HORTICULTURE AND SMALL FARMS

Program Highlights

- Over the past 5 years, **355 producers** participated in soil, water, and pest management workshops contributing to more environmentally sound farming systems
- In 2009-10, **UCCE produced 14 new informational publications** targeted to issues facing small scale foothill growers
- **In the past 5 years, 341 producers** gained marketing and farm business skills through UCCE workshops and short courses, improving small farm economic viability

Small farms are the foundation of agriculture in Placer and Nevada Counties. They produce a wide range of horticultural crops, feeding the increasing demand for locally grown produce. Foothill topography provides a multitude of microclimates, allowing production of crops ranging from subtropical citrus and pomegranates to temperate zone Christmas trees and apples. While overall agricultural acreage declines, the small farm community is growing. Despite the growing number of small farms, local producers often can not meet the demand for local produce. More farmers are needed, and as the farming community ages, the need for a new generation of farmers becomes more critical.

Most growers in Placer and Nevada Counties farm on small acreages, at the rural-urban interface. The overriding concern is keeping small farms viable in the face of high land prices and development pressures. Specific issues include recruiting and training new farmers, marketing and farm economics, and managing soil, water, and pests with sustainable, environmentally sound practices.

The mission of the UC Cooperative Extension Horticulture and Small Farms Program is to:

- *Provide information, education, and technical assistance to help farmers develop and maintain economically viable farming enterprises.*
- *Provide opportunities that encourage growers to work together to address local problems and needs.*
- *Help connect growers and area residents and educate consumers about the importance of local agriculture.*

Academic Sabbatical Leave
Citrus Production in North Africa

Issue

Citrus is a key crop for foothill horticultural producers and mandarins are the signature crop in Placer County. While most of our production is sold locally, a small amount is shipped to the East Coast and throughout the US. Growers are always interested in new varieties, production techniques, and developments in the global citrus market. The majority of mandarins sold on the East Coast are from North Africa and Spain, so I chose to spend a part of my sabbatical leave learning about citrus production in Morocco and Tunisia.

Tunisian Mandarins in Central Market, Tunis, Tunisia.

What Was Done

I spent two months in the main citrus growing region of Morocco, the Souss Valley. I was a guest of the Agronomic and Veterinary Institute (IAV) near Agadir. Clementine mandarins produced for export are the primary citrus crop. I also spent a month in Tunisia, hosted by the National Agronomic Institute of Tunisia (INAT). Tunisia's signature citrus is the Maltese orange, a Mediterranean dessert orange highly prized in Europe. In addition to visiting numerous orchards, packing houses, and field experiments, I was able to study citrus literature from the Arab world as well as from Europe, which is not readily available in the US. I learned a great deal about different production methods and varieties which may be successful here. I have made several presentations about what I learned.

Impact

I have shared much of the information I learned in North Africa with local citrus growers. Growers are interested in planting some of the varieties I encountered in North Africa, especially the Maltese orange. However, that is a long-term project, as it takes 5-6 years to bring in, clean, and legally certify citrus budwood from outside California. Several Tunisian colleagues will be visiting Placer County citrus orchards in late June, so the contacts I made will facilitate greater exchange of knowledge, to the betterment of our local citrus industry.

Academic Sabbatical Leave
Protected Vegetable Cultivation

Issue

Crop production is occurring more often in "protected cultivation" as demand for high quality local produce throughout the year increases. Protected cultivation, or production in high tunnels, hoop and mesh houses or other protective structures has become standard practice in Europe, North Africa and the Middle East. It is a valuable technique given increasingly unpredictable weather and regular invasions of new and devastating pests. As climate change intensifies, unseasonable weather makes protected cultivation more and more valuable to Placer and Nevada County growers.

What Was Done

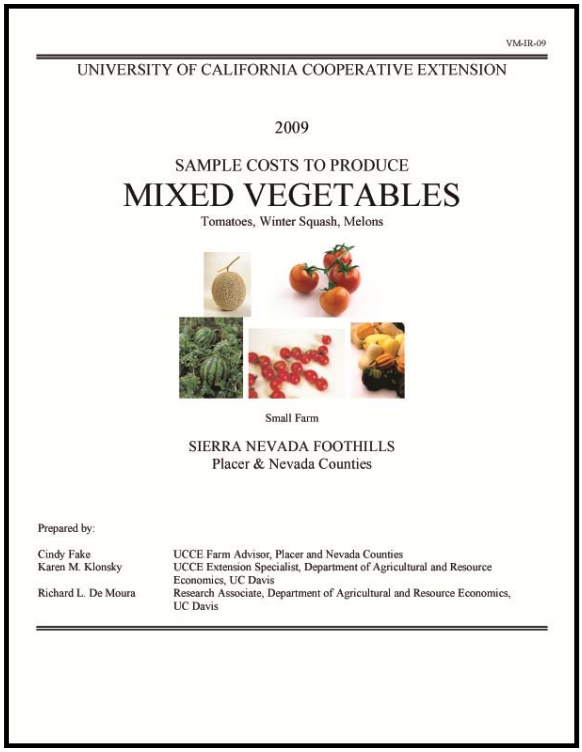
As part of my sabbatical research, I spent several months in North Africa learning about protected cultivation of vegetable crops. Tomatoes, peppers, squash, and cucumbers are grown off-season to feed the demanding clientele of large, high-end supermarkets in Europe. Much of the production is "biologique", the equivalent of "certified organic" in the US. This is in contrast to most US protected cultivation, which is chemical intensive. I learned firsthand about excluding and managing pests, managing crops on infertile soils, and practical growing techniques in protected cultivation.

Cherry tomato harvest near Agadir, Morocco.

Impact

Interest in protected cultivation is increasing in the foothills, as it can lengthen short cropping seasons and extend production of warm season crops into cooler weather. This can increase revenues and improve cash flow, increasing the economic viability of small farming operations. A number of area growers have taken advantage of the USDA cost share program for construction of high tunnels, so a number of high tunnels are currently in the planning or construction phases. As the practice becomes more common, the need for information and production techniques tailored to the exigencies of protected cultivation will be needed. My experience in North Africa will be very useful in helping growers learn about these new production techniques.

Academic Sabbatical Leave
Publications for Local Producers



VM-IR-09

UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION

2009

SAMPLE COSTS TO PRODUCE

MIXED VEGETABLES

Tomatoes, Winter Squash, Melons

Small Farm

SIERRA NEVADA FOOTHILLS
Placer & Nevada Counties

Prepared by:

Cindy Fake — UCCE Farm Advisor, Placer and Nevada Counties
Karen M. Klonsky — UCCE Extension Specialist, Department of Agricultural and Resource Economics, UC Davis
Richard L. De Moura — Research Associate, Department of Agricultural and Resource Economics, UC Davis

Issue

The foothills constitute a unique growing environment because of elevation changes and the variability of microclimates within a short distance. However, most available production information is targeted to large-scale producers and areas where large acreages of a specific crop are produced. There is little available information for small scale production in foothill conditions.

What Was Done

Developing publications relevant to foothill growers was a key goal of my sabbatical leave. During that period, I worked with a team of six growers to produce a mixed vegetable cost study for the foothills. Cost studies are important for growers who need financing to expand or diversify, as well as for beginning producers to learn what is involved in production of a particular crop. Other publications produced include information sheets on:

- **Citrus**: Growing Citrus in the Foothills, Mandarin Fruit Quality
- **Water Quality**: Best Management Practices for Copper Use, Water Quality Best Management Practices for Orchards and Row Crops
- **Vegetable Production**: Managing Blossom End Rot, Organic Compost Regulations & Suppliers
- **Farm Business**: Farming in Challenging Economic Times, Elements of a Farm Business Plan

Impact

Providing information appropriate to foothill farming is critical to inform decision-making for local producers. The citrus growing publication has been widely distributed to potential producers of citrus and the blossom-end rot publication has found wide use among local vegetable growers. The audience for some of these publications is much wider, however. The mixed vegetable cost study has drawn interest from as far away as Michigan, and the citrus document has been used in a number of other California counties with a significant number of small farms.

Horticulture Webpages

Issue

With growing interest in local food and more and more landowners interested in small scale farming, there is an increasing demand for web-based information on local farms and farming. While the UCCE horticulture program web pages provided some information for existing and prospective growers, many publications which had been developed for local agriculture were not available online. In addition, more resources on local produce were needed.

What Was Done

In summer 2009, with the assistance of intern Vanessa Reed, the UCCE Placer/ Nevada horticulture web pages were updated and new publications added. These publications were developed for foothill conditions and are now readily available to existing farmers as well as those exploring options for becoming a producer.

Eat Local, Start Now web page.

The "Eat Local, Start Now" web pages at ceplacer.ucdavis.edu/ Eat_Local,_Start_Now/were given a facelift and new information was added. The webpages provide factual information that helps consumers understand the importance of buying local produce and its contribution to the local economy and community. The pages now contain information on what organic means, a glossary of terms that are frequently used in discussions of local agriculture, as well as information about farmers' markets and other sources of local food products. There are extensive lists of resources for those interested in finding out more, making the pages a real asset for promoting local produce.

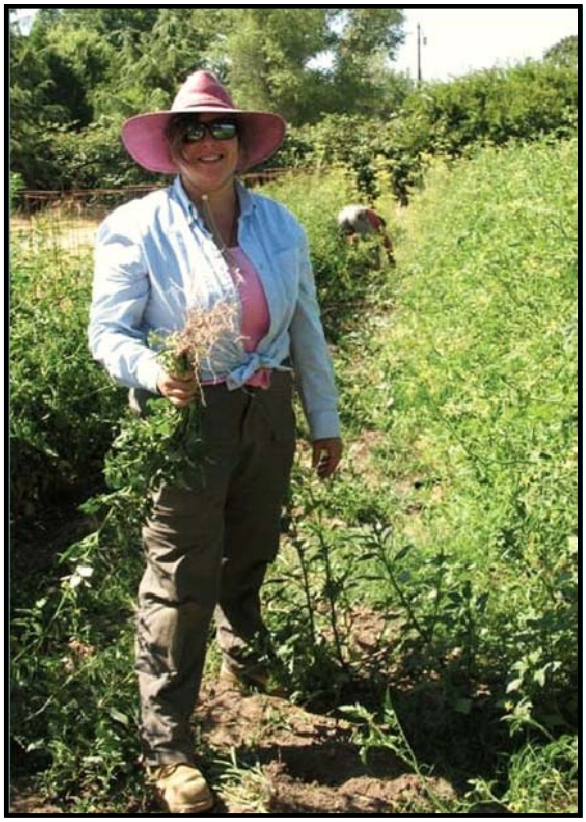
Impact

More and more prospective producers are finding their way to UCCE's programs and services through our website. Response to recent programs has come through the horticulture web pages, indicating the value of the site in providing information and resources. Local consumers are also finding useful information to inform their food purchases on the Eat Local pages.

Ag Futures Intern Program

Issue

The average age of a farmer in Placer and Nevada Counties is more than 56 years of age. The 2007 Census of Agriculture shows that only 2.5% of farms are run by someone under 35 years while 43.4% are operated by someone 60 years of age or older. Few of the younger generation of farm families are interested in continuing farming/ranching operations, so recruiting and training a new generation is critical. In addition, the current supply of local agricultural products lags far behind consumer demand. The lack of a new generation of farmers and ranchers means that supply will stay short of demand, unless new producers can be trained.



Intern Carrie LaPorte at Pilz Farm.

What Was Done

The Ag Futures Project involves the efforts of a broad spectrum of producers and ag agencies in planning and developing projects to ensure the future viability of local agriculture. Producers visited area high schools and colleges to talk about opportunities in agriculture, and in summer 2009, with the assistance of a grant from the Western Sustainable Agriculture Research and Education program, a small group of producers piloted an on-farm internship. Interns spent two weeks each at five different farms, learning what was involved in each operation. UCCE delivered the intern training and coordinated the on-farm intern program.

Impact

The outreach to schools helped educate students about opportunities in agriculture and recruited three interns for the summer on-farm intern program. Although the number of interns participating was small, it was a very worthwhile experience for both interns and producers. Development and management of intern programs continues to be a focus of the Ag Futures project.

Beginning Farmer Short Course

Issue

The burgeoning interest in local food has created a situation where the demand for local produce exceeds the supply for many commodities. We do not have enough farmers to meet the demand, but there is increasing interest in starting small farms in the foothills. Many would-be farmers and ranchers, are, however, neophytes in agriculture and need information and advice on getting started. There is little training available through area colleges and few professional consultants to assist new producers.

Jenny Gardemyer of Colfax Family Farm, one of the participants in the 2009 Beginning Farming class.

What Was Done

With so many new producers who need skills in order to develop viable farming operations, providing education and connecting producers with available resources is a critical part of the Farm Advisor's function. In 2009, the University of California Cooperative Extension developed a two-session business and marketing short course to help beginning farmers and ranchers get started. The class was offered again in June 2010, with space for 30 people, but demand for the class exceeded the capacity of the class and a second session will be offered in late summer 2010. In addition to providing training, the class is intended to help new producers begin to build support networks with new and existing producers. UCCE also assists new growers by providing individualized information on appropriate crops, soil and climatic conditions, costs of production, and market potential for specific crops.

Impact

The beginning farm planning and marketing classes provides a pathway for starting a new agricultural operation and helps producers realistically assess their farming plans. It is too early to assess impacts from the 2010, but at least four producers from the 2009 class are up and running, selling their products from the farm and in farmers' markets.

Grape Grower Field Day
Nevada County

Issue

Our foothill counties lack agricultural support infrastructure and there are few professional services that small-scale producers can rely on for assistance. With the expansion of vineyards in the foothills, many new winegrowers need practical skills and knowledge appropriate to foothill conditions. In addition, new pests continue to invade, threatening crops, and growers need to constantly update their knowledge of pests and management practices.

Mark White, Placer Resource Conservation District and Mike Naggiar, Naggiar Vineyards at 2010 Field Day.

What Was Done

UCCE organized a vineyard field day at Naggiar Vineyards in June 2010. The workshop focused on practical skills and information such as trellising decisions, canopy and irrigation management, monitoring for pests and managing them in a variety of situations from backyard to commercial vineyards. Twenty-two growers attended the field day. Their level of experience ran the gamut from planning a small vineyard to commercial growers with over a decade of experience.

Impact

Learning sustainable best management practices helps growers succeed in growing quality winegrapes and in conserving the land and water resources that farming relies on. The practical advice offered by an experienced vigneron, Mike Naggiar, whose vineyards exemplify sustainable production, was invaluable to the participants. Even the most experienced growers in the group said they learned a lot from the field day. In a post workshop survey, 71% of respondents said they planned to change their farming practices within 6 months, as a result of the workshop. 100% of respondents said they would change practices within a year. Practices they planned to change included monitoring for insect pests, adjusting irrigation to plant needs, and planting cover crops and insectary hedgerows to attract beneficial insects. All these practices contribute to more ecologically sound farming.