The University of California prohibits discrimination or harassment of any person on the basis of race, color, national origin, religion, sex, gender identity, pregnancy (including childbirth, and medical conditions related to pregnancy or childbirth), physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or service in the uniformed services (as defined by the Uniformed Services Employment and Reemployment Rights Act of 1994: service in the uniformed services includes membership, application for membership, performance of service, application for service, or obligation for service in the uniformed services) in any of its programs or activities.

University policy also prohibits reprisal or retaliation against any person in any of its programs or activities for making a complaint of discrimination or sexual harassment or for using or participating in the investigation or resolution process of any such complaint. University policy is intended to be consistent with the provisions of applicable State and Federal laws.

Inquiries regarding the University’s nondiscrimination policies may be directed to the Affirmative Action/Equal Opportunity Director, University of California, Agriculture and Natural Resources, 1111 Franklin Street, 6th Floor, Oakland, CA 94607, (510) 987-0096.

WEB SITE:  ceplacernevada.ucdavis.edu
I Love Farmers, They Feed My Soul is a 501 (c) (3) charitable / educational organization. The Board of Directors is made up of young twentysomething adults. Here is how Board members describe themselves on the website: “We may be young, but we are not stupid. We love farmers. They feed our soul. Together we are working to help our generation understand the importance of knowing where our food comes from and who produced it.

We’re not your typical “who cares” kind of young people from the Millennial Generation. Sure, we all have cell phones and we text like crazy. We have iPods and spend way too much time on Facebook and MySpace, but we care about our planet. We care about our country. We care about the American family farmer.

Few of our friends know how their food is produced. We think that is sad. And, really it is kind of scary. If we are not careful, we will become dependent on other countries to provide our food. That is not good. Who knows what goes on in other countries when it comes to growing our food? We have an idea, and it too is not good.

In an effort to create a conversation among our peers about our food, our farmers and our future, we have committed to getting connected. We want to get the word out about where our food comes from and how it is produced. We invite you to join our I Love Farmers group on Facebook and be a part of the conversation about American agriculture.

“Together, our generation can make a difference.”

Scott will be bringing some board members with him. I think this will be a different kind of keynote topic that is most relevant to our area. Very few people in the foothills know about agriculture and local food – even with extensive and successful efforts to promote and educate about local food! We need more people - more farmers and ranchers along with local communities buying more local food and supporting agriculture.

Given that less than 2% of our population is involved with agriculture, we have generations that have grown up with little connection to the land or understanding of where their food comes from. Depending on the agricultural community alone to spread that message is not effective as they are too busy producing food! I encourage you to make plans today to attend the 2012 PlacerGROWN Food and Farm Conference for what promises to be most informative and provocative day.

PlacerGROWN
Food and Farm Conference
Livestock Strand

The 2012 Livestock Strand will focus on getting started in the livestock business. Each of these classes will provide an overview of how to get started. More in-depth workshops on each topic will occur in 2012. Classes will include:

Getting Started in the Beef Cattle Business
Topics to be covered include: enterprise selection, stocking rate and carrying capacity, nutrition and supplementation, health, and calendar of operations.

Getting Started in the Sheep and Goat Business
Topics to be covered include: enterprise selection, stocking rate and carrying capacity, nutrition and supplementation, health, and calendar of operations.

Getting Started in the Vegetation Management Business
Topics to be covered include: Opportunities in vegetation management, contract considerations, insurance, nutrition considerations, and predation management.

Getting Started in the Niche Meat Business
Topics to be covered include: Opportunities with niche meat, understanding terms such as organic and grass-finishing, harvest and processing, quantity of product, and marketing options.
Water Woes

Roger Ingram, County Director and Farm Advisor, Placer / Nevada Counties

The following is my opinion only. Feel free to agree or disagree.

The Irrigated Lands Program – For more information go to the State Water Resources Control Board Website (http://www.swrcb.ca.gov/water_issues/programs/agriculture/)

The California Water Code authorizes State and Regional Water Boards to conditionally waive waste discharge requirements (WDRs) if this is in the public interest. Over the years, the Regional Water Boards issued waivers for over 40 categories of discharges. Although waivers are always conditional, the historic waivers had few conditions. In general, they required that discharges not cause violations of water quality objectives, but did not require water quality monitoring. Senate Bill 390, signed into law on October 6, 1999, required the Regional Water Boards to review their existing waivers and to renew them or replace them with WDRs. Under SB 390, waivers not reissued automatically expired on January 1, 2003. To comply with SB 390, the Regional Water Boards adopted revised waivers. The most controversial waivers were those for discharges from irrigated agriculture.

Discharges from agricultural lands include irrigation return flow, flows from tile drains, and storm water runoff. These discharges can affect water quality by transporting pollutants including pesticides, sediment, nutrients, salts (including selenium and boron), pathogens, and heavy metals from cultivated fields into surface waters. Many surface water bodies are impaired because of pollutants from agricultural sources. Groundwater bodies have also suffered pesticide, nitrate and salt contamination. Statewide, approximately 9,493 miles of rivers/streams and some 513,130 acres of lakes/reservoirs are listed on the 303(d) list as being impaired by irrigated agriculture. Of these, approximately 2800 miles, or approximately 28%, have been identified as impaired by pesticides.

The Irrigated Lands Program is designed to protect water quality and to help agriculture meet water quality standards. It provides that owners and operators of irrigated lands may join coalitions as an alternative to individual permits for waste discharges from their operations. The Irrigated Lands Program requires coalition groups to monitor, identify water quality problems and to work with growers in their areas to address those problems. Participant growers are required to manage their operations and to implement management practices to prevent water quality problems and to address existing ones.

What Happened Next?

Watershed groups were formed as a way to pool groups of farmers and ranchers in order to keep per person required monitoring costs low. For example, there is a Placer, Nevada, South Sutter, Northern Sacramento Sub-Watershed (PNSSNS) group for our area. They are one of ten subwatersheds within the Sacramento Valley Water Quality Coalition. Our members include large and small farms, rural property owners, organic farmers, ranches & ranchettes with poultry, horses, cattle, orchards, vineyards, nature and hunting preserves, country clubs, water districts and some who simply support self-monitoring to keep our waters clean. In 2003 PNSSNS formed a non-profit 501C3 organization authorized by the Central Valley Water Quality Control Board (Regional Water Board) to provide its members a state required conditional discharge waiver.

PNSSNS has been in existence since 2003. The Board of Directors is made up of farmers and ranchers from the counties included in the subwatershed. Monitoring results over the last 8 years have not revealed any consistent or large problems. If you would like more detailed information on monitoring results, please contact PNSSNS at 916-654-1774 or cleanwaters@netscape.com. Research conducted on (Continued on page 4)
watersheds in Plumas and Sierra Counties by my colleague, Holly George - UC Farm Advisor, also revealed minimal agricultural impact to water quality on irrigated lands.

There has been considerable effort by PNSSNS and some other northern California sub-watershed groups to pursue adoption of a low-threat waiver that would have reduced monitoring requirements. This effort eventually led to the development of different Tiers for agricultural waiver. Tier 2 is what the sub-watershed is in right now. The means costly annual monitoring costs even though results have indicated little problems. Tier 1 requires extensive monitoring every 5 years along with reduced monitoring requirements between years. Unfortunately, there are very few areas so far that are recognized as qualifying for Tier 1.

Further developments this summer shifted emphasis on developing watershed orders. Below is information from the Central Valley Water Board Framework Facts (www.swrcb.ca.gov/centralvalley/water_issues/irrigated_lands/long_term_program_development/recomnd_framework_fact.pdf)

How will the requirements be tailored for differences in agricultural operations?

The Board would issue 10-12 geographic or commodity-specific Orders, which will include requirements tailored to the issues relevant to that geographic area or commodity. In addition, the Board will tailor requirements based on water quality threats: "Tier 1" - low threat; "Tier 2" - unknown water quality threat or unknown irrigated agricultural contribution to a known threat; "Tier 3" - known water quality threat with an identified irrigation agricultural contribution.

How do the "tier" requirements differ?

For "Tier 1," there is enough data to demonstrate that agriculture is not causing or contributing to a water quality problem for a given constituent in an area. In addition to the farm self-evaluation, a regional plan must be submitted which describes the management objectives that will be established to maintain the water quality protection efforts.

For "Tier 2," there is not enough data for a given constituent to determine whether there are water quality problems or if there are problems, whether there is an irrigated agriculture contribution. Monitoring to address data gaps or source identification studies will be required. If the studies demonstrate no agricultural contribution, then "Tier 1" requirements would apply. If the studies demonstrate an irrigated agricultural contribution, then "Tier 3" requirements would apply.

For "Tier 3," there is enough data for a given constituent to indicate that irrigated agriculture is causing or contributing to a water quality problem. Requirements include the development of regional water quality management plans; monitoring efforts to evaluate management practice effectiveness and water quality trends, and implementation of improved practices by growers.

2012 for Order Development

PNSSNS sub-watershed group is one of 10 such groups under the Sacramento Valley Water Quality Coalition. Order development is not scheduled until October 2012. During the Order development, coalition groups will have the opportunity to respond to tier designation by staff and provide information (e.g., watershed assessments, special studies, scientific papers, additional monitoring data) to support Tier 1.

The State budget situation has now impacted the Irrigated Lands program. The decision was made after the state cut nearly all General Fund support for board programs. Adopted as an emergency fee-setting regulation, the increases are effective for the 2011-12 fiscal year that began July 1. As a result, per acre fees that go back to the State Water Resources Control Board increased from 12 cents to 56 cents per acre - that
One email that was forwarded to me noted that the biggest annual cost is the program management and reporting. If PNSSNS and other areas could be recognized as Tier 1, costs would be a more reasonable level and monitoring could continue on a more practical frequency to assess agricultural impacts to irrigated lands water quality. Despite documented monitoring evidence conducted by sub-watershed groups and other UC research efforts – there is still no movement to include more areas as Tier 1.

What Is the Result of All This Absurdity?

If you own irrigated land and are in commercial agriculture, you need to join a sub-watershed group. PNSSNS has very reasonable fees. They must collect 56 cents an acre for state fees. In addition, they charge 70 cents an acre to support sub-watershed monitoring costs plus $100 annual dues. For example, 10 irrigated acres would result in $112.60 in annual dues and fees.

As you might imagine, people either see no use for the program and have opted out, do not know about it, or refuse to join. Membership in PNSSNS has dropped from a high of 879 to the current 559 members. Board members from PNSSNS have been adamant about keeping fees low. Due to the lack of movement on increasing the amount of area recognized as Tier 1, PNSSNS is stuck with having to continue required monitoring. Less people mean they either need more members or they have to raise fees. There is a $77,000 monitoring bill due in November.

Adding to the issue is that the Central Valley Regional Water Control Board (they are under the State Water Resources Control Board) has sent out 3 postcards inquiring about their status on Irrigated Lands Program Compliance – ie are you a member of a sub-watershed. Those who received postcards would need to:

1. Prove they are not in commercial agriculture (there is no formal definition) which means they do not need to be in the program
2. Join the PNSSNS sub-watershed group. You would first need to complete and submit, "Application for Regional Water Board Approval to Join a Coalition" with $50 and send to the Central Valley Regional Water Control Board as soon as possible. The form is available at [www.waterboards.ca.gov/centralvalley](http://www.waterboards.ca.gov/centralvalley).
3. Get an individual waste discharge permit and conduct your own monitoring program and report results back to the Board Staff. The cost for a 200 or less acre property ranged from $7000 to $14,000 for initial setup, plan preparation, analytical costs, limited monitoring and annual reporting costs.
4. Do nothing and face fines. Some have said between $89,000 and $93,000.

This area and many others should easily qualify for Tier 1. The lack of inclusion of Tier 1 puts PNSSNS in unworkable situation. They need more members to keep costs low. Existing members have no incentive to subsidize others who have not joined. It is not PNSSNS's role to be out tracking down people who are not members. It appears postcards being sent out the Central Valley Regional Water Control Board are doing that unpleasant job. Given PNSSNS monitoring results, this is not about water quality – this is only about money – again, only my opinion.

The PNSSNS Annual Meeting is scheduled for Wednesday, February 22nd. I would urge you to attend. I would urge you to contact them to see if there is anything you can do to help in continued effort to get the PNSSNS area into Tier 1 where appropriate. The same would hold for other sub-watersheds in northern California.

PNSSNS Contact Information:
Telephone: 916.645.1774
Email: cleanwaters@netscape.com
Web: www.cleanwaters.info
California Grazing Academy
April 27-28, 2011
UC Sierra Research and Extension Center
Browns Valley, CA

Fees and Enrollment:
$140.00 (includes meals, and course materials – some lodging available)

Limited sleeping space available — first come, first served (bring your own sleeping bag and towel). No walk-in registrations due to set-up needed for hands-on activities.

NO REFUNDS. Your check guarantees your space.

About The California Grazing Academy
The California Grazing Academy is a unique and exciting program emphasizing practical application of controlled grazing principles to improve the environment and increase ranch profit. This challenging course consists of a minimum of lecture and a maximum of hands-on experience.

After completing the Academy, course participants will be able to:
• Assess the condition of the four basic ecological processes that determine ranch productivity.
• Apply principles of time and stock density to improve pasture productivity and stock performance.
• Estimate carrying capacity.
• Apply principles of animal behavior to reduce stress.
• Determine the supplementation needs of grazing animals.
• Design a layout to efficiently use resources and apply controlled grazing principles. Immediately improve grazing management on your own ranch.
• Understand underlying principles of using high stock densities.
• Managing through drought

For More Information
Contact Roger Ingram at the UC Cooperative Extension Office/Placer County, located at 11477 E Avenue, Auburn, CA 95603, call (530) 889-7385, or email at rsingram@ucdavis.edu

BEHAVE Facts

Learning to Mix Diets
Livestock can learn to mix nutrients and toxins to lessen effects of toxins. Unfortunately, most grazing systems let livestock to eat the most preferred plants and avoid the unpalatable ones. These systems don’t encourage livestock to mix foods high in nutrients with those high in toxins. Livestock repeatedly encouraged to eat all plants in an area, in a high-intensity grazing system for example, may learn to eat mixtures of nutritious and toxic plants in ways to lessen toxicity. For more information read the fact sheet on Diet Mixing https://extension.usu.edu/BEHAVE/files/uploads/Fact_Sheets_App/Diet_mixing.pdf

Nutrients and Toxins
An animal's ability to eat plants high in toxins depends on their nutritional status. The body must change the structure of most toxins before they are excreted from the body, which requires additional nutrients. Excreting toxins may also disrupt the body’s acid/base balance forcing it to use even more protein and energy. In short, as animal's ingest more toxins their need for nutrients also increases. For more information, read the fact sheet on Nutrient and Toxin Interactions and their influence on diet selection https://extension.usu.edu/BEHAVE/files/uploads/Fact_sheets_Basic/Toxin-nutrient.pdf
Teaching Cows to Eat Big Sagebrush

Beth Burrit, BEHAVE June 2011 Newsletter

More information on this article available at: https://extension.usu.edu/behave/htm/current-projects/eating-sagebrush/

Chuck Petersen successfully defended his thesis this past May. His research focused on training cattle to eat sagebrush in the fall to improve plant biodiversity on rangelands. Chuck conducted his study at the Cottonwood Ranch in NE Nevada. Trials began in late October and ended in early November from 2007 to 2009. Plots were a half-acre in size. Each year cattle spent 11 to 14 days in an adaptation pasture until they were eating sagebrush. Then they spent 5-7 days in trial pastures.

During the adaptation and trial phases, cattle were supplemented with grass hay and a protein-energy pellet, to lessen the effects of the terpenes in big sagebrush. In 2007, all cattle used in the trials were naïve to sagebrush. In 2008 and 2009, experienced cattle (sagebrush eaters) and naïve cattle foraged together in the same pasture. In 2008 and 2009, animals with experience eating sagebrush consistently ate more sagebrush and lost less weight, or actually gained weight, compared to naïve animals. Cow/calf pairs, bred yearling heifers, and first-calf heifer/calf pairs were used in the trials and most ate sagebrush as a significant portion of their diet. Over three years, Chuck taught 98 cattle on the ranch that sagebrush was food. One observation that surprised both Chuck and his committee was the amount of time cattle spent eating bark from sagebrush.

Let Them Eat Sagebrush

After Chuck’s success at getting cattle to sagebrush, Agee Smith applied for and received a Western SARE Producer Grant to teach his herd to forage on sagebrush in winter.

Fall grazing by cattle also reduced the abundance of big sagebrush and promoted the growth of grasses and forbs in the understory compared to control pastures. Fall and winter are ideal times for grazing big sagebrush because typically terpene levels in sagebrush are low and perennial herbs and grasses are dormant.

Let Them Eat Sagebrush

After Chuck’s success at getting cattle to sagebrush, Agee Smith applied for and received a Western SARE Producer Grant to teach his herd to forage on sagebrush in winter.
Kody Menghini works at Cottonwood and was in charge of the project.

In 2010 and 2011, bred cows were turned out on sagebrush-dominated rangeland and fed half their normal ration of meadow hay from January to March. Cows were in their second trimester of pregnancy. There were no problems with abortion or percent calf crop. Cows seemed to maintain their body condition but because they were bred, it was hard to determine actual weight gain or loss during the period cows browsed on sagebrush.

Many ranchers in the Intermountain West feed hay in winter. Using sagebrush steppe vegetation, as forage will likely enable ranchers to feed their cows roughly half the hay they usually feed. This represents a huge savings in winter feed costs. In addition to the financial savings, grazing sagebrush-dominated rangeland in winter improves rangeland condition and productivity of the understory resulting in long-term habitat and vegetation improvements for both livestock and wildlife.

The goals of this project are to:
1) cut winter feed costs
2) create a locally adapted herd of livestock at Cottonwood
3) to use management practices that ensure long-term health of sagebrush steppe.

UPCOMING EVENTS

Contact Roger Ingram at 530-889-7385 or rsingram@ucdavis.edu to register or if you have questions.. Check website for updates at ceplacer.ucdavis.edu

California Grazing Academy
April 27, 28, 2012
Sierra Foothill Research and Extension Office
Browns Valley, CA

Pasture Walks
March 2012
Date and location to be determined

PlacerGROWN Farm Conference
February 4, 2012
Lincoln High School
Lincoln, CA

Pond Management and Irrigation Classes for Small Landowners
Keith Crabtree, Green Acres 101
Call 530-269-1217 or go to greenacres101.com for information.

Farm Business Planning
February—March 2012
A six session course on developing a mission and vision, enterprise analysis, operations planning and much more.

Roger Ingram
County Director, Placer and Nevada Counties
Livestock & Natural Resources Advisor
2012 California Grazing Academy Registration Form

Date: April 27—28, 2012

Cost: $140.00 (includes meals, and course materials—some lodging available, first come, first served—bring your own sleeping bag and towel. NO WALK-IN REGISTRATIONS DUE TO SET-UP NEEDED FOR HANDS-ON ACTIVITIES)

Register: Complete this form, mail with your check payable to UC REGENTS, to:
Roger Ingram
California Grazing Academy
11477 E Ave.
Auburn, CA 95603
OR, visit our website: http://ceplacernevada.ucdavis.edu and follow the links.

Location: UC Sierra Research & Extension Center, Browns Valley, CA

First Name __________________________ Last Name __________________________
Address: ____________________________
City ____________________________ State/Zip __________________________
Email: ____________________________ Phone Number: __________________________

What types of animals do you graze or manage? ____________________________________________________________

________________________________________________________________________________________

________________________________________________________________________________________

How many head: ____________________________ On how many acres: ____________________________

The University of California prohibits discrimination or harassment of any person in any of its programs or activities. (Complete nondiscrimination policy statement can be found at http://danr.ucop.edu/aa/danr_nondiscrimination_and_affirm.htm)
California Grazing Academy
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5. Determine the supplementation needs of grazing animals.
6. Design a layout to efficiently use resources and apply controlled grazing principles.
   Immediately improve grazing management on your own ranch.
7. Understand underlying principles of using high stock densities.
8. Managing through drought

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Complete the registration form on the reverse and include your check payable to UC REGENTS to: Roger Ingram
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Auburn, CA 95603

OR

An on-line registration form is available at ceplacernevada.ucdavis.edu – Just follow the link to Livestock and Natural Resources and then to California Grazing Academy.