

COUNTY OF MADERA
 BUDGET UNIT DETAIL
 BUDGET FOR THE FISCAL YEAR 2020-21

Department: COOP. EXTENSION
 SERVICE (09200)
 Function: Other
 Activity: Ag. Education
 Fund: General

	<u>BOARD APPROVED 2019-20</u>	<u>CAO BASELINE 2020-21</u>	<u>DEPARTMENT REQUEST 2020-21</u>	<u>CAO RECOMMENDED 2020-21</u>
<u>ESTIMATED REVENUES:</u>				
OTHER FINANCING SOURCES				
680200 Operating Transfer In	0	0	2,625	2,625
TOTAL ESTIMATED REVENUE	0	0	2,625	2,625
<u>EXPENDITURES:</u>				
SERVICES & SUPPLIES				
720300 Communications	1,100	1,100	1,100	1,100
721400 Professional & Specialized Services	80,500	80,500	92,639	92,639
TOTAL SERVICES & SUPPLIES	81,600	81,600	93,739	93,739
<u>TOTAL EXPENDITURES</u>	<u>81,600</u>	<u>81,600</u>	<u>93,739</u>	<u>93,739</u>
<u>NET COUNTY COST (EXP - REV)</u>	<u>81,600</u>	<u>81,600</u>	<u>91,114</u>	<u>91,114</u>

COOPERATIVE EXTENSION

COMMENTS

The University of California Cooperative Extension (UCCE) is the county-based research and educational program of the University of California, Division of Agriculture and Natural Resources and is a cooperating partnership between the County of Madera, the University of California and the United States Department of Agriculture.

The Mission of UCCE:

To serve California through the creation, development, extension and application of knowledge in agricultural, natural and human resources.

UCCE serves the local citizens of Madera through:

- Agriculture research and education to develop and improve agricultural practices.
 - Youth development programs to develop life skills, leadership and community service through (hands-on) education.
 - Nutrition education programs that help individuals and families to eat better, stretch their food dollars, handle food safely and improve health.
 - Extending information on sustainable landscape and gardening practices to the community.
- Our mission is accomplished through the education and research programs conducted by UCCE advisors and program leaders. The advisors and program leaders work with agricultural clientele, county residents, youth, families and community agencies to provide science-based knowledge and solutions to local residents.

A major strength of the UCCE partnership is the ability to leverage internal and external resources to serve the residents of Madera County. For each dollar of County support, more than three additional dollars are leveraged from state, federal and private sources. Although the revenue from increased agricultural productivity resulting from the research and extension programs is difficult to measure in any given year, the estimates from a 40-year study indicate that each dollar invested in agricultural research in California increases productivity by \$1.20.

Programs serving agriculture provide research-based answers to production challenges; assisting local growers and allied industry in the sustainable, economically viable, and safe production of their crops. Advisors serving Madera County cover 4-H Youth Development, Dairy, Horticulture, Livestock and Natural Resources, Nutrient Management and Soil Quality, Orchard Crops, and Viticulture. We have a strong Master Gardener program serving the public of Madera County. The CalFresh Healthy Living, UC program provides support and resources to teachers in low-income Madera County Schools.

COOPERATIVE EXTENSION

COMMENTS (continued)

Pursuant to a 2013 agreement with the University of California (UC), Madera County finances clerical staff, office supplies, facilities, and operating expenses for Cooperative Extension (CE). The Multi-County Partnership agreement also includes Fresno County and resources are provided to allow for delivery of the Cooperative Extension services there. UC is responsible for funding salaries and benefits for the academic staff and procuring grant funding for programmatic efforts. The total budget for Fiscal Year 17/18 was \$8,570,526; 5% of which was provided by the Counties and 95% by the University.

4-H Youth Development

In 4-H, youth discover and develop their potential to grow into competent, contributing, and caring citizens. Learn-by-doing activities, youth-adult partnerships, and research-based educational programs help members develop and enhance their leadership skills and build a wide range of life skills. Along with traditional community based clubs and residential overnight camp programming, our 4-H Advisor and part-time Program Representative are offering new programs targeted to rural, low income, and minority populations to introduce them to the benefits of 4-H. Specifically, we have worked directly with Madera Parks and Community Services and the Madera District fair to deliver a Fair Day Camp experience during summer 2019 and will continue that collaboration summer 2020. Also, we delivered nutrition, gardening, and physical fitness programming with the entire school of 250+ students from Fall 2018-Spring 2019 at Wasuma Elementary. We continue to seek additional opportunities to collaborate and offer our services to Madera County.

Dairy

The dairy extension program goal is to provide dairy producers with applied research and extension education programs across a spectrum of industry issues as they relate to the dairy production system. This includes environmental stewardship, quality assurance, animal welfare, food safety and production efficiency in order to assist dairy producers in making their operations compatible with current and future environmental concern and contribute to the success of their operations. The advisor outreach includes distribution of a quarterly Dairy Newsletter with topics of great importance to the dairy industry. In addition, the advisor contributes on promoting educational meetings, workshops and conferences with topics of great relevance including antimicrobial stewardship, manure management, automatic milking robots, calf management, animal nutrition, animal health and animal welfare among other dairy production topics. Automatic milking robots is a new and exciting technology and has been boosting the interest of dairy producers. Feasibility of milking robots to CA dairies is a main focus of the dairy program. Another example is the possibility of implementing a selective dry cow therapy aiming on reducing the amount of antibiotics used on dairy cows.

COMMENTS (continued)

ENVIRONMENTAL HORTICULTURE AND MASTER GARDENER VOLUNTEERS

The Environmental Horticulture advisor conducts a research and extension program that provides technical support to professionals in turfgrass and urban horticulture industries. This past year the program focused on providing extension presentations on turfgrass and landscape integrated pest management (IPM). Evaluation data showed 43% of survey respondents (n=67) planned to incorporate IPM practices and pursue alternatives to conventional pesticides. Anticipated impacts can be inferred from research showing that adoption/improvement of IPM can reduce pesticides applied and reduce costs associated with landscape management. Next year's priorities include creating written educational materials, demonstrating remote sensing technologies to clientele, and researching drought-tolerant grass options.

The advisor also trained 40 Madera Master Gardener volunteers on invasive pests and urban water conservation. This is impactful because the volunteers extended this information to the wider community, and our volunteers reached over 1,500 people in 2019. Madera Master Gardeners transferred information to others via workshops, info booths, hotline calls, and maintenance of a demonstration garden at the Madera Community College Center. Forty volunteers contributed over 2,300 service hours this past year, with an estimated value of \$60,122 to Madera County (Independent Sector, 2019). Next year's priorities include outreach to underserved foothill communities, expansion of Spanish-based outreach, and integrated programming with Madera Community College Center.

LIVESTOCK AND NATURAL RESOURCES

Livestock and natural resources research and extension efforts assist local producers in maintaining livestock production, a key economic sector in Madera County, while conserving and enhancing natural resources and ecosystem services. The advisor uses a variety of strategies to reach clientele in Madera County including distributing quarterly newsletters on livestock and natural resource topics to over 100 recipients and coordinating, hosting, and presenting at an annual livestock symposium. The symposium typically includes up-to-date information about grazing and range management, weed control, animal nutrition and parasite control, livestock breeding and genetic improvements, and relevant regulatory updates. This year, additional workshops are being offered on fire fuel reduction and prescribed burning on private lands to assist local livestock operators, rangeland owners, and forest landowners in reducing the risk of catastrophic fire on the landscape. In summer of 2020, an oak monitoring project will begin, to assess the impacts of drought and identify successful management practices to maintain these valuable trees on local rangelands.

COMMENTS (continued)

NUTRIENT MANAGEMENT AND SOIL QUALITY

Nutrient management and soil quality research and extension efforts provide science-based information addressing environmental issues related to crop and livestock production. The advisor uses a variety of strategies to reach clientele in Madera County including a quarterly newsletter that is being developed in coordination with the northern San Joaquin Valley Nutrient Management/Soil Quality advisor, organizing and presenting at the annual Alfalfa and Forage Field Day, and a new research trial characterizing manure on San Joaquin Valley dairies.

NUTRITION, FAMILY, AND CONSUMER SCIENCES

The CalFresh Healthy Living, University of California Cooperative Extension (CFHL,UCCE) program provides CalFresh eligible low-income families with information about food, nutrition, physical activity, policy, systems and environmental (PSE) changes. Along with food safety, and food resource management at no cost to participants. Over \$1,000,000 was awarded to CFHL, UCCE in Fresno and Madera Counties to deliver programs in Federal Fiscal Year (FFY) 2020. Madera partnerships include Madera County Department of Public Health CalFresh Healthy Living Program, Madera Unified School District, Dairy Council of California, Madera Career Club, Community Action Partnership, Housing Authority Madera County, and Camarena Health Center. Nutrition educators provided direct and indirect nutrition and physical activity education, policy, systems and environmental supports, and food resource management. In FFY19, CalFresh Healthy Living, UCCE reached a total of 285 adults and 2,363 youth with direct education and over 5,500 youth and adults at 20 sites with PSE in Madera County.

ORCHARD CROPS

The Orchard Crops advisor conducts research and extension activities to help Madera orchard growers, PCAs, and crop consultants improve their productivity and sustainability. Her extension program includes a podcast (Growing the Valley), a website (www.sjvtandv.com), an annual meeting, as well as working with orchard decision makers individually through emails, phone calls, and more than 100 farm calls. Her research program includes an almond variety trial, where she manages one of three sites that are evaluating 30 different almond varieties; a site to evaluate the field-scale feasibility of a new, pesticide free method to disinfest soils before planting new orchards; developing new methods to reduce insect infestation in dried figs; and she has just been awarded a grant to evaluate the effect of low soil oxygen on pistachio performance.

COMMENTS (continued)

VITICULTURE

The Viticulture Advisor in Madera has several different research objectives underway. The first of these is looking into nematode resistant rootstocks. Nematode are a soil born root pest of grapevine that can cause extensive damage due to their feeding activities, or by acting as disease vector passing viruses between vines. To help combat nematodes different public breeding programs have created new rootstocks with advanced nematode resistance. Two of these programs (UCD and USDA Fresno) released 7 new rootstocks over 10 years ago. Unfortunately, due to a lack in understanding how these stocks act within a commercial vineyard they have seen little use since their release. The Madera viticulture advisor, in coordination with operators from the wine industry has begun testing these rootstocks within the local growing region. Data collected so far has already identified 3 to 4 of these rootstocks that are better suited for San Joaquin Valley viticulture. A third breeding program at the USDA facility in Geneva, NY also produced over 800 potential rootstocks which are being grown at the Kearney REC in Parlier CA. These rootstocks are farther back in the selection process and will need much more analysis before field evaluation. The Madera Viticulture Advisor is currently overseeing this process to identify if any of these rootstocks should progress to larger trials.

The next area of research is looking into the mechanization of vineyard operations. With labor costs on the rise, and labor markets tightening, mechanization will be needed to keep production costs and schedules moving into the future. Work in this area has already identified benefits from doing mechanical leaf removal in wine grape vineyards. The cooperating vineyard in this project has just invested in a new 400-acre planting which they are hoping to operate touch free. They are hoping to continue the relationship with UCCE to fine tune their management processes and help everyone better understand how to fully mechanize a SJV vineyard. The final area of research being undertaken is in the area of water use, groundwater recharge and SGMA. With SGMA starting in January 2020, and the regular drought cycle of California, understanding vineyard water use is very important. Projects are currently being pursued to look at the true water requirements, and actual water use in SJV vineyards. Another project to look at the water costs and benefits of cover crops even in dry years is also being looked at. A more important future step is investigating the use of vineyard to accomplish groundwater recharge. SGMA requires that water pumping and water infiltration rates within specified areas known as basins become aligned. While understanding water use, and any benefits that cover crops may have towards water saving, will help reduce water pumping. It is hoped that during wet years vineyards can be used as flood basins to increase water infiltration. Running this extra water through vineyards could possibly affect many parts of the vineyard. The effects of this flooding on nutrient management, pest management, vineyard floor management, and vineyard management all need to be investigated so that best practices can be identified.

COOPERATIVE EXTENSION

COMMENTS (continued)

VITICULTURE (continued)

The Madera Viticulture Advisor maintains an active extension program. He is part of the steering group for The San Joaquin Valley Grape Symposium and for The UC Davis Grape Day, as well as a member of the committee that prepare the multiple educational events held by the San Joaquin Valley Winegrape Growers Association. In addition, he is a contributing author, and editor of the Vit Tips Newsletter.

ESTIMATED REVENUES

680200 **Operating Transfer In** (\$2,625) reflects the estimated staff time dedicated to the COVID-19 response, which is reimbursable from Org 13140 – CARES Act Coronavirus Relief Fund.

SERVICES AND SUPPLIES

Services and supplies are recommended based on the Multi-County Partnership Agreement.

720300 **Communications** (\$1,100) is recommended unchanged for telephone and fax costs as required under the Multi-County Partnership Agreement.

721400 **Professional and Specialized** (\$92,639) is recommended and reflects a \$11,039 increase in the contribution to the University of California Cooperative Extension through a Multi-County Partnership Agreement.