



Small Farm News

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SMALL FARM CENTER • COOPERATIVE EXTENSION • UNIVERSITY OF CALIFORNIA

New Farmers Learn From Challenges

by Susan McCue, senior publications coordinator, Small Farm Center

“It’s Impossible Acres — that’s our farm,” says Katherine Kelly, as she scans her family’s nearly new farm on the outskirts of Davis, California. Despite its name, Kelly and her family are determined to make the farm’s success not only possible, but highly profitable.

As new farmers, the Kellys have experienced their share of successes and challenges. “We gross \$7,000 on this little section right here,” says Kelly, pointing to a lucrative berry patch covering less than an acre. “If you can get \$2,500 an acre for any crop, then it’s worth doing as a pick-your-own.” The berry patch represents a stunning achievement in the Kellys’ world of constant challenges. In 1994, every one of their plantings died when the farm’s water well went out in August, a month throbbing with 100° degree days in Davis. “So after that failure, every other failure seems rather small,” says Kelly.

As if water trouble and simmering summers weren’t enough, Kelly says, “The soil is not particularly good for growing.” Still, she and her family plant berries, peaches, cherries, pumpkins, and apples, and dream of adding a farm stand to sell their crops now marketed predominantly through the pick-your-own operation and their “Friends of a Farmer” Community Supported Agriculture (CSA) program.

A History of Farming

“People say, ‘We raise grapes in our family,’” says Kelly. “Our family does pick-your-own.” Kelly’s parents run two successful u-pick operations in the San Luis Obispo area, providing experience from which the younger Kellys can draw. “We grew up with the public on hayrides — us driving the tractor and helping them through the fields,” she says. Her early contact with the public gave Kelly a keen sense of the value of listening to farm visitors. During her farm’s first pick-your-own season, she put up a suggestion box asking visitors what they would like to see on the farm. Visiting chil-

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Katherine Kelly leads a tour that begins with the commercial apples (pictured here) on her Davis farm.

Radicchio: Specialty Crop

excerpted from the *Small Farm Program’s Specialty and Minor Crops Handbook*

C*ichorium intybus* is a member of the Asteraceae (sunflower) family. Radicchio varieties include “forcing” and “nonforcing” types. Forcing types are Red Verona (small, deep red head with flavorful bite at maturity) and Treviso (resembling a small romaine lettuce, with a long, conical red head with white midribs and crisp, tangy leaves).

Nonforcing types include Palla Rossa (popular in the United States; dark green exterior leaves, and a head with elongated red leaves and pure white ribs), Castelfranco (semi-heading variety with a loose red and white inner head surrounded by green leaves streaked with rose, pink, green, or bronze in cold weather; milder flavor, more heat resistant); Castelfranco Variegata (crumpled foliage is striped red and yellow), Chioggia (variegated red and white; tighter head than Castelfranco), Giulio (round, compact, red head with very good color; resists bolting), and Cesare.

Radicchio is a red, broadleaf, heading form of chicory. Its leaf colors range from pink to maroon with white midribs; variegations include bronze and almost yellow streaks with green.

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Director's Message

California Small Farms and the Small Farm Program at the Beginning of a New Millenium

Remarkably, despite all its challenges and vicissitudes, the clientele served by the University of California's Small Farm Program still persists. Most people do not realize that there are still 74,126 farms in California, according to the 1997 U.S. Census of Agriculture.

This number is down from the 77,669 farms reported in the 1992 U.S. Census of Agriculture. Even so, the 1997 figures are remarkable. These farms vary in size and value of production.



Desmond Jolly

As indicated below in Table 1, 20,662 farms, or 28 percent, were below 10 acres in size. Another 24,250 farms, or 33 percent, range from 10 to 49 acres, and 13,288 farms range from 50 to 179 acres. Farms with more than 180 acres totaled 15,926, with 5,084 farms, or 8 percent, with more than 1,000 acres.

In terms of their respective incomes earned from farming, 19,423 farms earned less than \$2,500, and 28,410 farms earned between \$2,500 and \$100,000, representing 38 percent of all farms.

The Small Farm Contribution

Using the recent definition of small farms, provided by the National Commission on Small Farms as farms with incomes of \$250,000 or less, California's small farms contribute \$2.3 billion to California's agricultural output at farm gate.

But small farms also can be appreciated in a multifunctional context — not just the unidimensional context of dollar value. The National Commission on Small Farms enumerated many of these other contributions. Among them:

- small farms represent diversity of ownership, cropping systems, biological organization, cultures and traditions
- approximately 60 percent of all farms are less than 180 acres, indicating that the majority of farmland is managed

by a large number of small farm operators

- decentralized land ownership produces a more egalitarian society, offering opportunities for business ownership and operation
- small farms nurture youth in becoming responsible citizens
- small farms foster a more positive consumer connection
- small farms contribute to the rural community's social and economic vitality

Role of the Small Farm Program

The UC Small Farm Program has been contributing to California's small farm sector since 1979. Research and outreach conducted by the program's farm advisors have enabled California's small farm operators to adopt new niche market crops, to utilize more cutting edge production practices, and to market their products in innovative ways that meet emerging urban consumer

—CONTINUED PAGE 12

Distribution of California Farms by Acreage and Sales, 1997, 1992

Total California Farms in 1997			Total California Farms in 1992		
74,126			77,669		
Table 1. California Farms by Size		1997	1992	Table 2. California Farms by Sales	
	1997	1992	1997	1992	
1 to 9 acres	20,662	21,485	Less than \$2,500	19,473	22,692
10 to 49 acres	24,250	26,089	\$5,000 to \$9,999	6,498	7,417
50 to 179 acres	13,288	13,883	\$10,000 to \$24,999	8,621	9,324
180 to 499 acres	7,270	7,512	\$25,000 to \$49,999	6,747	6,899
500 to 999 acres	3,572	3,702	\$50,000 to \$99,999	6,544	6,360
1,000 acres or more	5,084		\$100,000 or more	19,727	17,817

Source: 1997 U.S. Census of Agriculture.

program news

Retirement

After more than 20 years as a farm advisor for UC Cooperative Extension, Placer and Nevada counties, **Garth Veerkamp** retired April 1, 2000. His retirement plans include traveling and spending more time on his Christmas tree farm. The Small Farm Center staff thanks Garth for his many contributions to the Small Farm Workgroup during the years, and wishes him great luck in the future.

Travel

Benny Fouche, farm advisor, UC Cooperative Extension, San Joaquin County, has been selected by the Winrock International Foundation Farmer to Farmer Program to serve on an assignment in Nepal for two weeks in June 2000. He will be working with eight village development committees in the Terhathum district to help improve their integrated pest management program in cole crops, and to learn from them as well.

Visitors

Members of the **North Korean Agricultural Research Team** visited the Small Farm Center and met with technical assistant Solomon Teklu to discuss small farmer assistance programs. Teklu also met with several **Vietnamese Economic Reform Project** members to discuss small farm information and marketing support.

Sabbatical

Marita Cantwell, postharvest Extension specialist and Small Farm Workgroup member, is on a sabbatical leave through June 2000. She is collaborating with colleagues at the University of Mexico on protocols for postharvest management of specialty crops.

Presentations

Desmond Jolly, Small Farm Program director and agricultural economist, made a presentation on size biases in agricultural research to a committee of the Board on Agriculture and Natural Resources, National Research Council, National Academy of Sciences at a special session held at the University of California, Irvine, January 17. The board will issue a report later this year.

Jolly also attended the North American Farmers Direct Marketing Association Professional Conference in Cincinnati, Ohio, in February, and presented the paper, "Farmers' Market Manager Professional Development Curriculum" at the direct marketing workshop.

On February 26, **Jolly** presented the keynote speech at the National Campaign for Sustainable Agriculture Conference in Washington, D.C. The campaign is involved in developing positions on and proposals for policies for the next Farm Bill.



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The Small Farm Center links those who need information on small-scale farming with those who have the information. The Center produces publications and a newsletter; sponsors conferences and seminars; holds a library of periodicals, reports and books; gives referrals; and answers numerous requests for information. Readers are encouraged to send us information, express views, and contact us for assistance.

Mention of a specific product is intended for the reader's information or as an example of a similar product — not as a recommendation for that specific product.

Radicchio —FROM PAGE 1

Some cultivars form loose heads, while others have folded leaves and resemble small cabbages. Leaf texture is similar to but stockier than that of a French endive. The red coloration increases during the colder months.

The first growth of many radicchios is green. The green leaves are tough and very bitter. If these leaves are cut back in fall and the winter is cold, the second growth will be bright red or magenta.

Market Information

Use. Radicchio is a popular European salad vegetable and garnish produced largely in Italy. It has a distinctive, bitter flavor, and is eaten raw or lightly grilled or roasted. Its flavor and color add zest to salads and other dishes. Americans prefer to use the bitter-tasting leaves sparingly. In Italy, there are at least 15 well-known kinds, from the flat, dark rosettes of Ceriolo to the long, thin leaves of Selvatico da campo to the variegated pink and pale green of Castelfranco. Radicchio also serves as a colorful garnish.

The edible flowers have a faint chicory flavor. They must be used immediately after picking, since they remain open only in the morning hours.

Culture

Propagation and care. Cultural practices are similar to those for endive, escarole, and lettuce, but radicchio requires a longer growing period than lettuce (80 to 85 days in the Salinas Valley) and so may require an extra irrigation. Sow seeds 1/4 to 1/2 inch deep from September through March. In Salinas, radicchio grows on a standard 40-inch bed with a 22 to 24 inch bed top. Two rows grow 12 to 14 inches apart on each bed. Down the row, plants grow every 10 to 15 inches depending on the stand before thinning. Raw seed can be precision seeded with a vacuum-type seeder, but other precision seeders require coated seed. The tops will withstand frost and low temperatures (to 20°F) for short periods. Some radicchio has been transplanted using transplanting modules or plugs.

In the warmer inland valleys, the summer heat can cause bolting and tip burning, so August and September plantings are recommended. Growers should experiment to determine the best planting date for each variety. Some varieties perform best on lighter, better-drained soils. In the Salinas area growers can seed the crop during the summer (March to August) if they use adapted varieties.

Harvest rates are low, sometimes in the 20 to 40 percent range. Many of the plants will produce either unmarketable heads or no heads at all.

As previously mentioned, there are two types of radicchio: "forcing" and "nonforcing." Nonforcing radicchio forms a head under normal growing conditions, whereas a forcing variety will form a head only after freezing weather. There are three ways to force radicchio to form a head: (1) cut the leaves off to within 1 inch of the crown 2 to 3 weeks before the first frost, and then dig the roots and store them in a burlap bag in a cool dark place (45° to 55°F) where they will produce a second growth of pale red heads; (2) leave the plants in the ground and cover them with straw or another mulch; or (3) leave the plants in the ground and let the frost kill the outer green leaves. Upon peeling back the dead outer leaves, you will find the red head inside.

Radicchio may be a host for lettuce mosaic. In counties like Monterey that enforce a lettuce-free period for mosaic control, radicchio is also subject to this crop-free period.

Harvest and Postharvest Practices

The USDA storage recommendation is 32° to 34°F at 95 to 100 percent relative humidity, with an approximate storage life of 2 to 3 weeks.

Radicchio Seed Sources

Abundant Life Seed Foundation,
P.O. Box 772, Port Townsend, WA 98368
(360) 385-5660.

Bountiful Gardens, 5798 Ridgewood
Road, Willits, CA 95490
(707) 459-6410

W. Atlee Burpee and Co., 300 Park
Avenue, Warminster, PA 18974
(215) 674-4900

Comstock, Ferre and Co., 263 Main
Street, Wethersfield, CT 06109
(860) 571-6590

The Cook's Garden, P.O. Box 65,
Londonderry, VT 05148
(800) 457-9705

Johnny's Selected Seeds, 299 Foss Hill
Road, Albion, ME 04910
(207) 437-4301

Le Jardin du Gourmet, P.O. Box 75,
St. Johnsbury Center, VT 05863
(802) 748-1446

Nichols Garden Nursery, 1190 North
Pacific Highway, Albany, OR 97321
(541) 928-9280

Park Seed Co., Cokesbury Road,
Greenwood, SC 29647-0001
(800) 845-3369

Pinetree Garden Seeds, Route 100,
New Gloucester, ME 04260
(207) 926-3400

Redwood City Seed Co., P.O. Box 361,
Redwood City, CA 94064
(650) 325-7333

Shepherd's Garden Seeds, 30 Irene Street,
Torrington, CT 06790
(860) 482-3638

More Radicchio Information

Chandoha, Walter. 1984. Grow Italian greens-radicchio, escarole, and arugula. *Organic Gardening*, 31(5):80-84.

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Stephens, James. *Minor vegetables*. 1988. Cooperative Extension Bulletin SP-40, University of Florida, Gainesville, FL.

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USDA. 1987. *Tropical products transport handbook*. Agric. Handb. 668. USDA, Washington, DC.

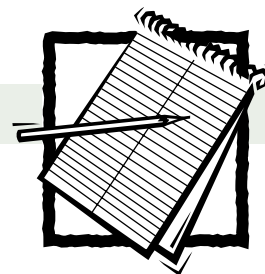
Web Sites

Oregon State University College of Agricultural Sciences
<http://osu.orst.edu/Dept/NWREC/radicch.html>

UC Postharvest Technology Research and Information Center
<http://postharvest.ucdavis.edu/Produce/ProduceFacts/Veg/radicchio.html>

Prepared by Yvonne Savio, John Inman, and Claudia Myers. ■

News Notes



■ The glassy-winged sharpshooter is a serious cultural pest in California. When feeding, it can Pierce's disease to grapevines and other diseases trees, alfalfa, citrus, and oleanders. First sighted in 1990, this insect has spread throughout Southern California and into southern San Joaquin Valley. For local information about this pest, contact your county's UC Cooperative Extension farm advisor. A glassy-winged sharpshooter brochure containing pictures and information about identification and detection can be found at <http://danrcs.ucdavis.edu/Special/gwss/default.shtml>.

■ Kubota Tractor Company has a special program to install a rollover protection structure (ROPS) and seatbelt on certain older Kubota models. The ROPS and seat belt help reduce the chance of serious injury or death in the case of a rollover accident. For more information, contact your local Kubota dealer; visit the Kubota website at <http://www.kubota.com/rops.cfm>; or call 1 (888) 4-Kubota, extension 328.

■ This spring, 10 nationwide hearings allowed producers to share their views with lawmakers reshaping the policies of the 1996 Farm Bill, which expires in 2002. The U.S. House Agricultural Committee held hearings in Alabama, California, Idaho, Illinois, North Carolina, Pennsylvania, Ohio, Tennessee, Texas, and South Dakota. Although the California hearing date has passed (May 1, 2000), informal comments can be e-mailed to farmpolicy@mail.house.gov. For more information, call (202) 225-2171 or check the web site at <http://www.house.gov/agriculture/farmpol.htm>.

■ UC Board of Regents voted in March to revert ownership of approximately 17 acres of land in the city of Santa Clara to the state. The land is now occupied by the Bay Area Research and Extension Center (BAREC), one of 10 field research and education outreach facilities operated by the Division of Agriculture and Natural Resources (DANR). Current research at BAREC will be completed or relocated to other research sites during the gradual phase-out period of the facility.

■ Revised proposed rules for the National Organic Program are available for public comment March 13-June 12, 2000. The proposal offers a national definition for the term "organic," and details the methods, practices, and substances that can be used in producing organic goods and livestock. The proposed rules can be downloaded for free at <http://www.ams.usda.gov/nop/> or, in California, by ordering a copy of the Federal Register for Monday, March 13, 2000, from the U.S. Government Bookstore in San Francisco at (415) 512-2770 or in Los Angeles at (213) 239-9844.

Send rule comments, identified with docket number TMD-00-02-PR, to Keith Jones, Program Manager, National Organic Program, USDA-AMS-TMP-NOP, Room 2945-So. Ag Stop 0275, P.O. Box 96456, Washington, D.C. 20090-6456; fax: (703) 365-0760; web site: <http://www.ams.usda.gov/nop/>, or call (202) 205-7808 for more information.

new agri-transmit to almond in the state

UC Farm Advisor Reaches Out to Urban Edge Small Farmers

by Susan McCue, senior publications coordinator, Small Farm Center



Maria de la Fuente consults with Tom Valentine, co-owner of VTR Seeds, who supplied seeds for some of the researched chile pepper varieties.

On an appropriately sizzling hot day in September, farm advisor Maria de la Fuente hosted a chile pepper field day in Santa Clara, California. Heat-challenged participants tasted samples from de la Fuente's research on more than 85 chile pepper varieties, ranging from the explosive habanero to the tranquil bell pepper.

"I started this research for the ethnic minority growers in my area, to give them something else to grow," says de la Fuente, who serves UC Cooperative Extension, Santa Clara County, and has been a valuable member of the Small Farm Workgroup since July 1996. With a doctorate in plant pathology, she carries out her educational and applied research-based programs to assist commercial agricultural producers endangered by an ever-expanding urban environment — Silicon Valley.

Known as one of the high-tech centers of the world, Silicon Valley, or Santa Clara County, also supports a thriving agricultural industry worth \$150-200 million per year. "It is the livelihood for 1,200 farmers and their families," says de la Fuente. "80 percent of them are small farmers from ethnic groups, mostly Chinese, Vietnamese, Hispanic, and Japanese."

De la Fuente addresses her clientele's concerns by assisting with environmental issues such as integrated pest management; plant, water and soil management; and green waste reduction and utilization through composting processes. She also aids the farmers with specialty crop development and marketing.

De la Fuente has developed a programmatic focus on mushrooms, a popular crop for which she frequently presents workshops throughout the state. Cur-



Participants taste chile pepper varieties on display at the Chile Pepper Field Day.

rently she is evaluating different production methods and substrates for mushroom production in Santa Clara County. One method includes oyster mushroom production using yard trimmings as the base for substrate preparation.

A respected member of the mushroom industry, de la Fuente recently received an honorarium professional membership to the American Mushroom Institute (AMI) for her contributions to the mushroom industry in California.

Additional Research

De la Fuente also has undertaken research projects that concentrate on Santa Clara County's major agricultural commodities, including specialty vegetables, garlic, nursery crops, bedding plants, indoor decorative plants, ornamental trees

and shrubs, and cut flowers. For the last four years, de la Fuente has participated in a garlic variety trial with Ron Voss, director of the UC Vegetable Research and Information Center.

De la Fuente's research requires field work that would not be possible without her recruitment of 25 master gardener volunteers, who assisted with her chile pepper project by tending the chile pepper fields as if they were their own. The volunteers planted seeds, cared for the green house, transplanted, harvested, and collected trial data. On Chile Field Day, they assisted de la Fuente in displaying the chile peppers atop crisp white tablecloths, and contributed chile pepper-laden pot luck dishes for lunchtime sharing.

Agricultural Heritage

Born with an agricultural gene inherited from her father, an agricultural professor studying at Cornell University in



Maria de la Fuente kneels amidst a field of robust chile pepper plants at the Bay Area Research and Extension Center (BAREC).

New York when she was born, de la Fuente returned with her family to Mexico after her father completed his doctorate program. Her agricultural interests led her to Instituto Tecnológico y de Estudios Superiores de Monterrey

(ITESM) in Mexico, where she received a Doctor in Sciences degree, and later to Iowa State University, where she obtained her doctorate in plant pathology with a



Specialty chile peppers may provide a new crop for small scale farmers in the Santa Clara Valley.

minor in soil microbiology. She then returned to ITESM, where she spent 15 years as a full professor and director of the ITESM Research and Development Department prior to her arrival at UC Cooperative Extension, Santa Clara County.

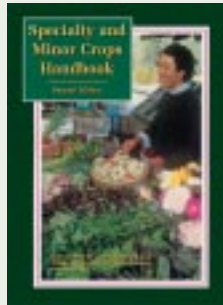
Her fellowships and short courses have taken her to the Netherlands,



These oyster mushrooms, part of Maria de la Fuente's mushroom substrate research project, can sell for as much as \$4 to \$6 per pound.

Mexico, and Honduras, where she expanded her cultural and technical horizons. Fluent in English, Spanish, and French, Maria de la Fuente brings to her small scale farming clientele a multicultural and scientific background that will help them thrive and prosper on the urban fringe. ■

Small Farm Program Publications

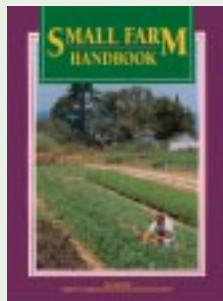


Specialty and Minor Crops Handbook

Updated and expanded from the first edition, the *Specialty and Minor Crops Handbook* contains 63 crop profiles, a comprehensive bibliography, a glossary of Asian vegetables, and an index to common and scientific crop names.

To order, call the Small Farm Center at (530) 752-8136.

Cost: \$35 plus tax and shipping.



Small Farm Handbook

This practical guide covers topics including livestock and crop production, buying property and equipment, dealing with taxes and regulations, and marketing.

To order, call the Small Farm Center at (530) 752-8136.

New price: \$15 plus tax and shipping.



The Small Farm Program and California Agriculture Magazine

The Small Farm Program is featured in two issues of *California Agriculture*, the peer-reviewed publication produced by the University of California Division of Agriculture and Natural Resources (DANR). The Small Farm Program is part of DANR.

The *California Agriculture* issues capture the essence of the Small Farm Program, detailing its 20-year history of cutting edge research and outreach to small scale farmers throughout the state. The editions include small-scale farmer profiles, in-depth reports on

farm advisor research targeting small scale farms, and new industry trends such as agritourism and farmers' markets; Central Coast blueberry production; and radio

outreach to ethnic minorities.

For copies of the *California Agriculture* November-December 1999 issue or photocopies of the March-April 1993 issue, contact the Small Farm Center at (530) 752-8136.

Safety is Job One When Using Agricultural Chemicals

Excerpted from the *Pesticide Safety for Small Farms* publication

Pesticides are chemicals that control pests. They include:

- insecticides for insects
- herbicides for weeds
- fungicides for plant diseases
- pesticides for other pests, such as rodents and birds

Unfortunately, many pesticides can also hurt people, pets, other animals, and the environment if they are not used carefully and according to label directions.

Pesticides can poison or injure you:

- if you swallow them
- if they get into your eyes
- if you inhale dusts or fumes
- if they get on your skin

Skin contact is the most common way pesticides enter the body. Pesticides that are spilled or splashed onto the skin through cuts and wounds could make you very ill.

Because pesticides can enter your body through your eyes and skin, you should avoid wiping your eyes and skin, face, and neck when you have been handling pesticides. It is also important to wash your hands before using the toilet.

Tobacco and food absorb pesticides, so do not carry them with you while you work. Leave them in a place where pesticides won't get on them.

Accidental contact with a pesticide could injure you or make you sick. Therefore, it is important for you to receive training in how to:

- understand the health risks associated with pesticide exposure
- recognize the signs and symptoms of pesticide exposure
- know what to do in emergencies involving pesticides (first aid, spills, cleanup)
- wear, use, and maintain personal protective gear and clothing (for example, goggles, respirators, and gloves)
- read and understand information on pesticide labels
- safely transport, mix, load, apply, store, and dispose of pesticides and pesticide containers
- safely operate the mixing, loading, and pesticide application equipment
- avoid exposure through common sense and personal hygiene

You can protect yourself from pesticides in many ways. Watch out for:

- splashes and spills
- sprays and dusts from pesticide applications
- skin contact with pesticide residues

You need to learn as much as you can about pesticides and safety equipment to protect yourself and others from pesticide injury when you work in agricultural

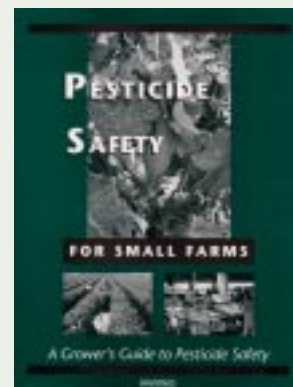


businesses, farms, fields, forests, nurseries, and greenhouses. ■

For More Information

To learn more about how to protect yourself when using pesticides, order *Pesticide Safety for Small Farms*, available from the Small Farm Center as a printed publication for \$5 in English, Hmong, Cambodian, and Lao languages. A Spanish version currently is being developed. Videotaped versions are available in English, Hmong, Lao, and Spanish.

Audiotapes are available in English, Hmong, and Spanish. To order *Pesticide Safety for Small Farms*, contact the Small Farm Center by phone at (530) 752-8136; fax: (530) 752-8136; e-mail: sfcenter@ucdavis.edu.



Pesticide Safety for Small Farms

Small Farm Resources



Publications

The *Organic Vegetable Production in California Series*, a set of five web site publications from the University of California, is available free from the Small Farm Program web site at <http://www.sfc.ucdavis.edu/research/organic.html>. UC authors including Mark Gaskell, farm advisor, San Luis Obispo and Santa Barbara counties; and Benny Fouche, farm advisor, San Joaquin County, cover topics including organic certification, and soil, weed, insect pest, and plant disease management. Printed copies also are available free from the Small Farm Center at (530) 752-8136.

The *Pesticide Safety for Small Farms* video, which accompanies print and audio publications co-authored by the UC Small Farm Program and the UC Integrated Pest Management Program, is now available in the Lao language as well as English, Hmong, and Spanish. Cost: \$20. Contact: University of California, Agriculture and Natural Resources, Communication Services, 6701 San Pablo Avenue, Oakland, CA 94608-1239; (800) 994-8849.

The *Legal Guide for Direct Farm Marketing* covers the risks of direct marketing, issues on marketing processed foods, meat, poultry, eggs, and dairy products, and the legal aspects of farmers' markets, contracts, advertising, food stamps, organic certification, leases, insurance, and liability. Cost: \$20. Contact: Drake University, Ag Law Center, Des Moines, IA 50311; (515) 271-2947.

The *Agriculture Wiring Handbook* explains the National Electrical Code and provides examples of wiring systems for structures and machines used in agriculture. Publication number: NFEC-1. Cost: \$9. Contact: NRAES, Cooperative Extension, 152 Riley-Robb Hall, Ithaca, NY 14853-5701; (607) 255-7654.

Harvesting New Opportunities: A Strategic Plan for San Diego County Agriculture outlines challenges facing San Diego County farmers and provides a strategy for success using options including agricultural tourism, branding, and public awareness about agricultural benefits to the county. Cost: Free. Contact: Ramiro Lobo, farm advisor, UC Cooperative Extension, San Diego County, 5555 Overland Avenue Bldg. 4, San Diego, CA 92123-1219; (858) 694-3666.

The *Organic Apple Production Manual* from the University of California includes information on trends in organic apple production and markets, supply and price, and state and federal regulation and certification. Cost: \$18. Contact: University of California, Agriculture and Natural Resources, Communication Services, 6701 San Pablo Avenue, Oakland, CA 94608-1239; (800) 994-8849.

Direct Marketing Today: Challenges and Opportunities, produced by USDA in cooperation with Cornell University Extension, is available free of charge on the web at <http://www.ams.usda.gov/directmarketing/DirectMar2>. The publication discusses the results of focus groups with producers and facilitators on direct farm marketing.

Farming Alternatives: A Guide to Evaluating the Feasibility of New Farm-Based Enterprises is an award-winning workbook that helps to plan and evaluate a new enterprise. The book includes chapters on setting goals, assessing markets, production feasibility, and financial feasibility. Cost: \$8 plus \$3.50 shipping and handling. Contact: Joan Padula, Farming Alternatives Program, 216 Warren Hall, Cornell University, Ithaca, NY 14853; (607) 255-9832.

Web Sites

Machine Finder Used Equipment Auction
<http://www.machinefinderauction.com>

UC Plant Protection Quarterly Newsletter
<http://www.uckac.edu/ppq>

USDA Community Supported Agriculture
<http://www.reeusda.gov/csa.html>

Biological Control: A Guide to Natural Enemies in North America (Cornell)
<http://www.nysaes.cornell.edu/ent/biocontrol/>

The European Market for Organic Products: Economics and Policy
<http://www.uni-hohenheim.de/~i410a/ofeurope/>

California Agriculture Statistics Service
<http://www.nass.usda.gov/ca/>

USDA National Food Safety Database Project
<http://www.foodsafety.ufl.edu/index.html>

Market Farming Discussion Group
<http://franklin.oit.unc.edu/cgi-bin/lyris.pl?enter=market-farming>

Managing for Today's Cattle Market and Beyond
<http://ag.arizona.edu/AREC/WEMC/TodaysCattlePub.html>

e-answers - Your Extension Information Source
<http://www.e-answers.org>

NEW FARMERS —FROM PAGE 1

dren asked, “Where are your farm animals?”

The Kellys responded with a petting zoo inhabited by chickens, goats, bunnies, cats, and miniature horses — many of them family pets known for their gentleness. Pumpkin-season tours also feature rides on Popcorn, the 20-year-old petting pony. “This horse is bomb-proof,” says Kelly. “You couldn’t put another horse out there.”



Clyde Kelly and son Jonathan drive the tractor-pulled hay wagon on a guided farm tour.

Last year 2,500 school children toured the farm in one month for a \$2 fee. The tractor-pulled hay wagon tour meanders past crooked peach tree rows because, “Heck, there’s too much straight in Davis,” says Kelly. “People like curvy little farms.” Her father initially protested. “You’ve got your rows crooked,” he said. But Kelly explained that the pancake-flat Davis land needed a little help in the contour department. “He’s all right with it now,” says Kelly.

Marketing Strategies

To attract pick-your-own customers, Kelly handed out flyers at the local farmers’ market. Each flyer contained a form offering a free basket of berries if the flyer was filled out and returned. From responses to that flyer, Kelly obtained a mail-

ing list of 30 customers, which has now grown to include 500 names. “That’s about as big as we want to get,” says Kelly, who still advertises in papers and sends advertising mailers directly to schools.

Although they have participated in farmers’ markets, the Kellys prefer on-farm marketing because it eliminates the need to pick, ship, and store their products — chores that force them to raise prices to consumers. “So if people come out here and they do all that stuff for us, we can give them a better price, and we don’t have to work so hard.”

Challenges Met

Although the on-farm reservoir and other irrigation tools have given Kelly problems, she sees obstacles as opportunities to learn. Gradually she and her family have developed the on-farm irrigation system to meet each crop’s needs. All crops, with the exception of apples, are on drip irrigation filtered from the reservoir. A new overhead sprinkler system debuted this season for the apples, which can get badly sunburned in the area’s scorching summer heat. The overhead system serves as an air conditioner for the apple trees as they mature.

But the water situation still presents challenges. “We found a well that has 10 times less boron than any of the wells we found in any of the areas around here,” says Kelly. They use the well to fill the reservoir, and in turn their reservoir’s pumping station irrigates the orchards. “The last time we had the apples tested,” Kelly says with a laugh, “the leaf test came back and they said, ‘You’re a tad low on boron.’”

She retains her sense of humor when relating the story about the peach rootstock

supplier in Stockton who, when Kelly arrived, had only 40 of the 320 rootstocks she had ordered. “He had sold the rest out from under me because I was a little guy,” says Kelly. She did the best she could with what he gave her, saying, “At least we got roots in the ground.”

More challenges came in the form of raspberry plants. Reading in a book written for the eastern U.S. that raspberries needed acidic soil, the Kellys added sulphur to bring their soil ph down from 8 to between 5.5 and 6. “We put our raspberries in, and then the leaves started burning up.”

Leaf analysis revealed toxic levels of soil micronutrients, made available to the raspberry plants because of the decreased ph level. Finally, after watering for two or three years with a ph 8 water, the soil is



Katherine Kelly explains a farm technique to tour members while her husband Clyde listens in the background.

back to normal conditions. “We’ll try again,” says Kelly.

Perseverance in the face of setbacks seems to be the recurring theme at Impossible Acres. But the Kellys remain undeterred. “Our life blood is people coming on to this farm and seeing it,” explains Kelly, “and that’s how we want it. We need people to walk around the farm. It’s just in the blood.” ■

**Visit the Small Farm Center Web site at
<http://www.sfc.ucdavis.edu>**

The site offers *Small Farm News* back issues, small farm related research, industry trends, links to agricultural sites, and a calendar where visitors can post events.

calendar

JUNE

3

**Agriculture Field Day
Hayfork, CA**

This program covers topics including food safety and preservation, Internet opportunities, livestock and field crops, and vineyard and orchard development.

Contact: UC Cooperative Extension, Trinity County, P.O. Box 490, Hayfork, CA 96041; (530) 628-5495.

10-11

**Committee for Sustainable Agriculture Heartland Conference
California State University, Stanislaus, Turlock, CA**

Workshops cover organic fruit and vegetable production, animal husbandry, herbs and flowers, homesteading, and permaculture. Farm tours and exhibits are included.

Contact: Committee for Sustainable Agriculture, 406 Main St., #313, Watsonville, CA 95076; (831) 763-2111.

16-18

**Jepson Herbarium 50th Anniversary Celebration and
Scientific Symposium
UC Berkeley**

Experts will discuss California plant diversity with biological consultants, government agency planners, conservation biologists, academic researchers, land owners, and the general public.

Contact: Betty Ringrose, Friends of the Jepson Herbarium, 1001 Valley Life Sciences Building #2465, UC Berkeley, CA 94720-2465; (510) 643-7008.

June 26-August 17

**Sustainable Agriculture: Principles and Practices
UC Davis Student Farm**

This eight-week course includes field activities, lectures, discussions and field trips that provide an in-depth introduction to sustainable agriculture. 8 units of UC Davis upper division credit. Enrollment is limited. Apply early.

Contact: Mark Van Horn, Student Farm, Department of Pomology, University of California, Davis, CA 95616; (530) 752-7645.

28

**San Joaquin County Mushroom Meeting
Stockton, CA**

Presentations cover topics including shiitake mushroom culture, oyster mushroom culture, and include a grower panel.

Contact: Benny Fouche, UC Cooperative Extension, San Joaquin County, 420 S. Wilson Way, Stockton, CA 95205

29-30

**Organic Farming in the San Joaquin Valley
Reedley College, Reedley, CA**

University of California researchers and other speakers will discuss organic methods for controlling insects, weeds, diseases, soil biology, composting, and the beneficial aspects of organic matter.

Contact: Richard Molinar, UC Cooperative Extension, Fresno County, 1720 S. Maple Ave., Fresno, CA 93702; (559) 456-7555.

JULY

13

**Field Day: Soil Solarization for Weeds, Insects and Diseases
Fresno, CA**

Speakers present solarization principles and methods and lead tours to sites where solarization is in process.

Contact: Richard Molinar, UC Cooperative Extension, Fresno County, 1720 S. Maple Ave., Fresno, CA 93702; (559) 456-7555.

21

**Foothill Grape Day
Nevada County, CA**

Industry speakers cover topics including cultural practices in vineyards, varietal selections, industry economics, winery construction, and turnkey concepts.

Contact: UC Cooperative Extension, Placer-Nevada Counties, 11477 E. Ave., Auburn, CA 95603; (530) 889-7385.

AUGUST

7-18

**International Short Course on Agroecology
Santa Cruz, CA**

The course will explore the application of agroecological knowledge to the design of sustainable farming systems, emphasizing the integration of agroecology theory with agricultural practice.

Contact: Erle C. Ellis, International Agroecology Short Course, Center for Agroecology and Sustainable Food Systems, University of California, Santa Cruz, CA 95064; (831) 459-2506.

27-30

**28th International Carrot Conference
Pasco, WA**

Topics include carrot production, pest management, breeding and genetics, and new products and marketing.

Contact: University Center for Professional Education, 2770 University Drive, Suite 202, Richland, WA 99352-1671; (509) 372-7200.

28-31

**International Federation of Organic Agriculture Movements
(IFOAM) 2000
Basel, Switzerland**

Presented in English, this conference covers organic agriculture and sustainable development topics in lectures, workshops, posters, and panel debates.

Contact: IFOAM 2000, FiBL, Ackerstrasse, CH-5070 Frick - Switzerland; phone: +41 (0)62 865 72 97; fax: +41 (0)62 865 72 73, e-mail: ifoam2000@fibl.ch

DIRECTOR'S COLUMN -FROM PAGE 2

needs. The program serves both conventional and alternative production systems.

The Small Farm Program has been supportive of, and has partnered with, other organizations to facilitate the development and growth of farmers' markets, Community Supported Agriculture (CSA), and other marketing alternatives. Through its co-sponsorship of Tasting of Summer Produce programs in various cities, the Small Farm Program helped foster the emergence and growth of California cuisine that focuses on fresh, locally grown produce.

The Early Years

Back in the early 1980s, with a cadre of farm advisors that included Pedro Ilic, Alfonso "Butch" Durazo, Faustino Munoz, Louie Valenzuela, Manuel Jimenez, and Steve Mendivil, the Small Farm Program focused on helping to empower new second-language, recent entrants to farming by working with them on their traditional and new crops. We continue that work today with Southeast Asian, Hispanic, and Latino growers in the Central Valley, and Hispanic and Latino growers on the Central Coast.

Our targeted resources include the Small Farm Center and six core Small Farm Program farm advisors. Other advisors from the Small Farm Workgroup add weight to our efforts. Our mission has not diminished. In fact, it has grown. However, our program resources have decreased. In particular, the Small Farm

Center's core support funding has declined, and farm advisors continue to find it difficult to access funds to carry out research on specialty and minor crops that do not have marketing orders or commissions such as the California Strawberry Commission.

The California Biological Agriculture Initiative - AB 2663

A glimmer of hope has appeared in the form of Assembly Bill 2663, which asks the University of California to adequately fund a number of legislatively mandated programs including the Small Farm Program.

The Small Farm Program cannot contact legislators to lobby on behalf of AB 2663. But we want to let our clients know that this bill, sponsored by the Assembly Committee on Agriculture and Assemblyperson Helen Thomson, offers a rare ray of hope that, for at least a couple of years, we may not need to keep up the frenetic pace of grant proposal activity to support our research, outreach, and services to the small farm and alternative marketing communities.

Legislators are not as aware of our contributions as those that have benefited directly from our work during the past 20 years. This may or may not be a factor in the passage of AB 2663. ■



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