

Livestock and Natural Resources



Commercial livestock production and rangeland management in Placer and Nevada Counties go hand-in-hand; most beef cattle, sheep, and goat operations rely on rangelands for a significant portion of the year. In addition to serving commercial ranchers, UCCE provides research-based information to local, state, federal, tribal, and nongovernmental land and resource managers. Our research and extension programs emphasize the ongoing and emerging issues impacting rangelands and the ranchers who rely on them.

In 2022-23, we continued to provide hands-on and virtual training programs for both new and experienced livestock producers. Our workshops and field days provided practical information on managing pasture and rangeland forages, reducing conflicts with predators and other wildlife, planning for wildfires and other emergencies, and using prescribed fire to reduce fuel loads and manage invasive weeds. We also developed resources to help ranchers diversify their income streams and adapt to drought and other climate impacts. We continue to

coordinate the only multi-county livestock disaster pass program in California, which provides training to ranchers to safely care for their livestock during wildfire or other emergency evacuations.

Our locally-focused research addresses the short- and long-term needs for ranchers and land managers. We are collaborating with a network of advisors and specialists to develop new remote sensing technology for measuring forage production and controlling livestock through virtual fencing. We are evaluating new approaches to using livestock to remove fuel loads, reduce the need for herbicides, and improve soil health in forestry and farming systems. We are evaluating cattle nutrition management strategies designed to improve efficiency and profitability. We completed an evaluation of foothill agricultural water use within the Nevada Irrigation District. Finally, we are helping policymakers translate our research into protecting livestock from predators into new policy approaches that recognize ranchers' unique role in addressing livestock-predator coexistence.

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Program Highlights 2022-23:

- More than 800 producers and land managers participated in workshops regarding oak woodland restoration, livestock production practices, prescribed fire, and targeted grazing. These workshops were a combination of field days, classroom-based instruction, and webinars.
- UCCE coordinated the Nevada-Placer-Yuba Livestock Disaster Pass and Nevada County Agricultural Disaster Pass programs, providing training to more than 115 local producers in fire behavior, the incident command system, and disaster planning. This program was recognized by the California State Association of Counties as the top Rural Disaster and Emergency Response program in 2022.
- During the 2022 fire season, UCCE and county agriculture departments worked with local law enforcement and CalFire to provide safe access for livestock producers to care for livestock and remove equipment from evacuation zones.
- Our research into nonlethal livestock protection tools and livestock-predator coexistence provided policymakers with science-based information in the creation of predator loss compensation and pay-for-presence programs in the northern Sierra Nevada and Northeastern California.
- Collaborative research regarding targeted grazing is identifying new management systems and expanding opportunities for livestock producers to address weed management and fuel loading issues while improving economic viability.
- Working with landowner partners, local resource conservation districts, and CalFire, we successfully implemented the first range improvement prescribed fire to occur on private land in Nevada County in several decades. This project, which focused on invasive barb goatgrass, will be followed up with additional prescribed burning in the coming years.
- Through our UCCE website (<https://ucanr.edu/sites/Livestock/>), our Ranching in the Sierra Foothills blog (<https://ucanr.edu/blogs/RanchingintheFoothills/index.cfm>), and weekly podcast, we provide timely, science-based information to producers throughout the foothills and beyond.



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