

COUNTY OF MADERA
 BUDGET UNIT DETAIL
 BUDGET FOR THE FISCAL YEAR 2021-22

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

	ACTUAL <u>2019-20</u>	BOARD APPROVED <u>2020-21</u>	DEPARTMENT REQUEST <u>2021-22</u>	CAO RECOMMENDED <u>2021-22</u>
<u>ESTIMATED REVENUES:</u>				
OTHER FINANCING SOURCES				
680200 Operating Transfer In	0	2,625	0	0
TOTAL ESTIMATED REVENUE	0	2,625	0	0
<u>EXPENDITURES:</u>				
SERVICES & SUPPLIES				
720300 Communications	1,094	1,100	1,100	1,100
721400 Professional & Specialized Services	80,500	92,639	95,003	95,003
TOTAL SERVICES & SUPPLIES	81,594	93,739	96,103	96,103
<u>TOTAL EXPENDITURES</u>	<u>81,594</u>	<u>93,739</u>	<u>96,103</u>	<u>96,103</u>
<u>NET COUNTY COST (EXP - REV)</u>	<u>81,594</u>	<u>91,114</u>	<u>96,103</u>	<u>96,103</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, it is estimated that for \$1.00 invested in agricultural research and extension, there is a return of \$20 to the community.

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 19/20 was \$8,050,266; 6% of which was provided by the Counties and 94% 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. As we began to ramp up for Spring and Summer activities, we were struck with stay-at-home orders due to COVID-19 which significantly affected how 4-H normally operates. However, those restrictions were lessened enough to allow some small in-person activities as well as physically and socially distanced day camps where youth were able to enjoy some in-person activities during the summer. A national survey of adolescents indicates, "School closures and sheltering at home in the COVID-19 pandemic isolate children and adolescents from peers, teachers, extended family, and community...fully one-third of adolescents reported high levels of loneliness." (Loades ME et al., 2020) To mitigate some of the negative social-emotional aspects of shelter-in-place orders we created first ever virtual day camps where youth could meet with their peers via Zoom and have some time to simply interact, followed by fun and educational activities led by volunteers and teens from across California. While our collaborative efforts with Madera Parks and Community Services and the Madera District fair to deliver a 2nd annual Fair Day Camp experience during summer 2020, we remain optimistic that we will be able to do so, safely, summer 2021. While many of our counties in California were hit hard with the effects of the pandemic, including 50% loss in annual youth enrollment in the program (we are at our core a program that meets in person to do hands-on, learn by doing organization), we were able to retain 75% of our normal enrollment, a testament to the strength of our staff and volunteers to provide opportunities for you even while challenged. We continue to seek additional opportunities to collaborate and offer our services to Madera County and are developing new strategies to safely meet and offer opportunities.

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

COMMENTS (continued)

DAIRY (continued)

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.

ENVIRONMENTAL HORTICULTURE AND MASTER GARDENER VOLUNTEERS

The Madera Master Gardener program volunteers who are older and had always delivered education and knowledge in person workshops and outreach had to quickly adapt to a digital format. Technology skills had to be upgraded to have the ability to host digital workshops and remote helpline. Forty volunteers contributed over 1,300 service hours this past year, with an estimated value of \$33,800 to Madera County (Independent Sector, 2019). Outreach has been limited to our remote helpline with 900 contacts by e-mail. The Grow Oakhurst project is looking at other ways to reach the foothills due to spotty internet service. The Madera Juvenile Hall Cadets are working with Master Gardener educators to develop new job skills in horticulture. Madera School district has reached out for joint presentation with Cal Fresh and Master Gardeners for healthy eating and gardening.

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 includes up-to-date information on topics from grazing and range management to livestock breeding and genetic improvements and relevant regulatory updates. In 2020, virtual workshops were offered on emergency preparedness for livestock owners. The program also

COMMENTS (continued)

Livestock and Natural Resources (continued)

offers virtual resources 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 2021, a short course for small-scale landowners will be held virtually to support beginning ranchers and community members with livestock on small acreages, who reflect an increasing population in the foothills of the Sierra Nevada.

NUTRIENT MANAGEMENT AND SOIL QUALITY

Nutrient management and soil quality advisor Joy Hollingsworth conducts research and extension efforts that provide science-based information addressing environmental issues related to crop production. The advisor uses a variety of strategies to reach clientele including a quarterly newsletter that reaches over 75 recipients in Madera County, organizing and presenting at the annual Alfalfa and Forage Field Day, and a research trial characterizing manure on San Joaquin Valley dairies. Joy recently conducted a large needs assessment and will be using the results to direct her research and extension program going forward.

NUTRITION, FAMILY, AND CONSUMER SCIENCES

The CalFresh Healthy Living, University of California Cooperative Extension (CFHL, UCCE) program brings \$1.25 million to Fresno and Madera counties to deliver direct nutrition and physical activity education and improve the lives of CalFresh eligible individuals and families. We partner with the county Department of Public Health, social services programs and local school districts to provide programming in schools, community centers, and at job training sites. In 2020, despite the limitations due to COVID-19 closures and in-person restrictions CFHL, UCCE Madera County reached 5,301 youth and 141 adults with direct education and 24,043 youth at 19 school sites were reached through Policy, Systems and Environmental changes. In response to the unprecedented pandemic and ongoing restrictions, CFHL, UCCE Madera, in joint effort with other CFHL, UCCE county programs statewide quickly adapted its evidence-based curricula and resources for youth and adults so that they could be made available and offered virtually. These efforts have allowed us to continue to serve the Madera County community and school districts. In particular, CFHL, UCCE has seen expanded interest from district level administrators, high schools as well as, parent education.

COMMENTS (continued)

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), annual meetings, 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 research project examining the effect of boron, salinity, and soil oxygen levels on pistachio performance; a site to evaluate the field-scale feasibility of a new, pesticide free method to disinfect soils before planting new orchards; and developing new methods to reduce insect infestation in dried figs.

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 4 of these rootstocks that are better suited for San Joaquin Valley viticulture. Further research with these four have identified that one of these rootstocks has strong resistance to water stress, indicating that it could be used under drought conditions.

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. His work with these potential rootstocks has already removed close to 500 of these vines as being unfit for further study.

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

COMMENTS (continued)

VITICULTURE (continued)

already identified benefits from doing mechanical leaf removal in wine grape vineyards. Additional work is looking at shoot thinning in young vineyards to prevent overcropping young vines. The cooperating vineyard on these projects 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.

The Madera Viticulture Advisor maintains an active extension program. He is part of the steering group for The San Joaquin Valley Grape Symposium and UC 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. During the past year he was able to bring the UC Davis on the Road event virtually to Madera county, and is working with the event committee to bring the next Viticulture & Enology Extension Leadership Conference to the San Joaquin Valley. In addition, he is a contributing author, and editor of the Vit Tips Newsletter.

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** (\$95,003) is recommended and reflects a \$2,364 increase in the contribution to the University of California Cooperative Extension through a Multi-County Partnership Agreement.