



EXTENSION

College of Agriculture,
Biotechnology & Natural Resources

EXTENSION | EUREKA COUNTY

Annual Report | Fiscal Year 2018 - 2019

University of Nevada, Reno Extension is engaged in Nevada communities, presenting research-based knowledge to address critical community needs in the areas of agriculture; children, youth and families; community and economic development; horticulture; health and nutrition; and natural resources. It is a county-state-federal partnership providing practical education to people, businesses and communities. It is a unit of the University's College of Agriculture, Biotechnology & Natural Resources, and plays a vital role in fulfilling the University's land-grant mission.

Extension, Eureka County Office

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PROGRAM IMPACTS

AGRICULTURAL PROGRAMS

HERDS AND HARVEST, SUSTAINABLE AGRICULTURAL PRACTICES



The economy of Eureka County is heavily dependent upon continued sustainable access and use of its natural resource base. Although agriculture comes in second to Mining in terms of economic income for the county, agriculture in the form of forage crop production and livestock production utilizing a combination of private and federal lands, provides long term economic and cultural stability. The Extension Educators programmatic focus is to assist producers in utilizing their land and water base sustainably. Integrating production practices into a holistic system managing croplands for efficient water use and soil management practices promoting profitable production under increasing input costs and decreasing water supplies was the agricultural emphasis. The Extension Educator addressed these issues through a suite of related program activities, including: 1) Irrigators workshop centered on soil health; 2) Continued Irrigation Water Management Studies of LESA center pivot irrigation systems and utilizing soil moisture meters to conserve irrigation water and energy use. 3) Provided leadership to the Eureka Conservation District in completion of a county wide resource needs assessment; and 4) Assisted in establishing a Eureka Experiment station. *"Irrigation efficiency has become the backbone of sustainability in a severely over -appropriated basin. We thought our pivot irrigation was sufficiently meeting the efficiency needs, but soon learned through [Cooperative] Extension, in collaboration with the University of Idaho, that we were behind the curve in ultimate application efficiency. Sustainability is now a realistic goal with this new application technique and better irrigation management practices."* Diamond Valley Farmer

PROGRAM IMPACTS (CONTINUED)

NATURAL RESOURCES



Continued use and access to federal rangelands is critical to livestock operators in Eureka County and throughout Nevada. Extensions natural resource programs emphasized grazing management and increased permit flexibility through the establishment of cooperative permittee monitoring (CPM) to document grazing effects and guide grazing strategies. The Extension Educator is leading a group of Range scientists and managers re-write the CPM training manual for permittees and agency staff. BLM and USFS have requested this manual and wish to provide training based upon the manual when completed. BLM also wishes to utilize this manual along with the NvRMH and Rancher's Guide to implement their Objective Based Grazing programs throughout the Great Basin.

Additionally, the Extension Educator worked with a multi-state team to organize a Free Roaming Equid Summit in Reno Nevada that brought together 200 Attendees from across the U.S., representing over 100 organizations to develop stakeholder-based processes to better manage free-roaming equids (wild horses and burros) in concert with other public lands multiple-uses to achieve western rangeland ecosystem sustainability. The Summit fostered a "non-political" grassroots movement now known as the Free-Roaming Equid and Ecosystem Sustainability Network or FREES. FREES seeks to enhance communication and engage diverse stakeholder groups to shape, guide, and coordinate the interests and needs of over 100 diverse agencies and organizations concerned about the management of free-roaming equids. The Extension Educator and other Summit organizers were subsequently invited by Senator Mike Lee to provide a workshop in D.C. to congressional staffers regarding Wild Horse and Burro management and potential solutions and suggest what Congress could do to help resolve this issue. The Summit has resulted in a *"Most notably, these efforts contributed to securing an additional Congressional appropriation of \$21,000,000 in the 2020 BLM budget to increase the number of wild horses and burro's gathered on herd management units that have exceeded the appropriate management levels and are now impacting horse and rangeland health standards"* Dr. Terry Messmer USU.

In 2019, Extension's efforts contributed to securing an additional Congressional appropriation of \$21,000,000 in the 2020 BLM budget to increase the number of wild horses and burro's gathered on herd management units that exceed the appropriate management levels and are impacting rangeland health standards.

The Extension Educator supervised the 4-H and youth development coordinator position; focus on rebuilding the Eureka and southern Lander county 4-H programs.

Updating and revamping the entire Eureka county 4-H program to reflect current statewide goals and activities in Nevada.

Initiated new local projects - Legos, Cowboy Poetry, Photography, Weaving, and Leathercrafts.

Authorized youth coordinator to organize and deliver week-long 4-H camp locally in White Pine County in absence of White Pine County youth coordinator.

Instructed Range Camp Students on the Sagebrush Rangelands Curriculum 2018-2019, and serve on the annual Society for Range Management planning committee that organizes and hosts Range Camp.

4-H

SOIL MANAGEMENT “SOIL HEALTH”

Programming was initiated in 2019 in response to local producer requests and extends throughout the state. Lack of water and a predominance of soils with low water holding capacity severely limits producer's ability to remain economically viable. After optimizing irrigation efficiency, the next step is to improve the soil to hold water and maintain/improve productivity. This requires a cultural practice paradigm shift in Nevada. The Extension Educator addressed these issues through a suite of related program activities, including: 1) Soil health research 2019 (soil sampling and crop management) with 2 producers on 18 pivots, developing a soil health monitoring program to determine how cultural practices implemented (no till, cover crops, grazing) affect soil properties and functions; 2) developed and planted Cover Crops (CC) on irrigated and dryland corners on 150 acres in DV, which allows producers to determine the effect and viability of cover crops in dryland and irrigated scenarios; 3) organized and taught three soil health workshops in Eureka, Orovada, and Winnemucca to 120+ producers; 4) Initiated a formal Soil Health Partnership for Nevada. NvACD (who has multi state input and numerous org/entities participating) voted to support the soil health partnership statewide to educate and promote soil health to all Districts. Partners include NvACD, NRCS, CABNR, DFI, and Extension.



Soil Health Training

Cover crops in Diamond Valley



Orovada Soil Health Workshop

+ 90 percent: I will incorporate some form of soil health management in my operation.

+99 percent: would attend future workshops on soil health and cover crops.

PROGRAM IMPACTS (CONTINUED)

SCHOLARLY COLLABORATIONS ON CRITICAL ISSUES

Perryman, B.L., G. McCuin, and B.W. Schultz. (In Press). Forum: A Framework for Resetting Wild Horse & Burro Management. Rangelands. 40: 160-165

Perryman, B.L. B.W. Schultz, J.K. McAdoo, J.C. Cervantes, S. Foster, G. McCuin, and S. Swanson. 2018. Viewpoint: An Alternative Management Paradigm for Plant Communities Affected by Invasive Annual Grass in the Intermountain West. Rangelands. 40:77-82.

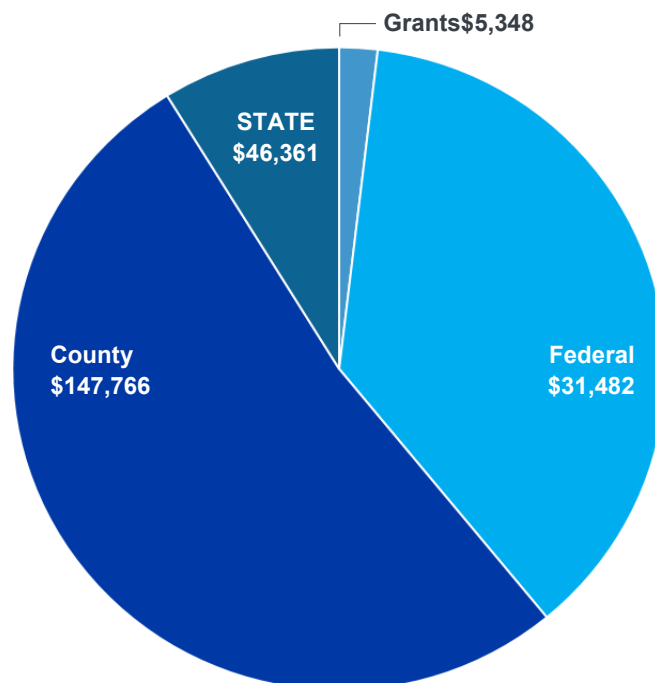
G. McCuin, and M. Orr. Resource Needs Assessments: A Guide for Conservation Districts. Nevada Association of Conservation Districts. Online at [http://nvacd.org/wp-content/uploads/2018/09/NvACD-Resource-Needs-Assessment-Guide-Sept-2018-3 .pdf](http://nvacd.org/wp-content/uploads/2018/09/NvACD-Resource-Needs-Assessment-Guide-Sept-2018-3.pdf) 3 7 pgs. (September 2018)

Schultz, B., B. L. Perryman, S. Swanson, G. McCuin, D. Voth, P. Novak-Echenique and P.T. Tueller. Ranchers' Monitoring Guide. UNCE Special Publication. 81 p. (Peer review completed, comments incorporated and submitted to Area Director on December 10, 2019 for final approval).

FISCAL YEAR 2018 - 2019

SUMMARY

\$230,956 - Total Revenue
\$185,638 - Total Expenses
\$385,366 - County Fund
Balance



REVENUE

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