



# University of California Cooperative Extension

Providing Research-Based  
Information Since 1918

# Glenn

# County

# 2005

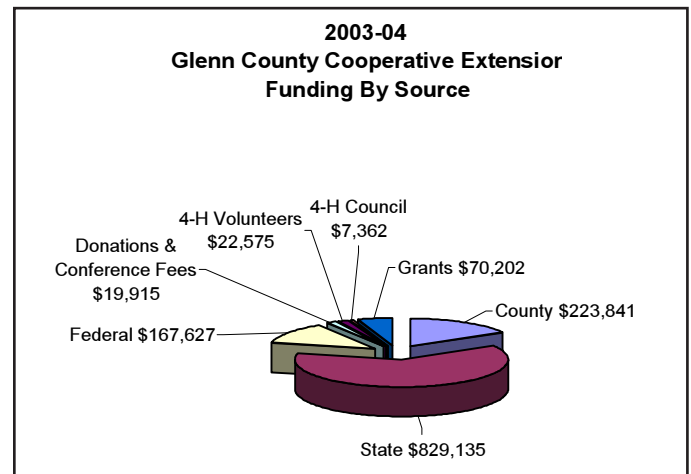
Cooperative Extension was established in Glenn County in 1918. The University of California Cooperative Extension (UCCE) provides education, outreach and research activities to the County as part of a Memorandum of Understanding with the County.

In return for University's work in Glenn County, the County provides support to UCCE including secretarial staff, transportation, utilities, facilities and other support. These services were formally adopted in Glenn County law in a 1948 ordinance that directed the board to maintain an agreement with the University and to appropriate funds on an annual basis to support Extension.

Cooperative Extension's mission is to help all segments of the community benefit from scientific advances in our nation's

land grant universities, particularly in the areas of agriculture, natural resources, family/consumer sciences and youth development. This mission is carried out by University professionals and highly trained and dedicated community volunteers.

Numerous research projects are conducted with farmer cooperators using land and equipment that is donated.



## STAFFING

### Advisors

William Krueger  
Pomology/  
County Director

Barbara Reed  
Dairy

Douglas Munier  
Agronomy

Deanna Rogers  
4-H Program  
Representative  
FSNEP (Tehama)

### Support Staff

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(Colusa)

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## GLENN COUNTY - Message From The Director

Glenn County Cooperative Extension is proud to present this overview of our programs and activities.

The University of California Cooperative Extension in Glenn County is part of a statewide system providing research-based information and education and outreach programs to agriculture, allied industries, local agencies, communities and youth.

Our programs operate through a unique partnership between the University of California, county government and local volunteers. Volunteer 4-H leaders are essential to the 4-H program and contribute hundreds of hours annually. Farmers provide fields and resources to conduct research and allied industry provides equipment, supplies and donations to conduct programs. Our activities also generate grants that contribute to Extension programming.

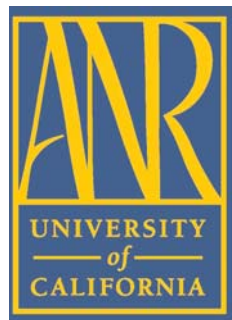
There are four main programs housed in Glenn County. These are Youth Development, Pomology, Dairy, and Agronomy. Additional programming is provided by advisors from neighboring counties for rice, vine seeds, tomatoes, irrigation and water resources, strawberry production, livestock/natural resources, forage, youth development and family/consumer sciences.

Public service is an integral part of Glenn County Cooperative Extension programming. We strive to provide timely answers to requests for information. If we are unable to adequately answer a question, we will refer it to someone who can. Public service information is provided for a wide variety of subjects including gardening and landscaping, household pest control, human nutrition, food safety and preservation, clothing and textiles and consumer information. We serve as a resource for other agencies including the Board of Supervisors, the Planning Department, the Agricultural Commissioner, the Resource Conservation District, the Farm Services Agency and the Farm Bureau. We also provide information to commodity advisory committees and various task forces.

All these programs are constantly evolving to meet the challenges facing Glenn County. Glenn County Cooperative Extension is dedicated to maintaining and improving the quality of life for the residents of the county.



Bill Krueger  
County Director



# 4-H YOUTH DEVELOPMENT

Deanna Rogers

The 4-H Mission is to help youth develop into responsible, self-directed, productive citizens of the world, and to improve the well being of society through the use of research-based learn-b-doing experiences. 4-H in Glenn County is available through several delivery methods including community clubs, overnight camping, school enrichment and after-school programs. The overall purpose of the 4-H Youth Development program is to help young people discover and develop their potential in a partnership with a caring adult.

Community 4-H Clubs - Glenn County has eight community clubs with a combined membership of over 450 youth and 160 adult volunteer leaders. Through



group participation, 4-H Club members learn to understand and cooperate with others. Adult volunteers serve as coaches to the officers and members to guide them as they acquire leadership and citizenship skills. The clubs offer a wide variety of projects in which members develop responsibility, knowledge, skills and explore career choices. Sixty five different projects were offered in 2004-05. Some of the most popular projects are: Sheep, Foods, Swine, Arts & Crafts, Archery, Dairy, Quilting, Horse, Sports Shooting and Clothing. 4-H Club members also participate in countywide events and activities by exhibiting and/or enhancing their knowledge and skills.



## *Program Spotlight:* **Teen Council**



The Teen Council, previously Hi 4-H, is for teens in 6th - 12th grades. The members that are a part of this project plan, organize and implement several community service projects throughout the year such as: Adopt-A-Family, Trick or Treat Canned Food Drive,

Glenn County Fair Cleanup Day, Farm Bureau Farm Day Petting Zoo, Petting Zoo for Convalescent Hospital, plus several fundraising efforts so that they can go on a fun trip at the end of the year.

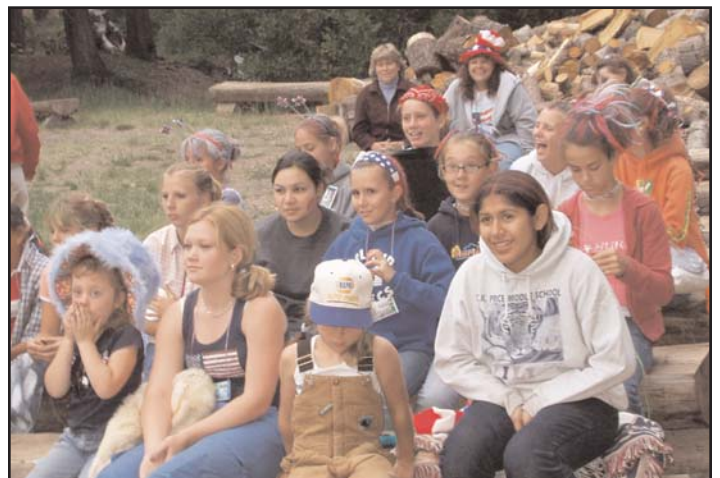


## *Program Spotlight:* **4-H Summer Camp**



The annual Glenn County 4-H Camp is a favorite among youth and teens. The teen counselors plan the camp for the younger 4-H members. Teens must complete an application, have a letter of recommendation prepared and go through an interview in order to be a counselor. This is all done

with adult volunteer leader support guiding the teens as they accept their leadership roles. Each year approximately 100 youth grades 4-8 attend camp to explore the outdoors, participate in team cooperative activities and build lasting friendships.



# Nutrition Education

Deanna Rogers

The Food Stamp Education Program for youth provides hands on activities for pre K -8th grade children to teach youth how to improve their help and physical fitness. 4-H staff trains teachers and provides lessons and materials to implement the program in their classrooms. At mid-year, there were 16 teachers from school, summer school and afterschool settings participating, reaching over 525 students. We are continually trying to reach more students.

4-H will be collaborating with the Glenn County Department of Education and their afterschool program to bring nutrition lessons and hopefully other science curriculum to their different sites. This is in the planning stages at this time; we look forward to a great working relationship between the two programs.



Glenn County is the center of Northern Sacramento Valley's dairy industry. Dairy products are Glenn County's third most valuable agricultural commodity with a value of over 48.5 million dollars. The industry faces challenges to remain in compliance with environmental regulations as these are revised at the local, state and federal levels. Although most of the dairies in the region are smaller than the state average of 700 cows, the region is seen as a desirable location for new and large dairy developments at the same time residential development is ready to increase rapidly. The dairy advisor continues to work with the County Planning Department to provide information and assistance as the County works to amend its general plan to include a confined livestock operations element. The process should be completed in 2005. We are also providing assistance to producers who are mov-

ing in to on-farm cheese production and other dairy processing. Opportunities for value-added marketing can help contribute to the economic base by providing both direct marketing and agri-tourism opportunities for the county dairies.



## *Program Spotlight:* **Food Safety Training**



This education and evaluation program assessed food safety practices at farmstead cheese plants and assists producers in the development of food recall plans, standard operating procedures and the implementation of good management practices. These steps prepared the cheese makers for implementation of a Hazard Analysis Critical Control Point (HACCP). While

HACCP programs provide a systematic approach for the reduction of food-safety problems through preventive measures, they are not yet required by law for dairy processing and most small cheese makers still need to complete the pre-requisite programs before they would be ready to develop a meaningful HACCP program and go through a third-party audit. We



developed and disseminated a survey/evaluation tool to determine current operational practices and level of expertise and conducted on-site visits to observe manufacturing practices and facility design. We conducted three workshops throughout the state tailored to the needs indicated in the surveys and site visits. The classes included a pre and post-test to assess knowledge acquisition, group problem solving, and development of individualized standard operating procedures and good manufacturing practices.

The field crops program in Glenn County works with all field crops, except for forage crops and rice. The primary crops for this program are wheat, corn, and cotton, while also working with sunflowers, dry beans, and safflower. Since all of these field crops are relatively low in value, it is important they be produced efficiently so they can compete with major production areas around the United States and the world. The cost of production must be kept to a minimum, while still producing high yields with good quality.

The hot and dry summers of Glenn County are well suited to growing many of these crops as seed production for other farmers to use. Field crop production for seed usually produces a substantially higher income with only a small increase in production costs.

Some field crops are planted for their value as rotational crops. Field crops grown as rotational crops help to decrease plant diseases. They also allow

growers to better control problem weeds. Wheat and safflower are particularly useful when irrigation water is in short supply.



Whether growers are planting a field crop as the principle crop, a seed crop, or a rotational crop, the field crop extension program seeks to help growers find improved production methods to increase yields and/or decrease production costs. In field crop production, two of the most cost effective ways to improve yields are through improved variety selection and better weed control. The Glenn County field crops extension program focuses on these two areas. The research results and recommendations from this work are published in the Field Crops newsletter and made available on the Glenn County Cooperative Extension website.



## *Program Spotlight:* **Site Specific Weed Control**

Site specific weed control research in Glenn and Butte Counties has accurately shown dramatic differences in the soil seed bank persistence of different weeds. Velvetleaf has a long history as a very difficult weed of field crops in the Sacramento Valley. It is slow spreading, but persists a very long time in the soil seed bank. A three year study in a 75 acre field showed no decrease in the number of seedlings germinating each year,



even though all seed production was prevented during this three years. Johnsongrass has also been in the area a long time and was very widespread prior to the use of the herbicide Roundup. In another local seed bank study, a moderate level of Johnsongrass in a 5 acre field has decreased to no Johnsongrass after four years of controlling all seedlings and not allowing any additional seed production. Thus, some weeds may want to be avoided like the plague because of their persistence and others may be eradicatable in a short time.

Fruits and nuts were produced on nearly 54,000 acres in Glenn County in 2003 with a farm gate value of approximately 91.6 million. Rapid growth in the fruit and nut industries has continued as row crop acreage has been converted to higher value tree crops and new land is developed on the west side of the Sacramento Valley. Acreage and value increased by 39% and 17% from 1997 to 2003. The leading tree crops included almonds, walnuts, prunes and olives.

The tree crop extension program assists producers by providing technical information aimed at solving problems faced by producers. This is accomplished through a variety of methods including newsletters, grower meetings, applied research and personal con-

tacts. This information is important to insure the continued economic viability of these important industries.

### Fruit and Nut Crops Production and Value - 2003

| Commodity     | Bearing Acreage | Production in Tons | Total Value         |
|---------------|-----------------|--------------------|---------------------|
| Almonds       | 28,729          | 18,929             | \$53,060,000        |
| Walnuts       | 9,296           | 14,432             | \$15,182,000        |
| Prunes        | 7,841           | 14,860             | \$10,313,000        |
| Olives        | 4,920           | 11,158             | \$5,021,000         |
| Grapes        | 1,278           | 11,975             | \$3,497,000         |
| Citrus        | 521             | 3,515              | \$1,104,000         |
| Pistachios    | 998             | 355                | \$1,042,000         |
| Miscellaneous | 235             |                    | \$570,000           |
| <b>TOTAL</b>  | <b>53,818</b>   |                    | <b>\$91,611,000</b> |

## Program Spotlight: Response To Olive Fruit Fly Invasion



Table olives are currently produced on about 12,000 acres in Glenn and Tehama Counties. This industry has an estimated total benefit to the economy of 175 million dollars. In 1998 the Olive Fruit Fly (OFF) was discovered in the Los Angeles area. It spread rapidly and can now be found virtually anywhere olives are grown in California. OFF lays its eggs in the olive fruit. The maggots feed and tunnel through the fruit. Damaged fruit can be attacked by decay organisms. Because damaged fruit can be extremely diffi-



cult to sort out and potential damage that infested fruit could do the ability to market the crop, the California table olive industry must have a very low tolerance for infested fruit. As the OFF population continues to develop, it remains to be seen if table olive growers will be able to meet these requirements. It is no exaggeration to say that the survival of this industry is dependent upon developing and adapting effective economical methods of controlling this pest. Currently much research is being conducted by the University of California, USDA and others to find the best ways for controlling OFF under California conditions. Glenn County Cooperative Extension is conducting an educational and research program to make sure that growers are familiar with the problem and have the most effective

economical tools available. Our activities have included: four newsletters annually with up to date information on controlling olive fly, an annual grower meeting to bring researchers in front of growers for dissemination of the most recent information, development, publication and distribution of a flyer for commercial growers in English and Spanish and the development, publication and distribution of a publication for owners and caretakers of non commercial trees, a media day to encourage the removal of non commercial trees, technical advice to the Glenn and Tehama County Olive Pest Control Districts, location and coordination of researchers to develop methods for sorting out damaged fruit and local research on the effect of cultural practices on OFF populations.

Glenn County hosts great rangeland and irrigated pasture resources for the production of livestock, which total approximately 49 million in production dollars. Primary livestock production for Glenn County is in beef cattle with numbers of cattle at about 68 thousand head. Cattle producers vary from commercial cow calf to seed stock operations. This differing range of production in livestock lends itself to many critical issues for Cooperative Extension to provide benefit through research and education. Since his hiring in September of 2004 Josh Davy, has begun to address several of these issues including marketing, sustainability of ranching, forage production (range and irrigated pasture), rangeland water quality, and animal health and research.

### Several Current Methods of Addressing Critical Issues

Niche Meat Marketing Course at CSU, Chico - The three day conference covered different methods of marketing cattle and sheep, as well as how to accomplish these methods.

Irrigated Pasture Day - UCCE presentation of proper irrigated pasture management in terms of irrigation, grazing, fertilization, and future water policy issues.

CSU, Chico Beef Day - UCCE provides collaborative support to CSU, Chico in its annual beef day. This year UCCE hosted an afternoon break out session on the causes and management of weeds in irrigated pastures.



Winter Animal Health Forum - UCCE produces an annual health forum in Orland that covers differing issues of importance. This year's forum covered differing methods of implementing an animal identification system, proper administration of antibiotics, and current trends in cattle prices.

Glenn/Colusa County Cattlemen's Field Day - Collaborating with the Glenn/Colusa County Cattlemen's to host a spring educational field day.

Research - Current research works to meet producer issues including range improvement, cattle identification, water quality, new technology or scientific systems, and efficient/practical methods for cattle health and growth.

Newsletters and Outreach - As a part of the program a bi-monthly newsletter is distributed to nearly a thousand people in the Glenn, Tehama, and Colusa area. These newsletters provide current information on issues of concern, relevant research, and upcoming events. These newsletters are sent in hard copy as well as posted on the web.

Other services provided by the livestock program include providing information to Glenn County residents through phone inquiries, walks-ins, farm calls, and educational meetings. There is great optimism and enthusiasm for the work ahead in the coming year, as the renewal of the livestock and natural resources program for Glenn County Cooperative Extension is beginning.



Chris Greer is responsible for conducting a multifaceted extension education program related to rice production, pest management, and environmental interactions. He works to develop, collect, adapt, and disseminate appropriate research findings and encourage the adoption of specific technologies or improved practices through his outreach efforts. Rice, including paddy and seed rice, was produced on over 89,000 acres in the Glenn County in 2003, and had an on-farm value of \$109 million. The following are major issues or trends facing the Glenn County rice industry:

- Limited herbicide options have led to reliance on a small number of herbicide products, many that have very similar modes of action. Repeated use of these same herbicides has led to widespread herbicide resistance within our rice weed populations.

- Water quality has become a large issue in the past few years in the Sacramento Valley as agricultural operations have come under tighter scrutiny with regard to irrigation water discharge. The repeal of agricultural discharge waivers will mean that farmers will have to monitor water discharged from their lands to ensure they are not contributing significant amounts of constituents of concern to the Sacramento River and impairing water quality.

- Disease management has become an increasing issue in California rice. The phase down of open-field burning has resulted in only about 16% of the rice acres being burned annually in recent years and this has led to an increase in stem rot and aggregate sheath spot disease incidences. In addition to the traditional diseases, there have been unfortunate introductions of two new rice diseases in the past ten years. Rice blast disease was first identified in California in 1996 and bakanae disease was first identified in California in 1999.

- Straw management continues to be a large concern as economically viable options to open-field burning are still being pursued. Many growers have shifted to chopping/incorporating and winter flooding to facilitate the breakdown of rice straw. In addition to increased production costs, these practices result in poorer weed management, disease management, and seedbed preparation when compared to burning.

- Each of the issues above has or will increase the cost of production for California rice. Economic analysis and cost of production studies are more important than ever in making sound management decisions.



## *Program Spotlight:* **Herbicide Resistance**

Alternative seedbed preparation and planting methods continue to be evaluated in an effort to improve weed control and manage herbicide resistant weed populations. Widespread weed resistance to herbicides is challenging the sustainability of California rice production. The goal of this project is to develop alternative stand establishment methods using dry and drill seeding as well as minimum tillage and "stale seedbed" techniques. It is hoped that these practices will allow rice farmers to reduce the number of herbicide applications and the costs for weed control while incorporating more environmentally benign herbicides into their weed management program. A long-term experiment was successfully established at the Rice Experiment Station in Biggs, CA to examine the differences between weed population differences under dry and water seeded systems. This project will allow us to develop recommended long-term weed management programs.

## **Variety Development & Adaptation**

The UCCE statewide uniform variety-testing program is conducted throughout the California rice producing regions and is an ongoing research project initiated over 30 years ago. The main purpose of the UCCE trials is to evaluate the adaptability of public varieties and advanced lines to different climatic zones and soil types. The objective is to develop reliable data on varietal performance under commercial production practices that allow producers and processors to make management decisions on selection of appropriate varieties for different locations and planting times. Development of new rice varieties for California has allowed producers to remain competitive in a global market. Increased yields and development of specialty rice varieties have both contributed to grower returns.



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Our mandate as a land-grant institution ties us to the welfare, development and protection of the state's land, resources and people. Our mission is to develop and extend the use of research-based knowledge to improve specific practices and technologies.

**County programs**



**4Hyouth development**

4-H helps young people discover and develop their potential by providing a wide variety of educational and enrichment experiences.



**Dairy**

Dairy productivity and product quality, as well as complex issues of animal health and welfare, waste management, and water quality.



**Fieldcrops**

The study of field crops and plants, and their ability to adapt to local growing conditions



**Livestock & Rangeland management**

Providing professional research and advice to support range livestock producers and rangeland managers.



**Orchardcrops**

Offering assistance and advice to growers of the various tree crops in the county in evaluating crop potential, soil suitability and pest management.



**Events calendar**

- 09-May-05 [Fair Horse Show](#)
- 11-May-05 [Camp Counselor Meeting #4](#)
- 18-May-05 [Glenn County Fair](#)
- 07-Jun-05 [JLAC Meeting](#)
- 07-Jun-05 [Farmstead Cheesemaking Course](#)
- 07-Jun-05 [Jr. Livestock Auction Meeting](#)
- 20-Jun-05 [BLAST Team Interviews](#)
- 20-Jun-05 [Council Meeting](#)
- 22-Jun-05 [Camp Counselor Meeting #5](#)
- 30-Jun-05 [Record books due to Key Leader](#)



**Current news**



**County information**

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***Check us out on the web at <http://ceglenn.ucdavis.edu>***