A Visit to Main Station Field Laboratory
Reno, Nevada

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As Assistant Director of the Nevada Agricultural Experiment Station (NAES), I would like to take this opportunity to share with you who we are and what we are currently working on at our Main Station Field Lab facility on the University of Nevada, Reno campus. Now, you may be asking yourself, how many facilities does the NAES operate, and what service does it provide to agriculture in Nevada? Well, let me first start by giving you a brief background of the NAES — what I call "NAES 101." Welcome to class!

NAES was first established in 1887 with the passage of the Hatch Act, which created a federal (USDA) state partnership to conduct research in support of agriculture in association with Land Grant universities. The mission was clear: to conduct research and education programming that was supportive of the agricultural enterprises within the state. Currently, the NAES has six facilities in operation:

- Main Station Field Laboratory
- Valley Road Field Laboratory (also in Reno)
- S Bar S Ranch (Wadsworth, Nev.)
- Newlands Property (Fallon, Nev.)
- Jay Dow Wetlands Property (Doyle, Calif.)
- Gund Ranch (Grass Valley, Nev.).

All six of these facilities give the NAES the opportunity to function as production, research and educational facilities for UNR's College of Agriculture, Biotechnology and Natural Resources (CABNR). The benefits our facilities provide to CABNR are as wide ranging as its associated college departments, which include Animal Biotechnology and School of Veterinary Medicine; Biochemistry and Molecular Biology; Natural Resources and Environmental Science; Nutrition; and Resource Economics.

Now that you've graduated from NAES 101, let me share with you details of current happenings at our Main Station Field Lab.

The Main Station farm is comprised of about 1,100 acres, of which approximately 800 acres are irrigated. The farm is bordered by the Truckee River to the north, McCarran Boulevard to the west, Pembroke Avenue to the south and Steamboat Creek to the east. The farm provides students and faculty with a hands-on classroom and research facility only 10 minutes from UNR's campus.

The farm also provides students the opportunity to work while attending school. Currently 21 students are employed at Main Station. These students are supervised by six full-time staff. Our current staff at Main Station includes:

- Dwight Joos, Farm Manager
- Laura Millsap, Sheep Production Manager
- Bo Kindred, Irrigation and Weed Control
- Chris Mendoza, Farm Mechanic and general maintenance
- Mike Holcomb, Manager of Wolf Pack Meats
- Steve Cartinella, Meat Technician

Sheep and cattle livestock production are areas of emphasis at Main Station, which currently manages 850 head of sheep and 500 head of cattle. Sheep production for meat and wool uses Merino/Rambouillet cross sheep. CABNR's biotechnology research operation manages another flock of sheep specifically for research purposes.

Cattle production at Main Station includes a purebred Hereford herd, purebred Black Angus herd and a herd of commercial cross-bred cows and recipient cows for embryo transfer production projects.

The farming operation at Main Station consists of 800 acres of irrigated land utilizing treated effluent from the Truckee Meadows Water Reclamation Facility. The irrigated land is part of our research/demonstration activities and includes trials of alfalfa hay, grass hay, grain hay and pasture. With the use of treated effluent to irrigate Main Station fields, we are monitoring the ground water, tracking the amount of water utilized by each crop, the labor involved in irrigation (wheel lines), fertilizer costs, pesticide costs and haying costs to determine the growing costs and crop yields. We will be initiating a bio-solids project this coming year in cooperation again with the Truckee Meadows Water Reclamation Facility.

Current research and production projects in progress at the Main Station Field Laboratory include the following:

- The relationship between alternative foraging systems and growth, feed efficiency and meat quality in grass-fed cattle.
- Studies on immunity to abortion due to Epizootic Bovine Abortion.
- Arid lands crops for use in biofuels, edible oils and biomaterials.
- Alfalfa trials on four different varieties (Dura 512, Archer 2, Producers Choice, Ruccus) being conducted in collaboration with Silverado Seed.
- Round-up Ready alfalfa production.
- Detection of nutrient flow in a managed agroecosystem following treatment with biosolids.
- Irrigation with treated effluent in association with crop production.
- Studies to determine the effect of mowing/herbicide combinations on control of tall whitetop.
- Studies on stem cell transplantation and plasticity as well as in utero gene therapy.

Among this research, several are multi-state projects being conducted between universities in the western region including UNR, Washington State University and UC Davis.

The above is just the tip of the iceberg of the cutting-edge research going on at this Reno facility. We are proud of what we do at Main Station and in the Experiment Station and pleased to be able to continue to fulfill our obligation of research in support of agriculture. The faculty, staff and students in CABNR and the NAES view this mission as not only an obligation, but a passion and a way of life.

Another part of our mission is to extend the research we do to other producers and the public. One way of sharing is through avenues like this article. Another way we share what we do is through our web site, www.cabnr.unr.edu, which provides information on current and past research, faculty names and contact information and details of upcoming special events.

And here's a special event to place on your calendar: The NAES and CABNR will hold our third annual Main Station Field Day Saturday, Sept. 20, from 9 a.m. to 3 p.m. Field Day includes tours of research and demonstration activities, individual faculty and student research posters, a BBQ by Wolf Pack Meats, children's activities and presents an opportunity to become more informed about the types of agricultural research and production being conducted at this facility. To register for Field Day or for more information, please go to www.cabnr.unr.edu/cabnr/fielddays/ or contact the NAES office at (775) 784-6237.

Over the course of the next few months, I hope to be able to continue sharing with you the research and production projects occurring at five other field labs.

For more information on the Nevada Agricultural Experiment Station, please visit CABNR's web site at www.cabnr.unr.edu or feel free to contact me directly at (775) 784-6237.

Sidebar break-out information:

Save the Date!
Main Station Field Day
Hosted by the Nevada Agricultural Experiment Station and UNR's College of Agriculture, Biotechnology and Natural Resources
Saturday, Sept. 20, 9 a.m. to 3 p.m.
Event highlights: tours, research posters, Wolf Pack Meats barbecue lunch and more
To register: visit www.cabnr.unr.edu/cabnr/fielddays/ or call (775) 784-6237