to our status quo requires us to seek ways to improve and better serve California’s small-scale farming communities.”

For more information about the Agricultural Sustainability Institute at UC Davis, visit <http://asi.ucdavis.edu>

program news

Profitable Niche Farming workshops were held Dec. 15 and 16 in Eureka and Ukiah, respectfully. Approximately 75 participants attended either of the workshops, which focused on specialty crops and strategies that small-scale farmers could use to select new enterprises. SFP advisor **Manuel Jimenez** presented on season extension strategies and blueberry production; farm advisor **Maria de la Fuente** presented on small-scale mushroom production; farm advisor **Deborah Giraud** presented on sustainable orchard management; and farm advisor **Rachel Elkins** presented on selecting orchard crops. Presentations from the workshops are available online at <http://www.sfp.ucdavis.edu/events/09niche>.

Connecting small-scale growers and WIC stores is the aim of a new project funded by the 2009 Specialty Crops Block Grant Program. The project will help vendors of the Women, Infants, and Children Program (WIC) better stock their produce sections with fresh and culturally appropriate foods, grown by small-scale, minority farmers in Alameda, Santa Clara, Tulare and Riverside counties. The grant was led by the UC Small Farm Program, in cooperation with farm advisors, nutrition advisors and food safety specialists from throughout the University of California.

Mushroom cultivation on small family farms was the topic of a workshop Aug. 13 at UC Kearney Agricultural Center. Presentations by SFP advisor **Richard Molinar** and farm advisor **Maria de la Fuente** are available online at <http://www.sfp.ucdavis.edu/events/09mushroom>.

Integrated pest management for cherry tomatoes and green beans was the topic of a workshop attended by 53 farmers, Dec. 11 at UC Kearney Agricultural Center. SFP advisors **Richard Molinar** and **Manuel Jimenez** were presenters, as was field assistant **Michael Yang**. The meeting was co-sponsored by the UC Small Farm Program, Fresno County Agriculture Department and Sunnyside Packing Company.

Asian vegetables and pest management were the topics of a Dec. 17 meeting of the Bay Area Chrysanthemum Growers Association in San Jose. SFP advisor Aziz Baameur presented at and organized the meeting with representatives from USDA, Santa Clara Division of Agriculture and approximately 65 growers in attendance.



Memorial: L. Clair Christensen, community development specialist emeritus, died Nov. 16, 2009, in Davis. Christensen was a task force chairman for the Small Farm Viability Project report of 1977, and directed the development of the Small Farm Program for nearly a decade. He helped organize the first California Small Farm Conference in 1982, now convening for its 23rd year. He worked for UC Cooperative Extension as a rural community development specialist based at UC Davis from 1972 until retiring in 1997.

From the cover

Small farm advisor Butch Durazo, right, confers with a grower in 1977.

History — FROM PAGE 1

matter their size, can often feel like victims of the food production system.

“We have a series of research efforts under way, focusing on the problems of surviving successfully as a small or limited-acreage producer,” J. B. Kendrick, Jr., wrote. “The limited-resource farmer will quickly become a victim unless the system is fully understood and the goals of the endeavor are clear.”

In 1979, the legislature appropriated \$100,000 in Cooperative Extension’s budget for small farm advisors. Four bilingual farm advisors were hired to serve primarily Hispanic farmers. Two farm advisors hired earlier, in 1976—Pedro Ilic in Fresno County and Butch Durazo in Riverside and Imperial counties—were already focusing their work on small-scale and limited-resource farmers.

“When I first started, the program was created to work mostly with minority farmers,” Jimenez explained.

Though an early stated focus was Spanish-speaking farmers, farm advisors soon found themselves working to also serve South-east Asian and Hmong refugee farmers. Farmers in other ethnic and minority groups have since found support through the Small Farm Program.

Jimenez’s first clients in Tulare County were a diverse mix of Armenian, Japanese, Filipino and Mexican farmers growing mostly tomatoes, squash and peppers. Today his small-farmer clientele is less diverse, but with a much wider array of specialty crops.

In those early days, major changes to the fresh-market tomato industry presented Jimenez with his first challenge to find alternative crops that small farmers could grow. From that initial challenge has bloomed an array of field-tested and market-tested specialty crops, including watermelons, seedless watermelons, specialty melon varieties, specialty potatoes, annual artichokes, Asian vegetable varieties, miniature varieties, heirloom tomatoes, tomatillos, papayas, guavas, mangos, lychees, longans, cherimoyas, blueberries and blackberries.

Patterns with new specialty crops seem to emerge; even if a new crop can be grown successfully, challenges of weather or seed sourcing can halt a budding market. If the crop is successful and the market expands, then overplanting or competition from larger growers entering the new market means it is time to find a new, competitive specialty crop for smaller growers.

“It’s not necessarily the crop that we work with, it’s what the crop is allowing people to do,” Jimenez explained. “Coming up with solutions for a farmer’s problems, that has always been something that makes me feel good about my work with small farmers. My main problem is I don’t have the time to do all the work that needs to be done.”

Several organizational structures bloomed in the early years of the University’s focus on small-scale farmers. A statewide gathering of organizations called the Information Access Council, chaired by Ilic, later conceived the Small Farm Center at UC Davis, which began receiving federal funding in 1980. The Small Farm Center, initially led by Clair Christensen, served as a clearinghouse of information and provided statewide leadership on small farm issues.

The Family Farm Council, initially chaired by Tom Haller while working at the Small Farm Center, was a starting point for today’s independent nonprofit organization Community Alliance with Family Farmers.

In 1981, the first edition of the newsletter you hold in your hand was published, with articles about resource guides for family farmers and bok choy as a promising specialty crop. The first Family Farm Conference was held in 1982, and later combined with another conference to become today’s California Small Farm Conference.

These amorphous beginnings began to take a more formal shape and structure around the time Ron Voss became director of the Small Farm Program in 1985.

“During that time, the Small Farm Program really gained credibility within the university in working with the small-farm clientele,” said Voss, now an emeritus vegetable specialist with Cooperative Extension.

Taking shape in this time period was the Small Farm Workgroup, a network of farm advisors and specialists throughout the university system who have expertise in small farm-related issues. Issues now considered important to small-scale farmers—such as organic farming, specialty crops and alternative marketing—also became a more formal part of the program, even as small-scale farms in general were beginning to earn more professional respect.

“Small farming really passed from a time when people were doing it because they believed in it, to a time when they saw a chance to make a livelihood as well,” Voss said. “They didn’t just have to be hobby farms. Hard data said that small farmers could be viable: They just had to be innovative and stay one step ahead. And that’s what they did.”

From 1995 to 2006, Desmond Jolly directed the program with a greater focus on marketing. Education about direct marketing outlets such as farmers markets, community supported agriculture and farm stands expanded to also include farmers market management training, agritourism, and artisanal, added-value products.

Marketing of the program itself also expanded, with a regular, full-color newsletter, a program website and a separate website with a searchable agritourism directory.

“We became known nationwide as a trend-setting program. We were regarded as kind of a template for small farm programs by USDA and professionals around the country,” Jolly said. “It was to the credit of the university that they had this program and became so well known for supporting small farms and not just the big farms.”

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Who to call, when...

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Small Farm Advisors:

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Santa Barbara & San Luis Obispo	Mark Gaskell	(805) 934-6240	mlgaskell@ucdavis.edu
Tulare	Manuel Jimenez	(559) 684-3316	mjjimenez@ucdavis.edu
San Diego	Ramiro Lobo	(760) 752-4716	relobo@ucdavis.edu
Fresno	Richard Molinar	(559) 456-7555	rhmolinar@ucdavis.edu

Elsewhere in California, find contacts for your local UC Cooperative Extension office at <http://ucanr.org/ce.cfm>

The Small Farm Program's website is still home to the program's collected resources:

www.sfp.ucdavis.edu