

UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:
\$14,850

Funding Period:
FY 1997–98

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Scott River Basin Water Balance: Phase I (Year I)

Objectives

1. Develop a water balance of the Scott River system in order to help local farmers address the problem of the low streamflows in the Scott River while maintaining sustainable agriculture in the Scott Valley.
2. Develop an holistic management tool that will help anticipate the benefits, costs, and political feasibility of policy/project alternatives that are presented by the local Coordinated Resources Management Planning (CRMP) Council.

Summary

This is a final report on Phase I (Year 1) for a water balance of the Scott River basin. Phase I included the collection and inventory of data necessary for developing a water balance and a computer model of the Scott River basin. Phases II and III were funded by the California Department of Fish and Game. (A report will be forwarded to UC SAREP when Phase III is completed in 2000.) Below is a brief summary of Phase I.

Farming and ranching provide the economic base for the people living in the Scott River basin. Historically, surface water ditches provided most of the irrigation and stock water needs for crops and livestock. However, during the summer and late fall there is little or no stream flow. For those that can afford it, large irrigation wells are installed to ensure an adequate water supply during the low-flow, fall months.

In addition, low surface flows in the fall are identified as a primary limiting factor to the survival/success of the local fisheries. These fish migrate upstream to spawn and need an adequate amount of water to allow for migration. Local areas of dewatered streams can cut off miles of potential spawning habitat. Many local agricultural producers recognize the need to improve streamflows to maintain a sustainable agriculture business and a viable community. This water balance was recommended as a way to better understand the hydrology of the basin.

A water balance is really an accounting system of the hydrology of a basin. Hydrology is the collection, occurrence, and distribution of water. In order to develop a water balance, all of the inputs and outputs of water in a watershed need to be identified and the data gathered.

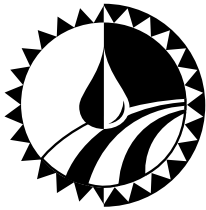
Using basic hydrologic concepts, the inputs were identified as precipitation; the outputs were identified as evapotranspiration and streamflow. These parameters are sufficient for an annual water balance. However, for a monthly or seasonal water balance, changes in soil moisture and groundwater storage are also necessary to capture the deficit of water in the summer and the excess in the winter.

Precipitation and streamflow are directly measurable and can be spatially interpolated with some confidence. However, evapotranspiration requires crop information, air temperature, relative humidity, and soil moisture. In addition to the hydrologic inputs and outputs, the land in the basin needed to be described accurately so that a computer model (named MODFLOW, written in Fortran77) could be developed and used to predict land and resource management impacts. Therefore, information on soils, geology, land use, roads, groundwater use, surface diversions, and urban lands were collected.

The end result of this project is to provide local resource managers with a tool that can be used to identify projects of benefit both to the local fisheries and to the agriculture community. A specific project of interest is conversion of brush lands to grazable grass lands. A physical model will help people visualize the results of such an action. The model will process a scenario where a piece of land is converted from brush land to grass land. The predicted results will then be visually presented to a group. If favorable, a proposal would be written to fund such a project. A visual representation of the scenario could be presented with the proposal for impact and support.

However, the long-term success of this model depends on adequate maintenance. Changes in topography, water use, and land use must be reflected in the model to ensure accurate results. In addition, only projects that have the support of willing landowners will be pursued.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$5,520

Funding Period:

FY 1997–98

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Market Cooking for Kids: Facilitating Field Trips to Sustainable Agriculture Farms

Objectives

1. Develop a Farmers' Guide to Hosting School Farm Field Trips during the course of 20 farm trips with selected school classes and farmers. This guide will then be widely disseminated to farmers.
2. Develop a complementary Teachers' Resource Guide to Visiting Farms, which will be field-tested with the same teachers.

Summary

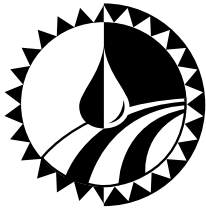
This grant provided funding to research and develop *A Farmers' Guide to Hosting Farm Visits for Children*, which has been produced for distribution to Bay Area farmers practicing sustainable agriculture. The purpose of the Guide is to encourage more farmers to host field trips to their farms and to provide the most meaningful educational experiences possible. The Guide offers suggestions for activities, group management, safety and logistics – everything a farmer needs to know to host a group of children. The grant which funded the Guide also helped support farm field trips for 376 Bay Area school children, grades pre-Kindergarten through Grade 5 in the spring of 1998. Outcomes and feedback from the farm field trips were incorporated and inform the Guide's content.

A separate Teachers' Resource Guide has not been developed. Instead, the farmers' guide was designed to serve as a supplemental resource for teachers. In addition, the farmers' guide is being incorporated into the *Market Cooking for Kids Activities Guide*, in which further information on farm field trips for teachers (e.g., list of local farms to visit and bus company information) will be included.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports

Resources

A Farmers' Guide to Hosting Farm Visits for Children, Center for Urban Education about Sustainable Agriculture, Berkeley, CA, 1998.



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$10,000

Funding Period:

FY 1997–98

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Park Village Community Supported Agriculture Research Project

Objectives

The Park Village Community Supported Agriculture (CSA) Project was funded by SAREP to support research and educational activities for the Park Village Farm Project. The grant from SAREP was used to examine the feasibility of the Park Village Farm Project, provide potential participants with training and technical assistance, and develop a project plan. [The second phase of this project, to implement the CSA, was funded by SAREP for fiscal year 1999-2000 (Kositsky/Melton).]

The specific objectives of the Park Village CSA Research Project were as follows:

1. Determine how farm land can best be used by Park Village Farms and what improvements must be made to the land.
2. Develop a business plan for Park Village Farms that will ensure the food needs of the community are met while creating economic opportunities for participants.
3. Provide residents of Park Village with training on operating a farm and develop an organizational structure for Park Village Farms.
4. Develop a project design, budget and timeline for the Park Village Farm Project. Raise funds through grants and/or loans for the Park Village Farm Project.
5. Write and disseminate a report that demonstrates the feasibility of the Park Village Farm Project for use by organizations interested in implementing similar projects.

Summary

Park Village Apartments is an affordable apartment complex co-owned by the Rural California Housing Corporation (RCHC) and the Asian Pacific Self-Development and Residential Association (APSARA). RCHC is a regional nonprofit housing and community development agency. APSARA is an association of the residents of Park Village. Residents are primarily refugees from war-torn Cambodia. They formed APSARA in 1989 in response to terrible living conditions in their community. As a result of their efforts, APSARA and RCHC purchased and rehabilitated Park Village. Today, the complex is an affordable, safe place to live that offers services to help families achieve self-sufficiency. Due to language and cultural barriers, however, many families face challenges to economic independence.

In 1996 RCHC staff began meeting with Park Village residents to discuss their interest in agriculture as a means for self-sufficiency. Many of the residents farmed in Cambodia and had informally discussed a desire to continue farming in the United States. During these meetings, residents stated that they believed farming might help them achieve self-sufficiency and food security. RCHC committed to helping residents pursue this goal.

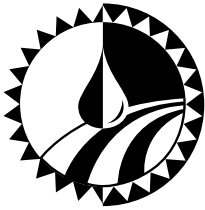
Initially, the Park Village Farm Project was to be sited on 20 acres of land in Acampo, Calif. Under an agreement with the Northern California Land Trust (NCLT), the Park Village Farm Project would farm the land rent-free and pay NCLT for their cost of ownership (property tax and insurance). Through the grant from SAREP, RCHC hired a farming consultant to evaluate the soil, capital improvement requirements and equipment needs for the project, and to determine what crops would be most successful using sustainable farming methods at the NCLT site. In addition, the consultant was to develop a budget for capital improvements and equipment. During this project the consultant worked closely with Benny Fouche, a Small Farm Advisor at the UC Cooperative Extension in San Joaquin County (UCCE). Jeff Kositsky, RCHC's Principal Investigator, worked with the cooperators to develop a feasibility study for the Park Village Farm Project.

This research concluded with a report on the donated land, a list of potential crops, an equipment list and a description of the improvements needed to make the land farmable. Data was gathered through a soil test, interviews with local farmers, a survey of the land, estimates from contractors, interviews with participants, meetings with wholesalers and other potential marketing sources, a review of crop studies and bids from suppliers.

The work was completed in a timely, effective and efficient manner and the report prepared was comprehensive. After the feasibility study was completed, however, NCLT determined that they needed to charge RCHC \$6,000 to prepare a new lease. NCLT also determined that they would require rent at 75 percent of the market rate for agricultural land. Since this fee was much greater than the original agreement with NCLT and the land required major improvements, RCHC decided to find another site for the project.

Although the land studied for this research project will not be used by the Park Village Farm Project, conducting the feasibility study provided a significant beneficial impact. First, it prompted the creation of a start-up budget, equipment list and crop plan that was useful regardless of the location of Park Village Farms. Additionally, it allowed RCHC to determine the quality of NCLT's land as it decided if the project should be sited there, educated the participants on agricultural issues, and provided RCHC with increased institutional knowledge on the subject of setting up a farming operation that was used to determine the feasibility of the project and for grant writing purposes.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

www.sarep.ucdavis.edu

Grant Award:
\$4,700

Funding Period:
FY 1997–98

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Design Plan and Monitoring Program Development for a Straw Bale Produce Cooler Demonstration Unit at the Rural Development Center in Salinas, California

Objectives

1. To develop plans for a strawbale produce cooler facility large enough to accommodate the projected volume of produce harvested by the Rural Development Center (RDC) program participants. The Center anticipates growing this produce on demonstration plots in connection with a possible commercial venture.
2. To develop facility plans which will have cooling and storage features to accommodate the physiological requirements of a range of commercial crops (over 40 varieties) grown at the RDC.
3. To develop facility plans with features and instrumentation, which will accommodate a monitoring program to assess efficiency, cost effectiveness, and long term feasibility.
4. To determine the total project cost of the demonstration unit to include labor, materials, and support costs. This information will provide the basic framework for the construction phase of the project (funds will be solicited from available sources).

Summary

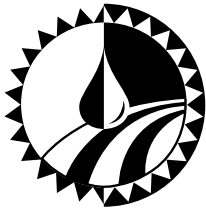
The primary purpose of the project was to enhance the prospects of family farmers associated with the RDC to market their own crops in a way that would give them more options, maximize profits, and provide them with greater control over the process of marketing. The construction of a cooling facility on the property would provide participating farmers with a marketing advantage by allowing them to store and cool their harvest and “play the market” to get the optimum price. The cooler would also provide opportunities for collaboration among family farmers in the region, partly through joint marketing arrangements.

Of primary importance in this project is the use of the straw bale produce cooler for educational and demonstration purposes. The project’s Technical Advisory Committee (TAC) has been fully supportive of this concept which supports the construction of a cooler unit that will be appropriate to a small family operation, can be built (as much as possible) by the farmer(s) themselves, and is financially affordable. In addition, if the cooler appears feasible, the project participants will develop a guidebook and training materials.

The TAC met all of the stated goals of this project by 1) developing a design for the strawbale cooling unit that can accommodate a wide range of crops and be monitored to assess energy efficiency, cost effectiveness, and long-term feasibility; and 2) developing a timeline and budget for its construction. The TAC also made plans for a covered entrance, which will serve as a space for washing and packing vegetables and as a space for large trucks to load/unload vegetables into the cooler. The second phase of the project will be built after the cooling unit is complete.

With the design and timeline now complete, the TAC is working on two immediate priorities: funding and the permit process. Construction is expected to begin in February 2000 with a completion date of March 2000. Throughout construction, videotaping will occur to create a documentary that will serve as a manual for others constructing their own strawbale coolers.

The complete report of this project is available on SAREP’s Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Progress Report

Grant Award:
\$9,540

Funding Period:
FY 1996–97

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Evaluating Farmers' Markets in Low-Income Areas

Objectives

1. To determine the factors that have made farmers' markets in low-income urban communities across the country successful.
2. To determine the factors that have resulted in the failure or stagnation of farmers' markets in low-income communities in California.
3. To determine public policies that affect the success of farmers' markets in low-income communities.
4. To educate farmers' market organizers, farmers, and other relevant individuals about developing farmers' markets in low-income communities and the steps needed to make them successful.

Summary

This research project has explored issues surrounding farmers' markets in low-income communities. It examined policy opportunities and barriers at the federal and state levels, and conducted a literature review of low-income consumers' cooking and shopping habits, and their implications for farmers' markets. It also examined nine markets on the East and West coasts to determine common criteria for operating and starting a successful low-income farmers' market.

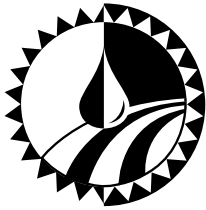
A report of our findings, *Hot Peppers and Parking Lot Peaches: Evaluating Farmers' Markets in Low-Income Communities*, includes general guidelines for farmers' market operation, such as developing a community sense of ownership, following solid market organizing and operational principles, cultivating a culturally appropriate mix of products at low prices, developing strong links with farmers, cultivating political connections with City Hall, and gaining some form of subsidy, either through Farmers' Market Nutrition Program coupons, the presence of middle-income shoppers, or through subsidies from middle-income markets.

With regard to policy issues, the report details a lack of coordination within USDA on farmers' markets and low-income food access. USDA has not yet developed a system to allow farmers' markets to continue accepting food stamps once states have converted them to a debit card system. Some California farmers' markets will suffer dramatically if such a system is not developed within the next few years. In other policy issues, the report concludes that the state of California should provide a minimum of \$400,000 per year for participation in the Farmers' Market Nutrition Program, and allow for off-farm stands in low-income areas to be exempt from standard pack regulations.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports

Resources

Hot Peppers and Parking Lot Peaches: Evaluating Farmers' Markets in Low-Income Communities,
Andy Fisher, Community Food Security Coalition, Venice, CA, 1999.



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$37,707

Funding Period:

FY 1996-98

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Collaboration Between Willard Greening Project & BOSS (Building Opportunities for Self-Sufficiency)

Objectives

1. To develop urban, inner city agriculture by utilizing unused public lands for food production.
2. To demonstrate the applicability and economic sustainability of intensive farming methods such as those promoted by John Jeavons for small plot urban situations.
3. To train homeless people in intensive farming methods.
4. To develop a community food system by:
 - Developing and expanding local markets for urban produced foods.
 - Developing the Berkeley Unified School District's Food Services as a market for local farmers and gardeners.
 - Developing more efficient use and less waste of existing urban-produced foods.
 - Promoting mutual understanding and political cooperation between the community and food producers through community education and outreach.
 - Educating consumers on the benefits of locally produced, organic foods.
 - Demonstrating that contrary to popular beliefs, school children want to and will eat vegetables, and are viable consumers of locally produced, organic foods.

Summary

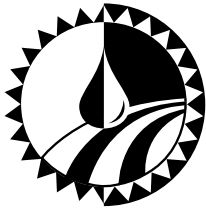
In 1998, the Willard Greening Project expanded its production with the removal of 2,200 square feet of asphalt and the installation of raised beds at Willard Middle School. As a result, beginning in September 1998, the Willard Greening Project began and continues to produce 15 to 30 pounds of lettuce and salad greens per week. The primary destination for the greens is the school lunch programs at two schools, Willard Middle School and Jefferson Elementary, which use five to six pounds of greens per week. The remainder of the greens is sold at the local farmers' market, or donated to Harrison House, a homeless shelter for families. The successful model of school garden produce supplying the school lunch has prompted other schools to request assistance in implementing this model. The goal is to have all children in Berkeley eating fresh, organic salads in their school lunch. The Greening Project has also actively participated in the formation of the Berkeley Food Systems Project with the goal of developing links between the school and local farmers for the rest of the fresh vegetables and fruits used in school lunches, and for the development of a food security policy to be presented to the City of Berkeley. [The Willard Greening Project received additional funding from SAREP for fiscal year 1999-2000.]

The original objectives of the project have changed. One major change in the objectives involves the termination of the job-training program for the homeless, which then necessitated ending the collaboration between the Willard Greening Project and Building Opportunities for Self-Sufficiency (BOSS). The reasons for ending the homeless job-training program are many. Primarily, BOSS, after evaluating the efficacy of its training program, chose to change the gardening program from job training and food production to rehabilitation. BOSS, within the last year, purchased a piece of property which has been developed into an ornamental and herb garden.

The second major change was the researchers' appreciation of the importance and significance of improving the quality of food served in school lunches. Schools are a major market for food. Berkeley Unified School District (BUSD) has an enrollment of 9,283 students, and approximately one-third of these students are eligible for federal meal subsidies. In the course of a school year, the Food Services department will serve over 463,000 lunches and 106,000 breakfasts. For many students, school meals provide a significant portion of their nutritional intake. Currently the meals served by Berkeley's Food Services department, consistent with the industry standard, contains little or no fresh vegetables and fruits. The bulk of the items served are reheated, prepackaged frozen foods.

California Department of Education, Nutrition Education and Training Section recently concluded that "fruits and vegetables are the most under-consumed of the five food groups," and that in fact "fruit and vegetable intake by kids may be falling." Fruits and vegetables are not just healthy choices; studies have shown that students who eat the recommended amounts of fruit and vegetables actually have improved academic performance. One way to increase fruit and vegetable consumption by children is to involve them in gardening.

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UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$10,000

Funding Period:

FY 1996–97

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Market Cooking for Kids: In Season Cooking and Science for School Children

Objectives

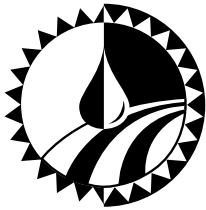
1. Present the MCK program in the same schools, with the same teachers, as last year.
2. Expand our program, based on suggestions from teachers, to include: activities in school gardens; school visits from local farmers who grow the featured produce; field trips to local farmers' markets; wholesalers; and urban market garden projects; and lessons through the summer in year-round schools.
3. Use the program to test lessons for a Reference Guide about the cooking and science of seasonal foods. With teacher involvement and feedback, further develop lessons, recipes, and pre- and post-lesson classroom activities.
4. Increase teacher and family involvement by providing take-home activities, such as recipes, and soliciting teachers' and parents' input for the reference guide.
5. Make the classroom programs self-sustaining by training teachers and by creating "Rolling Kitchens" for each school.

Summary

This grant supported the development and testing of the Market Cooking for Kids *Activities Guide*. This guide is organized into 18 chapters based on a series of seasonal crops and provides a compilation of recipes, activities, background information, and tips for conducting simple cooking activities in the classroom. Each chapter of the guide also includes a farm profile – a brief article about a local, family-owned, organic farm where each crop is grown. The *Activities Guide* will be used by elementary school teachers to introduce their students to issues of food production, sustainability, and nutrition through hands-on experience.

Market Cooking for Kids has made considerable progress toward meeting each of these objectives since they were originally submitted for this proposal. However, the implementation of this grant has focused primarily on meeting the third objective, to develop and test what was referred to as a "Reference Guide" and has evolved into the Market Cooking for Kids *Activities Guide*.

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UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$15,000

Funding Period:

FY 1996–98

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Rethinking Direct-Marketing Approaches Appropriate to Low- and Moderate-Income Communities and Urban Market Gardens

Objectives

The intent of this research was to identify viable direct-marketing approaches that could sustain a small market garden in low- and moderate-income urban communities. Once a 'fit' between consumer and producer needs was identified, a pilot project would be developed that was both economically viable and neighborhood-appropriate. The original research objectives included:

1. Eating and Purchasing Habits. Collect data on available food distribution systems, eating habits, and direct marketing participation of a low- and moderate-income community.
2. Bringing Locals to Market. Determine feasible direct-marketing approaches to integrate urban market garden projects into low- and moderate-income neighborhood food consumption and consumer purchases.
3. Pilot Project. Develop an alternative direct-marketing pilot project that addresses the needs and preferences voiced through a survey of the local community.
4. Research Report. Provide a report to UC SAREP and targeted research and community practitioners summarizing results of the study and the justification for the proposed pilot project.
5. Funding Proposal. Approach UC SAREP and other funders to initiate a pilot project that reflects the research findings and test it as a viable case study in urban sustainable agriculture and community food systems.

At the outset the research team believed that the Garden Patch's remaining unmet goal was economic viability which could be achieved through better marketing. As the work progressed it became clear that the research objectives needed to include an assessment of both opportunities and barriers to the self-sufficiency of a non-profit program of this sort:

6. Realities of Non-market Agendas. Assess the ability of an urban, social-agenda farm to be financially viable.
7. Social-Agenda Marketing. Determine economically feasible market approaches for small-scale urban market garden projects that capitalize on the project's social agenda.

Summary

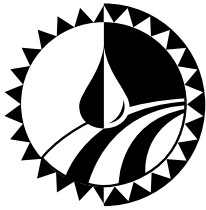
Berkeley Youth Alternatives' (BYA) Garden Patch is a half-acre site providing multiple services to youth and community while striving for financial self-sufficiency. Of particular interest to this study is the Garden Patch's Youth Market Garden Program (Market Garden) which trains and employs at-risk youth to grow and sell organic produce at farmers' markets and elsewhere.

The intent of the research was to improve the Garden Patch's economic viability through analysis of potential market niches and development of a pilot project. The research focused on two areas – food purchasing patterns in the surrounding neighborhood and the economic feasibility of a small urban garden. Data collected through surveys, focus groups, and interviews showed that BYA neighbors enjoy ready-access to fresh produce and have complex shopping patterns motivated by the search for quality, affordability, and convenience.

An internal audit and expert input revealed cost inefficiencies in operating the socially motivated Market Garden, specifically time spent on youth training, non-garden BYA activities, and community outreach. Yet experts and survey participants placed more importance on the Market Garden's role in youth training than as a for-profit venture. Further, many of those surveyed indicated they would support the youth programming by purchasing Market Garden products as long as they were high quality and fairly priced.

These findings informed the design of a pilot project that incorporated small business learning experiences for youth in direct marketing pursuits. However, it remains unclear if such an educationally based program can sustain itself financially in the long term.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Progress Report

Grant Award:

\$80,200

Funding Period:

FY 1996–1998

FY 1999–2000

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A Spatially Explicit Vineyard Expansion Model: Addressing Crop Production, Public Policy, and Environmental Concerns

Objectives

The goal of this project was to provide an assessment of where vineyards have been planted, where they are likely to be developed, and address the natural resource and environmental policies that are associated with agricultural expansion in Sonoma County. The specific objectives of the research were to:

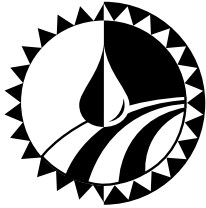
1. Integrate vineyard maps with physical and habitat data for Sonoma County into a Geographic Information System (GIS) to assess patterns of vineyard development.
2. Make a model of areas suitable for future vineyard development.
3. Use the GIS to evaluate proposed and adopted regulations and habitat loss and fragmentation.

Summary

Vineyards are expanding rapidly in California's north coast due to a booming wine market. In Sonoma County, much of this expansion is occurring on hillsides that harbor California's remaining oak woodlands. These natural areas support a majority of the region's biodiversity, provide ecosystem goods and services and scenery valued by residents. This project was designed to provide an assessment of where vineyards have been planted, where they are likely to be developed, and address the natural resource and environmental policies that are associated with agricultural expansion in Sonoma County.

The specific objectives of our research were to 1) integrate vineyard maps with physical and habitat data for Sonoma County in a GIS to assess patterns of vineyard development; 2) make a model of areas suitable for future vineyard development; 3) use the GIS to evaluate proposed and adopted regulations; and 4) evaluate the risk of habitat loss and fragmentation. This research project provided analysis that is designed to promote sustainable agriculture at the landscape scale. Also, this information is incorporated into a planning tool that is being used by Sonoma County for planning purposes thereby meeting SAREP's priority to integrate crop production issues with public policy issues and community development.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$14,948

Funding Period:

FY 1996–97

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Natural Beef: Consumer Acceptability, Market Development and Economics

Objectives

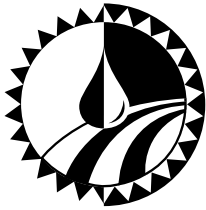
1. Determine the consumer acceptability of natural, forage-fed, blade-tenderized beef, developed on California rangelands without exogenous anabolic steroids or subclinical use of antibiotics.
2. Characterize the demographics of the potential market in Northern California.
3. Determine the economic feasibility of the development of a natural beef market, emphasizing costs and returns to producers in contrast to current marketing systems.
4. Develop a rancher-to-consumer marketing plan for Natural Grass Fed Beef.

Summary

This project provided insight into the viability of grass-fed beef marketing in California. Findings from consumer surveys and focus groups indicated an interest in beef products that were not implanted with hormones or given antibiotics. Restaurant purveyors were interested in increased links between production ranches and restaurant products, and were concerned about the leanness of ranch products and the ability of producers to deliver the consistent quality required for their businesses. A sample marketing plan was developed to provide strategies for potential product development for Northern California.

Four case studies were developed to provide insight into actual market development through past rancher activities. These case studies underscored the issues that need to be addressed prior to considering a marketing plan. A flow chart was developed to visually illustrate the different marketing outlets and the issues that arise trying to access them. Based on these actual experiences, a review document was developed to highlight the issues that need to be addressed with suggestions on how to approach them in a systematic fashion. A business plan model was developed to provide potential ranchers with a framework to help think through the business side of producing grass-fed beef. A sample budget was included to help analyze individual operations. Because of the small economy of scale, transportation was the most sensitive item in the expenditures. The major consideration in grass-fed beef is location: the location of the nearest USDA-inspected processing plant, and the location of the target market. Thus, strategically locating the grass-fattening operations near a processing plant and the target market greatly reduces the operational costs. Ranchers also need to define their product's yield of retail cuts, and its quality in both tenderness and flavor under their existing management systems.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$14,440

Funding Period:

FY 1996–97

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Socio-Economic Analysis of Rotational Management of Wetlands and Cropland in Tulelake Basin

Objectives

The overall goal of this multidisciplinary and participatory project is to assess the feasibility of wetland/cropland rotations as a long-term management option for sustainable coexistence of irrigated agriculture and wetland reserves for the Tulelake Basin. The primary goal of the proposal was to initiate development of an assessment modeling framework combining GIS (Geographic Information System)-based economic, hydrologic, and environmental models for estimating the effects on farm profitability and overall economic activity, and the environmental changes for different management options.

Specifically, the research objectives were:

1. Document the various positions and values of the many parties concerned about agriculture and wildlife in the Tulelake basin, and to determine what constitutes acceptable resolutions to those involved.
2. Develop a spatial GIS database with a digital map which will include information on topography, infrastructure, cropping history, crop management, water flows, soil characteristics, vegetation patterns, and all data generated from the pilot study sites.
3. Develop and implement innovative cost/benefit assessment frameworks that incorporate spatial and temporal aspects of potential trade-offs and threshold boundaries for decision-making. This will involve:
 - Creation of a GIS-based economic model to estimate crop production budgets and drainage and flooding costs.
 - Expansion of the model to incorporate ecosystem health indices such as habitat diversity, water quality, water consumption, nutrient cycling and measures of refuge desirability for hunting and wildlife recreation activities.

Summary

This report is part of a multi-disciplinary, and community-based research project underway to assess the feasibility of wetland/cropland rotations as long-term management options for sustainable coexistence of productive irrigated agriculture and wetland reserves in the Tulelake Basin. The proposal requested supplemental support to develop frameworks to assess relative merits and costs of different management scenarios that are acceptable to all the major stakeholders.

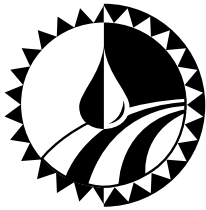
Specifically with respect to our proposal's objectives:

The researchers were unable to complete semi-structured interviews as planned due to some highly controversial issues impacting both agriculture and refuge management. Outreach and continued interaction with involved parties has intensified.

Researchers will expand development of a GIS database and digital map for the region that already includes information on topography, climate, infrastructure, crop and wetland history, crop management inputs, water flows, soil characteristics, and vegetation patterns. The researchers will add data on water use, nutrient cycling, pest population dynamics etc. as they are generated from ongoing pilot studies.

The researchers began creation of an innovative cost/benefit framework that will incorporate spatial and temporal aspects for management decision-making. Agency personnel and advisory groups representing farming, environmental, and hunting interests have been involved in all stages of the project.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:

\$7,000

Funding Period:

FY 1995–96

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San Francisco Public Market
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Bill Wilkinson,

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Market Cooking for Kids: Developing Children's Consciousness of Regional Sustainability

Objectives

1. To introduce children to the pleasures of flavorful, local produce.
2. To use this enjoyment as a basis for building an understanding about regional sustainable agriculture and for developing good nutritional habits.

Summary

The purpose of this program is basic and vital: to introduce urban children to the experience of tasting, preparing, and learning about the most flavorful, freshest produce. The researchers believe that if children are exposed to this kind of food, they are going to want to eat it. This motivation provides the basis for the fulfillment of the program's objectives.

During the 1995-96 school year, Market Cooking for Kids (MCK) was implemented in two classrooms in each of five San Francisco and five Oakland public elementary schools. We presented five lessons over the course of the school year, each lesson featuring a particular seasonal fruit or vegetable. The lessons were divided into two half-hour segments, one on cooking and one on science. The classes were organized and physically laid out to encourage maximum interaction between the presenters and the children and to facilitate hands-on activities.

The cooking segments, taught by chefs from local restaurants, included comparative tastings of different varieties of the featured fruit or vegetable. After the tastings, each chef worked with the children to prepare a simple recipe based on the same fruit or vegetable.

The science segment focused on helping children understand the fruit or vegetable as part of an ecosystem and to develop a sense of season and place. Using resources provided by local farmers, such as whole, rooted plants, the children learned about the biology of food plants. They also located the primary growing areas for each crop on a California topographical relief map, and several times planted seeds or starts to take home.

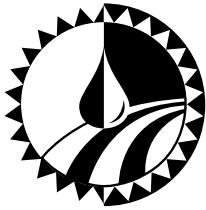
Each class (except one) went on a field trip to a local farm to reinforce the children's sense of connection to their regional agriculture. For teachers and students alike, this was one of the highlights of the program.

The program was enthusiastically received by all cooperators and participants. All the schools where it was presented last year have asked the researchers to come back.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports

Participating Chefs and Restaurants: Patricia Unterman, Michael Sparks, Hayes Street Grill, San Francisco, Reed Hearon, Jody Denton, Restaurant LuLu, San Francisco, Judy Rogers, Ristorante Ecco, San Francisco, Anne and David Gingrass, Hawthorne Lane, San Francisco, Esther Cook, RSVP Catering, San Francisco, Scott Miller, The Pasta Shop, Oakland, Maggie Klein, Oliveto's, Oakland, Larry Goldman, Bay Wolf, Oakland, Jim Shepard, Oakland Museum Café, Oakland

Participating Classroom Teachers and Schools: San Francisco — Larry Allegre, Marta Estrella, Cesar Chavez Elementary School, Sandra Berger, Michelle Wong, Lafayette Elementary School, Patrick Milkeen, Darci Chan, Jefferson Elementary School, Julie Dixon, Anne Allen, Treasure Island Elementary School, Mrs. Jamison, Mrs. Chang, Argonne Elementary School Oakland — Esther Tidwell, Meg Engelhardt, Bella Vista School
Monica Rock, Patrick Urbi, Whittier Elementary School, David Kumamoto, Loreto Ariztia, Lafayette Elementary School, Dana Madison, Kay Carter, Golden Gate Elementary School, Anne Larsen, Elizabeth Bandy, Peralta Year-Round School



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture Research and Education Program

Final Report

Grant Award:
\$20,000

Funding Period:
FY 1995–98

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Pomona-Inland Valley Council of Churches' Food Security Project

Objectives

1. Through the outreach of the Services Developer, who provides training, nutrition education and advocacy via the Beta Center Hunger Program in Pomona, the project will address the nutritional needs of impoverished families with direct food distribution, nutrition education, and classes.
2. Through Pomona-Inland Valley Council of Churches' Pomona Valley Certified Farmers' Market, the project will expand the accessibility of fresh, locally grown, low-cost, nutritious food to low-income communities.
3. Through collaboration with other community gardens in the Pomona area, the project will assist in developing and sustaining neighborhood-based, community-sponsored agriculture.

Summary

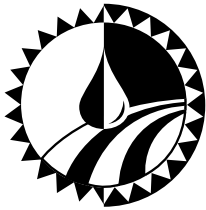
The Pomona-Inland Valley Council of Churches (PIVCC), organized in 1967, is an ecumenical organization composed of 83 member churches throughout the Pomona Valley/Inland Empire Region. The Council acts as an advocate for those on the margins of society, and facilitates their empowerment. In particular, the Council responds to the needs of the hungry and homeless in area communities with direct services such as food and shelter, and identifies the root causes of these problems as members work toward systemic change. The Food Security Project is linked to a broader effort to build local food security so that low-income individuals and families can obtain a nutritionally adequate, culturally acceptable diet through local non-emergency sources. The project's goal is to increase the capacity of a neighborhood to produce its own food, increase knowledge and practice of good nutrition, and expand accessibility of fresh, locally grown food.

The Food Security Project experienced some major successes and some setbacks in its third year of operation. Although it was not able to continue the Horticulture Training Program and the Community Garden was not a total success, the Farmers' Market reached approximately 1,000 shoppers per weekend. The accessibility of fresh, locally grown, low-cost nutritious food through the Farmers' Market has expanded to reach considerably more low-income individuals.

The goal of supporting small family farmers through PIVCC's Farmers' Market has been accomplished. The community and the clients have taken advantage of fresh, locally grown, low-cost and nutritious food.

The key staff position, the Hunger Services Developer at the Beta Center Hunger Program, is partially funded by the SAREP grant and continues to be a vital piece in the food security effort, working with impoverished families to help them meet their nutritional needs.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports



UNIVERSITY OF CALIFORNIA

Sustainable Agriculture

Research and Education Program

Final Report

Grant Award:

\$30,000

Funding Period:

FY 1994–97

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Cooperators:

**PlacerGROWN Agricultural
Marketing Program**

Impacts of Local Food Systems on Communities and Agriculture: Reason for the Seasons... Increasing Sustainable Practices Among Consumers

Objectives

The overall goal of the project has been to encourage greater agricultural production and consumer purchasing of local agricultural products in a manner that creates more sustainable communities.

This goal is supported by the following objectives:

1. Develop a Regional Food Guide that emphasizes availability and consumption of locally produced foods and seasonal variation in diet.
2. Develop an educational strategy to increase consumer demand for locally produced and processed foods around a Reason for the Seasons campaign.
3. Increase consumer awareness of environmental quality, resource use, and social equity information in food shopping decisions.
4. Adoption of more harvest extension practices by local producers.
5. Develop direct marketing of livestock products to the consumer.
6. Develop baseline data on Placer County's present food system.
7. Develop an historical and social profile of agricultural production, practices, and trends in Placer County.
8. Track data over the next three years to determine the extent of impact of PlacerGROWN and related efforts.

These objectives relate specifically to sustainability issues in the area of community food systems, community economic development, land use, and the urban/rural interface.

Summary

The project developed educational strategies and gathered baseline data in support of a newly developed grass-roots agricultural marketing organization called PlacerGROWN. Overall, the project has encouraged greater purchasing and production of local agricultural products to create a more stable and sustainable community. The project has increased consumer awareness and responsibility for their role in creating sustainable communities.

Through the *Reason for the Seasons* campaign, consumers were educated about the benefits of purchasing locally produced, processed, and distributed food that is geared to seasonal availability. Harvest extension practices and information were extended to producers through various workshops and newsletters to increase economic opportunities and farm sustainability. These efforts culminated in the development of an 80-page season extension manual entitled *Growing Across the Seasons*. Direct-marketing of livestock efforts were the focus of a series of 12 workshops which provided detailed information on direct marketing, nutrition, carcass quality, and alternative livestock enterprises.

A survey of bulk food buyers was conducted to gather information on their awareness, attitudes, current use of local agricultural products, and their willingness to increase purchases. Survey respondents indicated support for local agriculture and a willingness to use agricultural produce and products. Placer County has experienced rapid population growth and rapid loss of farmland over the last 20 years. These two trends mean agriculture must adapt and innovate to survive. PlacerGROWN has spent the last three years developing an organization that is positioned to assist farmers to adapt and innovate in today's marketplace.

The complete report of this project is available on SAREP's Web page at:
www.sarep.ucdavis.edu/grants/Reports

Resources

Growing Across the Seasons: A Season and Harvest Extension Guide for the Small-Acreage Farmer, Garth Veerkamp, University of California Cooperative Extension, Placer and Nevada Counties, Publication 31-101, 1996, \$10.

Reason for the Seasons: A Consumer Education and Agricultural Marketing Program, Sharon K. Junge and Carolyn Gavranich, University of California Cooperative Extension, Placer and Nevada Counties, Publication 31-402, 1998, \$12.