



# LIVESTOCK & NATURAL RESOURCES

## Program Highlights

**33 workshops provided 129 hours of instruction and reached over 1,460 ag producers.**

**827 ag producers received the quarterly *Foothill Rancher* newsletter.**

**Business Feasibility Plan completed for a USDA Harvest and Processing Facility in Placer County.**

**California Multi-Species Academy held for the 15th time, has reached over 309 producers and agency people who manage over 400,000 acres.**

*The Placer/Nevada Livestock and Natural Resources program provides relevant information, hands-on educational opportunities and research to support existing and new livestock producers. Livestock, range, and pasture production generates a gross income of more than \$27 million between Placer and Nevada Counties.*

*Many types of livestock are raised in the two county area including: cattle, sheep, goats, horses, llamas, and alpacas. Small-scale poultry production continues to expand. Niche meat marketing direct to the consumer and targeted grazing using small ruminants for fuel load reduction and noxious weed removal have emerged over the last 7 years as viable enterprises.*

*Economic viability and scale of operation are major issues for Placer and Nevada livestock producers. Access to grazing land, irrigated pasture, soil health, capital for developing infrastructure, and labor are identified challenges that need more education and research to help find solutions.*

*The Livestock and Natural Resources program provides direct assistance to livestock producers in the two county area by providing University of California research based information to help them be economically and environmentally sustainable. Sustainability for producers translates into four core concepts:*

- *Structure your livestock operation to work with nature by matching the herd's forage demand with nature's cycle of when we have plenty of forage. This results in becoming a low-cost producer.*
- *Develop a plan for profitability at an appropriate scale over and above paying a salary and land rent for the rancher. This includes economic, financial, and capital planning.*
- *Manage for the ecological landscape you want to create. This means using the ecosystem processes of energy flow, water cycle, and nutrient cycle to develop a more productive landscape.*
- *Create a risk management plan for drought, marketing, succession, and personal injury to make the ranch resilient in the face of adversity.*



# RETIREMENT

This is the last Livestock Annual Report that I will write. My official retirement date is June 29<sup>th</sup>, 2017. I have worked over 31 years with UC Cooperative Extension in Placer and Nevada Counties starting in March 1986. I worked as a Texas Cooperative Extension County Agent for almost 3 years prior to coming to California. I had never worked at a job longer than 3 years when I started in Nevada County (My initial assignment was 4-H / Livestock and Natural Resources Advisor in Nevada County). I transitioned to full time Livestock and Natural Resources Advisor for Placer and Nevada Counties in 1993.

When I became a County Agent in Texas in 1981, I was unsure of what I wanted to pursue as a career. I found that Cooperative Extension fit well with what I wanted to do as I was serving people and there was flexibility in transitioning programming to meet community needs. Those years in Texas increased my competence and self-confidence.



*Roger Ingram—out standing in his field.*

I have done a variety of things in my career. The main programmatic areas I have focused on includes: grazing management with cattle and small ruminants, range ecology, soil health, low-stress livestock handling, direct marketing of agricultural crops and products, niche meat marketing, USDA inspected processing, poultry processing, beginning farming, and farm business planning. Program focus changed as new local priorities emerged.

I can truthfully say that I still look forward to coming to work even after 31 years. I have served for the last 10 years in a dual role as County Director and Livestock and Natural Resources Advisor. During this time, I have been blessed to work with a team of dedicated advisors and staff. I could not have dealt with the extra administrative duties without that support.

I want to thank each of you, who I have tried to the best of my ability to assist and help. It has been an honor to serve you. There is still much to learn even after 34 years of total Cooperative Extension experience. I will still be around and you may see me occasionally helping a bit with some trainings. I feel confident in Dan Macon's abilities to continue serving you as Livestock and Natural Resources Advisor. I want to thank Horticulture and Small Farms Advisor Cindy Fake for agreeing to take over the County Director role.

I will continue to raise sheep and try to figure out how to be a better dog handler for my border collies. I will also do some traveling and hiking. My big bucket list item is to either walk the entire (or part) of the Camino de Santiago in Spain. I will do it in 2018 or 2019.

I know the future will hold many challenges for agriculture in the future. I want to encourage you to look beyond those challenges and to see the opportunities that will be there as well. Good luck to each of you in the future.



# MULTI-SPECIES ACADEMY



*Instructor An Peischel helps participants set up electric fence.*



*Participants view the impact of 24 hours of goat browsing on reducing fuel load around a pond.*



*2017 California Multi-Species graduates proudly display their t-shirts.*

## ISSUE

Ranchers, land managers, and agency people in Placer and Nevada County are interested in the use of small ruminants (sheep and goats) for fuel load reduction, removal of noxious weeds, adding a meat enterprise to their operation and/or considering starting a contract grazing business. Small ruminants can provide a flexible alternative to mechanical and chemical control methods.

## WHAT WAS DONE

The California Multi-Species Academy is now in its 15<sup>th</sup> year. It is used to help local producers, land managers, and agency people gain knowledge and hands-on experience in working with sheep and goats prior to using them on their property. The academy features field work and hands-on experience at local ranches in Placer and Nevada Counties. The Academy runs for 2.5 days and gives participants a total of 25 hours of instruction. Participants work with over 100 goats and 150 sheep during the academy. Topics covered included: grazing/browsing principles, ecology, contract grazing, nutrition, reproduction, health, guard dogs, and economics.

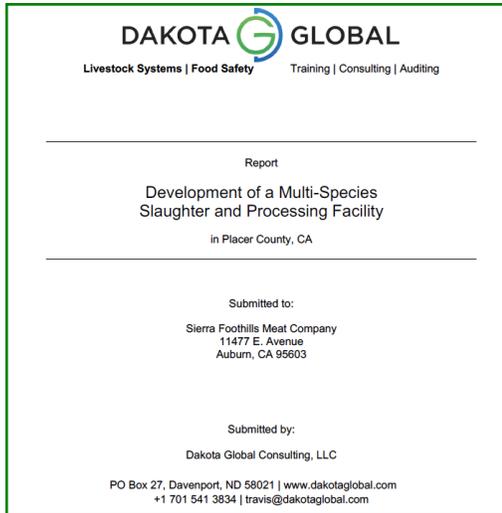
## IMPACT

Participants commented on the important things they learned:

- The realities of contract grazing and how challenging it can be and how husbandry and health are so important.
- Financial Planning and animal health was very valuable.
- Decide what the main part of your business is and pursue/grow that part, i.e. if it's grazing, make your decision on the best interest of those goals. Not breeding or some other priority.
- Lectures were very thorough, field walks and hands-on activities complimented lectures well. Great opportunity to be exposed to a lot of people and ideas.
- Met great people—Contacts. Quality of practical education.



# USDA INSPECTED HARVEST AND PROCESSING IN PLACER COUNTY



*Dakota Global completed the feasibility study report in November 2016.*



*Sierra Foothills Meat Company Board met 12 times in 2016-17 to provide input on the feasibility study and plan next steps. Meetings were facilitated by UCCE.*

## ISSUE

USDA inspection for harvest and processing is required for local producers to market meat directly to consumers and/or wholesale markets. Few USDA inspected facilities exist for livestock producers in California and there are none in Placer or surrounding counties. A USDA inspected facility in Placer County would improve producer economic viability, create jobs, and increase access for area consumers to locally grown meat.

## WHAT WAS DONE

A rancher steering committee was awarded a USDA Value-Added Producer grant in September 2015 to develop a business feasibility plan on constructing a producer owned USDA Inspected Harvest and Processing facility in Placer County. Placer County provided \$50,000 in match funding for the \$75,000 USDA proposal. Proposal development was completed by UCCE County Director and Farm Advisor Roger Ingram, Placer County Agricultural Commissioner Josh Huntsinger, now retired Placer County Air Pollution Control Officer Tom Christofk, and now retired Placer County Office of Economic Development Director David Snyder. The steering committee formed Sierra Foothills Meat Company, Inc. to receive grant funds. The board of directors hired Dakota Global Consulting, LLC to develop the business feasibility plan. Biogas Energy, Inc. was hired to develop alternative energy and waste stream reduction options for the plant. The board of directors met 12 times and provided 332 hours of input into the plan. This was further supported by 194 hours of time by the UCCE Farm Advisor and 128 hours by the Placer County Agricultural Commissioner.

## IMPACT

The business feasibility plan showed:

- Proposed plant would cost approximately \$2.2 million to construct and would be 4800 square feet. An additional 900 square feet would be for corrals.
- The facility would provide USDA inspected custom harvest and processing of beef, lamb, pork, and local and regional livestock producers who are marketing meat directly to consumers, restaurants, and retail stores.
- Initial capacity of the facility would be for harvest and processing of 1200 large animal units (cattle) and 800 small animal units (hogs and sheep/goats) per year.
- All activities will be custom fee based and there will not be a retail segment. Animals would arrive the day before or day of processing.
- Cooler storage space for 64 beef carcasses would be available to accommodate longer dry-aging periods. Processing will include aging, cutting, grinding, and packaging to customer specifications. Value added services for ham, bacon, etc. would be provided.
- The business plan found the project to be feasible; it would take until year 3 for the facility to generate a positive cash flow and profit.
- Sierra Foothills Meat Company, Inc is looking for a potential site for the facility.



# SOIL HEALTH WORKSHOPS



*Producers using survey flag to determine level of soil compaction in an irrigated pasture.*



*Roger Ingram discusses soil profile and texture at the 2016 Beef and Range Youth Field Day held at the Sierra Foothill Research and Extension Center.*



*Participants discuss soil health at the 2017 Irrigated Pasture Management field day held in Penn Valley.*

## ISSUE

Landowners and ranch managers in the Sierra Foothills raise livestock on shallow, rocky, low productive soils. Understanding basic soil properties and management practices that contribute to soil health are critical to enhancing forage productivity, maintaining soil cover to minimize erosion, increase organic matter to increase soil microbe activity, and increase stable carbon storage.

## WHAT WAS DONE

Working in partnership with local producers, UCCE delivered the following workshops on soil health: Role of Worms in Soil Health at Nevada County Farm Day, Soil Health in Irrigated Pastures at the Sierra Research and Extension Center Beef and Range Youth Field Day, Soil Health and Grazing Management Workshop in Greenville, and Soil Health in the Sierra Foothills at the Nevada County Food and Farm Conference and Tour. Soil health was covered at the California Multi-Species Academy in Auburn and Grass Valley, Irrigated Pasture Management in Penn Valley, and two pasture walks at local ranches in Grass Valley.

Soil samples on irrigated pasture were taken at a local ranch in Lincoln and tested for soil health. A Renewable Resources Extension Act (RREA) grant in collaboration with UCCE Advisors in Sonoma, Plumas, and Sierra Counties was received for developing an educational program, toolkit to assess soil health, and a companion workbook.

## IMPACT

- The six soil health workshops and two pasture walks taught 375 producers and land managers about soil health. Participants viewed soil profiles of soils from irrigated pasture and range. They viewed roots in irrigated pasture and learned about grazing principles that promote root health. Participants learned about soil structure, microbes, how to estimate soil moisture, and grazing management principles to enhance soil health.
- The two irrigated pasture soil samples tested for soil health showed that grazing management to minimize overgrazing can enhance soil health. It revealed that cost effective strategies to raise pH are needed to enhance nutrient cycling.
- The RREA grant funded development of a soil health toolkit that is being used to educate local ranchers and land managers on soil health. A companion workbook is in development.



# LOW STRESS LIVESTOCK HANDLING SCHOOL

## ISSUE

Using low-stress handling techniques, ranchers can graze their livestock in ways that will improve riparian areas, water quality, and rangeland health. By accommodating the natural behavioral characteristics of livestock and always giving them a release from handler pressure, it is possible to gain increased control with less stress on the animals.

Reduced stress lowers health costs and increases weight gains. This results in more profit for ranchers. These techniques hold potential for predator protection by getting the animals to stay closer together as a herd. The late Bud Williams, the world's leading livestock handling expert, developed low-stress livestock handling techniques as a teaching tool.

## WHAT WAS DONE

A low-stress livestock handling school was held at the Sierra Foothill Research and Extension Center (SFREC). SFREC provided facilities for classroom instruction and hands-on experience with cattle. The school was supported by a Western Sustainable Agriculture Research and Education grant. Steve Cote, author of the low-stress handling book *Stockmanship*, was the lead instructor. UC Cooperative Extension organized the workshop, assisted with instruction, and developed videos of the hands-on work with cattle.

Participants were given instruction on: cattle behavior, basic principles of low-stress livestock handling, working one animal, sorting, working with a herd, stopping and turning cattle, working in corrals, corral design, and placing animals on range without fences.

## IMPACT

25 ranchers completed the school. Participants came from Placer, Nevada, San Benito, Yuba, Marin, El Dorado, Petaluma, Tehama, and Plumas Counties. The following are some participant comments.

- “The school has proved invaluable to me personally and to our business T.O. Cattle Co. It has made us more peaceful, more profitable, and more able to get herds of animals to the places on the ranch that are in need of their impacts. The three young people I sent to the school all returned with improved livestock handling abilities, but it was me who returned to my work with livestock with some major breakthroughs in my understanding. To say I was pleasantly surprised is an understatement. “
- “It was immediately impactful. As soon as I arrived home, I applied the techniques that Steve taught us and successfully moved our 30 sheep in a way I had previously only dreamed of. On the way back to the house, I decided to push it a bit and spent an hour gathering the 50 cow/calf pairs that were spread across several acres of hillside and settled them under the trees at the bottom of the hill. I was as stunned as I was confident that I could do it, mostly thanks to Steve's guidance, wisdom and his model of calmness as a handler and as a person.”



*Steve Cote of Cattle Sense discusses low-stress livestock handling in a corral with participants.*



*Participants got hands-on experience using low-stress handling techniques in a field.*



*Participants got hands-on experience using low-stress handling techniques in a corral.*



# LIVESTOCK HUSBANDRY WORKSHOPS

## ISSUE

Landowners and managers in the Sierra Foothills are interested in raising a variety of different livestock on their own and leased property. This includes: sheep, goats, cattle, and pigs. People need hands-on experience to gain husbandry skills, understand grazing management, and how to maintain or create healthy soils.

## WHAT WAS DONE

Working in partnership with local producers, UCCE held the following:

Getting Started in Beef Cattle Workshop, Shepherding Skills Short Course, Pastured Pig Workshop, and Irrigated Pasture Management Workshops. Each workshop was held on local ranches and featured presentations by local producers in addition to information provided by Roger Ingram, UCCE Farm Advisor. The quarterly Foothill Rancher newsletter featured information on managing for drought and soil health.

## IMPACT

- The Getting Started in Beef Cattle workshop was held in Auburn and 32 producers attended. The workshop was a collaborative effort between UCCE, local ranchers, and the Tahoe Cattlemen’s Association. Participants learned about: yearly forage production, types of cattle enterprises, buying and selling cattle, equipment, reproduction, nutrition, and health.
- The Shepherding Skills Short Course reached 64 producers. Topics covered included: introduction to sheep production, sheep husbandry field day, lambing on pasture field day, and shearing and wool handling field day. The three field days were held with a local rancher in Auburn in collaboration with UCCE. Participants got hands-on experience with: giving shots, trimming feet, caring for newborn lambs, and handling wool.
- Pastured Pig Workshop was held for the first time for 27 producers at a local ranch in Chicago Park. Participants learned how to graze pigs on pasture, raise pigs for finishing, nutrition, health, and reproduction.
- Irrigated Pasture Management was held for 46 producers at a Penn Valley Ranch. The workshop was sponsored by the Nevada Irrigation District (NID). Participants learned about NID and delivery of water, estimating soil moisture, soil health, and types of irrigation.



*Paul Glowaski of Dinner Bell Farms discusses the role of cover crops in providing forage for grazing pigs.*



*Joe Fischer of Bruin Ranch discusses genetics and reproduction at the 2016 Getting Started in Beef Cattle Field Day held at Beard Ranch.*



*Participants learned how to ear tag a lamb at the 2017 Lambing Field Day held in Auburn.*



# FARM BUSINESS PLANNING SHORT COURSE



*Connie Scheiber of Scheiber Ranch in Lincoln reviews her 5 year timeline with the class. Each participating business presents their homework to the class to receive both instructor and peer feedback.*



*Charley and Marylisa Cornell of Jollity Farms discuss the profit margins of different cheeses using the crop and livestock profitability calculator.*



*There was a follow-up meeting with 2017 Farm Business Planning graduates to discuss progress on action plans. The meeting was held at Starbright Acres in Grass Valley and featured a tour. Farm Advisor Cindy Fake and Michael Whamond of Hillview Acres view and discuss the trellising at Starbright Acres.*

## ISSUE

There are 2,097 farms in Placer and Nevada Counties according to the 2012 Census of Agriculture. A total of 601 farms (29%) have less than 10 years experience. The renewed interest in farming has been driven by: providing food for local communities, need for part- or full-time income, and a strong desire to get back to the land. This interest needs to be coupled with development of a business plan and learning from experienced farmers and ranchers.

## WHAT WAS DONE

The tenth annual Farm Business Planning Short Course was conducted in 2017. This year featured an advanced version of the short course for farm businesses that had previously completed the short course or workshop. The five week six session course featured sessions on: mission and vision statements, enterprise analysis, economic plan for profit, cash flow, operations plan, risk management plan, and marketing. The final session covered development of an action plan for the next 3-6 months that includes important tasks, when they will get done, and by whom. A follow-up meeting is held three months later to hear farm updates.

## IMPACT

- This year's short course featured extensive use of the crop and livestock profitability calculators. These tools gave participants the opportunity to test out scenarios such as raising prices, increasing production, and reducing labor costs on profitability.
- 63% of participating businesses indicated they would be making management changes within the next six months. And additional 13% would be making management changes within the next year.
- Key participant included: paying myself a salary; importance of record keeping; we're on the right track; need to grow less crop varieties; and profitable planning and identifying ways to get there.
- The practices participating farms intended to apply included: production efficiency, change in crops, new marketing outlets, reducing cost, better record keeping, and development of business and risk management plans.
- Comments from participants on what they need to change: develop operations calendar, risk management plan, and action plan; keep better records; determine individual crop profitability; cross train others on the farm; and track labor efficiency.