Cooperative Extension, University of California
FOOTHILL RANCHER
...Practical Information for Foothill Livestock Producers
Summer 2003

# PLACING LIVESTOCK WITHOUT THE AID OF FENCES: A Powerful Livestock Handling and Range Management Tool

By
Tim Westfall

**Why Place Cattle?**

Placing cattle is one of the most powerful livestock management tools we have available to us. By working with the natural behavior and psychological processes of cattle or other herd animals we can place them where we want them and have them stay without the use of fences.

This is particularly useful in areas where we have riparian areas where we don't want cattle camping yet we want them to graze the uplands and be able to use the water sources. We can place the cattle on a site where we want them to bed down, have them go to water twice a day and graze the area surrounding where they were placed.

We can also use livestock as a vegetation management tool. For example, we can place them in a stand of dense sagebrush and have them trample it. By doing so, we can incorporate organic matter into the soil, improving the nutrient cycle, create a seed bed for grass seeds, and alter the grass/shrub ratio's of our rangelands. This technique may also be used to reduce weed patches through the use of animal impact.

**Herd Animal Psychology: Why do animals stay where we put them?**

Animals want to stay where they feel safe and comfortable. This area is known as their comfort zone. This comfort zone can be created by both physical factors such as shade, close access to water, or lush forage; or by psychological factors. Of the two, the psychological factors are the most powerful. If the animal feels safe from predators and comfortable in an area, they will stay there until they are asked to move. This is why we see cattle laying in grazed out riparian areas losing weight when there is plenty of forage in the uplands.

**WEB SITE: ceplacernevada.ucdavis.edu**

**PLACER COUNTY**
11477 E Avenue *(Bldg 306, DeWitt Center)*
Auburn, California 95603
**(530) 889-7385** • FAX (530) 889-7397
**E-Mail:** ceplacer@ucdavis.edu



**NEVADA COUNTY**
255 So Auburn *(Veterans Memorial Bldg)*
Grass Valley, California 95945
**(530) 273-4563** • FAX (530 273-4769
**E-Mail:** cenevada@ucdavis.edu

*(Continued from page 1)*

We can use this psychological comfort zone to our advantage by working with the animals to make their move from one area to another comfortable and creating a comfort zone of our choice where we place them.

**Preparing the cattle to move**

Before placing animals on range they should already be comfortable with taking pressure from the side, turn with pressure / release applied to the head and neck or hip, speed up, slow down, and drive well. A detailed description of these techniques and diagrams showing how they would be applied is available in the publication, ***Belief and the Will To Do It***. Please call our office for a copy at (530) 889-7385).

As a general rule, cattle go to water twice a day, once in the morning and again in the evening. After they water up they generally have a feeding period after which they lay down to ruminate. I use this behavior to my advantage by timing my moves around when cattle go to water, generally in the morning. This is also less stressful on the animals, because other than long drives, they aren't being moved in the heat of the day.

When I go to move the animals, I am careful to bump them up if they are lying down. I do this by applying enough pressure to get them to start to stand up. Then I back off and let them do so. I always allow the cattle to stretch and urinate at this time. If they want to drink, I allow them to do so. With pairs, I allow them time to mother up and let the calves nurse. If you move cows without them being mothered up, I can guarantee you that they will fight you the entire way. When you try to place them they will not stay put and will beat you back to the place where the calf last nursed. This step is extremely important and must not be skipped. The cattle will be bedded in an area that they consider their comfort zone. If they are moved with force, against their will, out of this area they will return to it no matter how correctly you place them or how careful you are with the rest of the move. This is one of the most commonly made mistakes when trying to place cattle. The cardinal rule for working cattle, horses or any other herd animal is to let your idea become their idea. By this I mean always give the animal at least two options or escape routes. One will be what you want them to do. You will set things up to make sure that this is the easier of the two options. The other will be what they want to do. You will make this more difficult; but, you should never prevent them from doing it. The adage to live by is to "make the right thing easy and the wrong thing difficult." You can do this most effectively by setting things up so that if they pursue this option it will be more work and they will run into the psychological barrier you have created through your presence and body positioning, thus putting pressure on themselves. It is important that you understand that you create a psychological barrier; but you don't put pressure on the animal. The animal puts pressure on itself if it chooses to do the "wrong" thing by moving its flight zone into the handler's space and in so doing runs into the psychological barrier you have created, thus putting pressure on itself. This is less stressful to the animal and works more effectively with the way they process information because they have created the situation and may relieve pressure on themselves by "doing the right thing." Setting things up this way helps to assure that the animals will view you as a dominant member of the herd, preferably the herd leader, rather than as a predator.

This technique is very effective because herd animals have a deeply ingrained sense of self preservation. Because of this they do not like to waste energy. If they expend energy needlessly, they may not have the reserve energy required to escape a predator. If this occurs they won't live long. Evolutionarily, herd animals have evolved to take the path of least resistance. This is why we can use the adage of "make the right thing easy and the wrong thing difficult" as an extremely effective training tool to get herd animals to do whatever we ask them to do as long as we ask clearly and then get out of the way and let what we asked for happen.

*(Continued on page 3)*

**Starting the move: Creating good movement**

When moving cattle or other herd animals, getting movement to begin with is more important than the direction of the movement. Once we have established movement, we can ask for the direction we want simply by applying and releasing pressure to the correct area of the animal's body.

When moving cattle with the end goal of placing them and having them remain where we want them, we must be careful to move them quietly and calmly. When the move begins I allow the slowest animal to set the speed. The fastest way to move stock is slow. Once I establish good movement, I can use the speed of my pressure and release and riding against the direction of the movement of the herd to speed the animals up. I allow the animals to graze as we go along, making absolutely sure the cow-calf pairs are mothered up. Also, I allow the animals to stop and drink whenever they want. While this may seem illogical to you, it means a great deal to the cattle in regards to how they perceive the comfort of the move. If they are started comfortably, leave their previous comfort zone under their own accord, are comfortable during the move, and are placed properly, they will stay until you move them again.

**Selecting and Arriving at the Placement Area**

Placing animals can be done by a single person or a group of handlers. When working as a group this is accomplished by forming a rodear, a circle of riders on horseback or herders afoot encircling the herd to be held or placed, outside of the animal's pressure zone.

As I come into the placement area, I take the cattle to their new water source and let those who want to drink. When I arrive at the area where I will place the cattle I let them drift in. I then slow the movement by going up the side of the herd within the flight zone. This will cause the animals to slow or even stop. Then I go to the head of the herd and zig-zag in front of the herd to slow the movement of the leaders and stop the herd. Following this, I will turn the leaders back into the herd. Next, I establish a psychological barrier by riding or walking a large circle around the herd just out of their pressure zone. This is the area where the animal recognizes your presence but where your presence will not cause them to move. If they try to leave they will put pressure on themselves by bumping into me with their flight zone. This will cause them to turn back into the herd.

At this time, if I see a lot of movement in the herd such as a lot of milling around, cattle with their heads up looking around and very few animals with their heads down grazing, I will take the movement out of the herd. I do this by moving them around the area where they will be grazing them drifting them back in and settling them. I do this until the majority of the animals stand calmly when I drift them in and stop them. At this point, animals should start to put their heads down and begin to graze. If this is the case, I will once again form the circle around the herd on the outside of the herd's pressure zone and then wait until the majority of the cattle have their heads down grazing or are laying down. At this point, I will go into the herd and by pressuring shoulders or hips get the animals to face in several different directions. I do this because cattle will drift in the direction they are facing. If I leave them facing in the same direction,

when I return, the next day, they will have drifted off in that direction. By placing them facing in many different directions, I can alleviate this prob-

*(continued from page 3)*
lem. After this is accomplished, I go back outside of the pressure zone and wait until the cattle are either bedded down or have their heads down grazing. It is important at this time to just wait and watch to make sure the herd is settled. Think of your self as the rider pictured in the Charlie Russell painting "The Trail Boss" in which the rider is on a ridge above the cattle resting his elbows on his saddle horn and gazing out over his herd. This may take from fifteen minutes to an hour of your time. However, it is worth the time expended in that you will be sure your herd has settled and you won't have to spend several hours the next time you check on them hunting them up, moving them, and re-placing them. At this point they are effectively placed and it is safe to leave them.

Occasionally, I will have one or two cows who do not want to stay where I have placed them. In this case, I merely take them for a walk. I don't care what direction they go. I just stay off of their hip and walk with them. Before long, they decide "I don't want to go for a walk, I want to be with the herd", so I let them. You see my idea has become their idea and now it is very difficult to stop them from doing what I wanted them to do initially.

**In conclusion, there are three (3) principles to keep in mind:**

1. **You need to have more patience than a cow.**
2. **It takes the time it takes. Don't get in a hurry. Cattle will pick up on your nervous energy through your body language and you'll undo everything you've done so far.**
3. **Cattle will do what you ask them if you just have enough patience to let them.**

**A Summary of Things Not To Do**

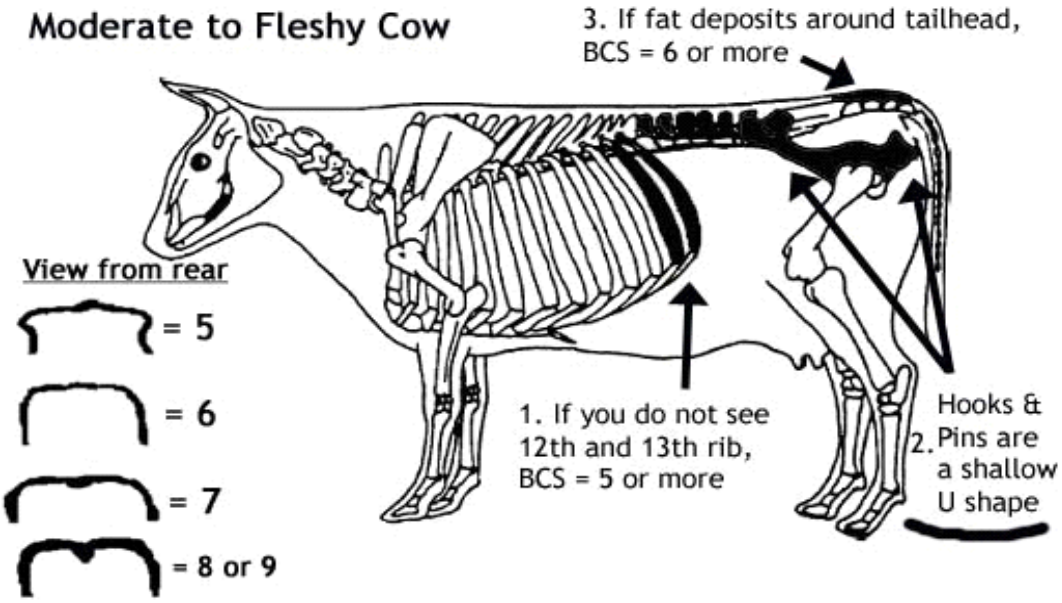
- Do not get in a hurry and rush things
- Do not leave until every animal is relaxed, grazing or resting
- Don't yell, holler, or create loud noise around stock
- Don't pressure from directly behind for any length of time
- Don't pressure stock from a head on approach
- Don't shove or push cattle (pressure then immediately release only. Try to get your timing refined to the point where you release pressure when the animal thinks about doing what you asked them to.)
- Don't crowd or jam cattle together
- Don't move fast or tear around when handling
- Don't jump in front or spin cattle around
- Don't work stock from too far away
- Don't walk or ride in curved lines or creep up the side
- Don't work stock when you are in a bad mood

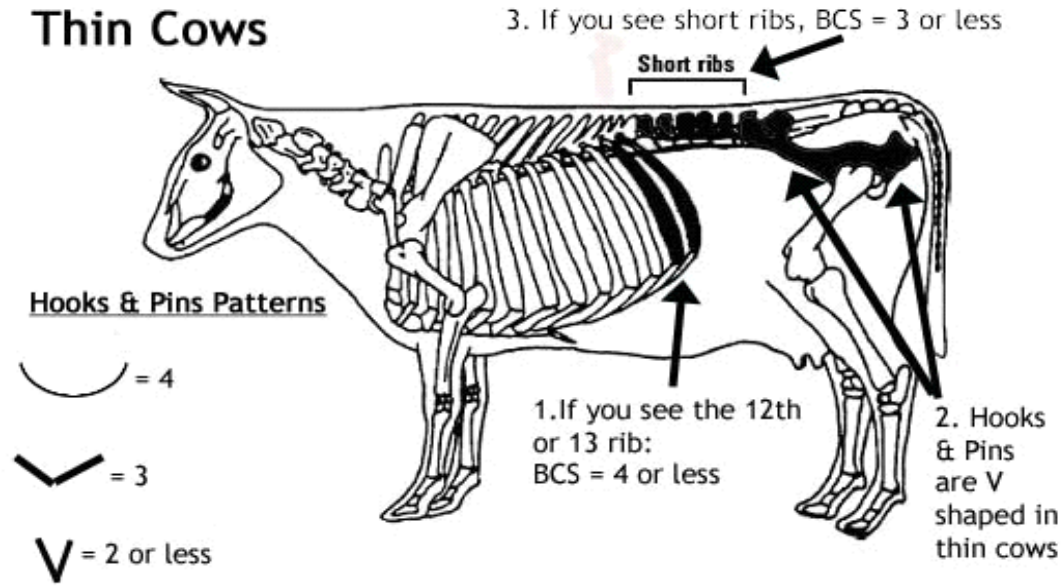
**Summary of Some Things To Do**

- Keep the noise down
- Work in and out of the flight zone
- Work as close as you can. With really wild or sensitive animals this may be working in and out of the pressure zone to reduce the flight zone
- Be patient, at least a bit more than the animal(s) you are working with
- Watch the stock at all times to see what effects you are having on them. This allows you to move slower and sooner rather than later and faster.
- Pay attention to such signs as the set of the tail head, facial expressions, eyes, set of the ears, how the animal is holding its head, vocalizations, etc.
- Always move in straight lines around cattle. This is not necessarily the case for horses who tend to consider straight line movements more aggressive. Horses tend to find our moving in straight lines around them threatening and prefer us to work in an arc when handling them.

# Body Condition Scoring Cards

The drawings below are visual indicators of body condition in beef cows. If you see the 12 and/or 13th rib, use the Thin Cow drawing. If you do not see the ribs, then use the Moderate to Fleshy drawing. These drawing are a graphical representation of a systematic way to approach visually body scoring cows without having to feel the animal. This system was developed by Dr. Jerry Stuth of the Grazingland Animal Nutrition Lab of Texas A&M University. The body condition at calving is the most critical factor affecting re-breeding.



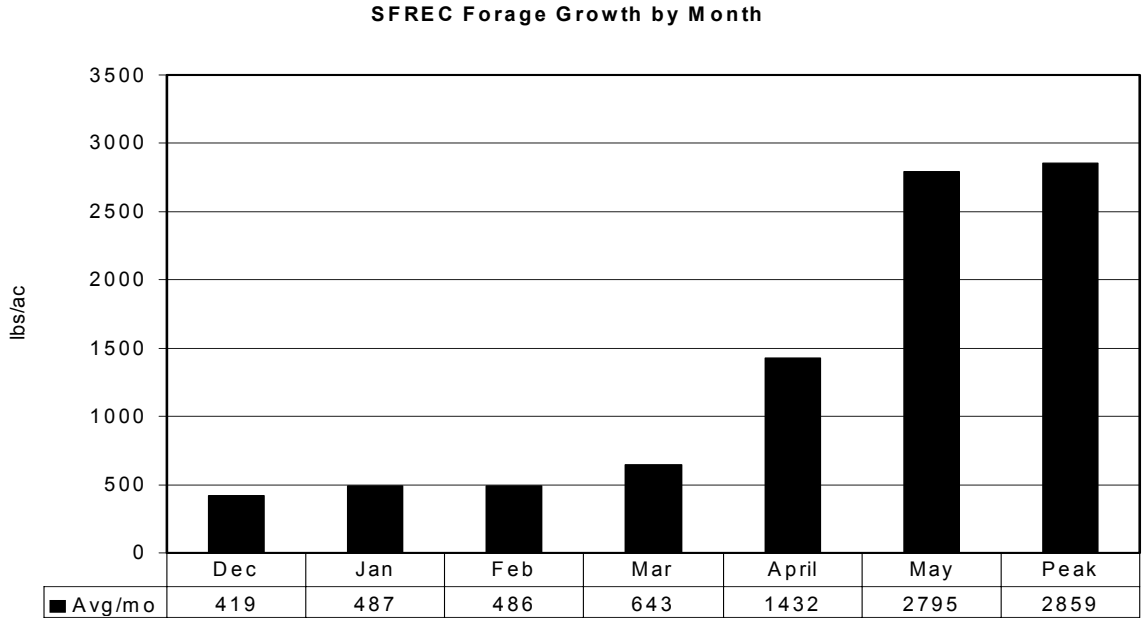
# Growth Characteristics of Foothill Annual Rangelands

## By Roger Ingram

Rangelands in California are dominated by annual grasses, legumes, and forbs. Growth begins with germinating rains in the fall and peaks in May as plants put all their energy into forming a seed bank for next year's crop. California livestock producers spend six months out of the year (December – May) attempting to grow as much quantity as possible. The following six months (June – November) are spent rationing out standing feed until the next growing season. This standing feed must be monitored for loss of crude protein later in the season to determine potential protein supplementation needs.

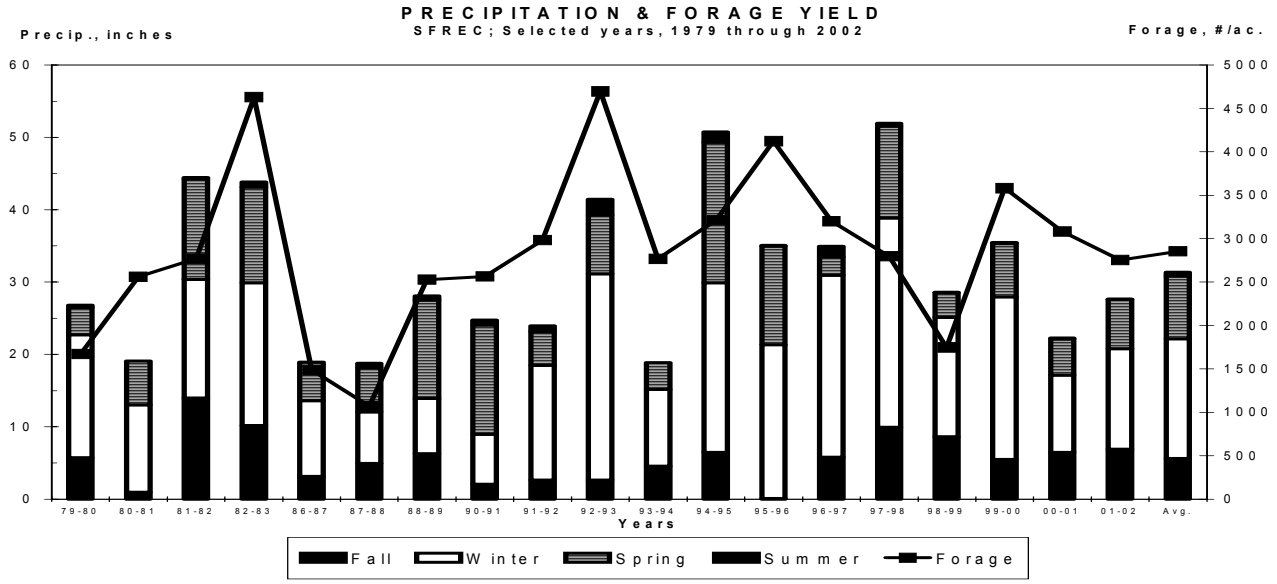
**Annual Forage Growth**

Annual forages germinate with fall rains and grow slowly from November – February. This slow growth is due to short day lengths and cold nighttime temperatures. Sometime in March, as days lengthen and temperatures warm, rapid growth begins if there is adequate soil moisture. Monthly average forage growth data from the Sierra Foothill Research and Extension Center (SFREC) shows forage quantity increasing 67% from December – February, 123% from March – April, and 100% from April – Peak Standing Crop.

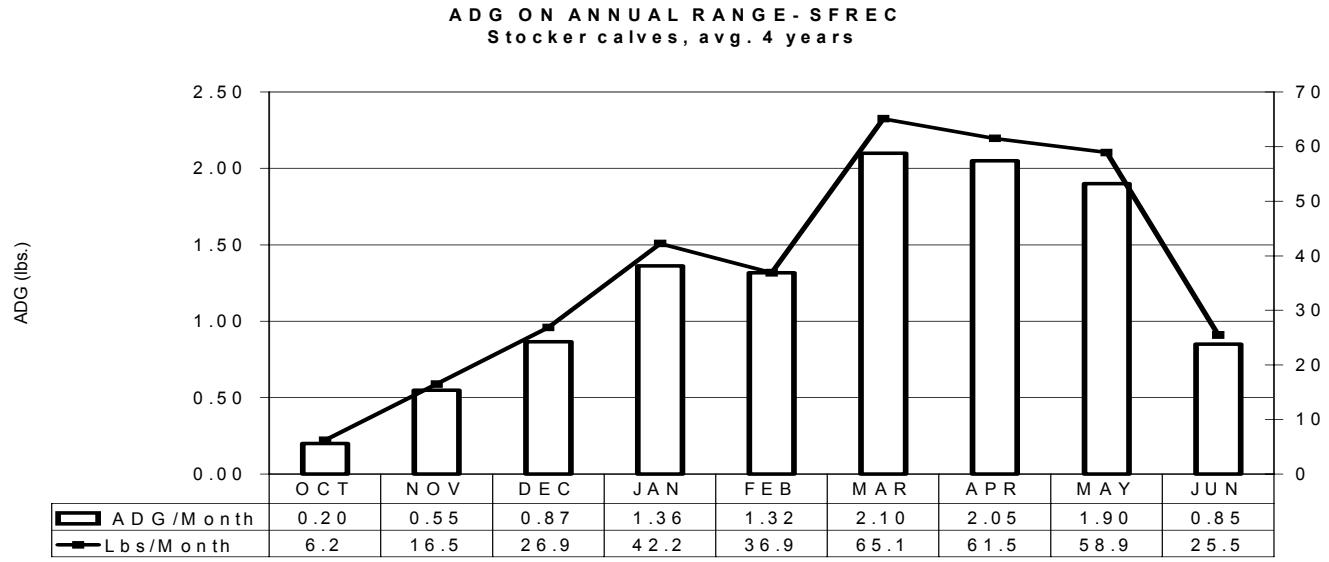



However, these average forage values vary from year to year based on both total precipitation and its distribution throughout the four seasons. Rainfall amounts by season, total precipitation and forage production are shown in the following graph. There is no real pattern as each year tends to take on its own unique characteristics. Two general trends will hold constant: higher than average rainfall will result in either average or higher than average forage production; and the majority of growth will occur March – May.

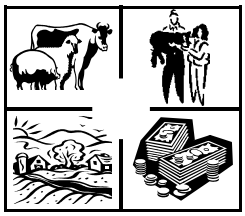
The graph below represents the relationship between precipitation and forage yield at the Sierra Research and Extension Center. The line represents forage yield and the columns represent total precipitation for the year. Each column is broken down into seasons. You can see rainfall can vary annually and seasonally, which affects forage production. Average forage production at the Center is 2859 lbs/acre. The graph shows that if you stock for the average year, most years you will be either over- or under-stocked. Be flexible in your stocking rates so you can adjust to changes in forage supply (carrying capacity) on an annual and seasonal basis.




Grass growth is then consumed by animals for production. Past average stocker gains on SFREC range shows that the highest weight gains occur during the rapid growth from March-May as indicated below. During this period, stockers gained 185.5 total pounds which is 77% higher than the 105 pounds gained from December – February.




| | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN |
|---|---|---|---|---|---|---|---|---|---|
| ADG/Month | 0.20 | 0.55 | 0.87 | 1.36 | 1.32 | 2.10 | 2.05 | 1.90 | 0.85 |
| Lbs/Month | 6.2 | 16.5 | 26.9 | 42.2 | 36.9 | 65.1 | 61.5 | 58.9 | 25.5 |



# 2002 Upcoming Events/ Activities

**Yellow Starthistle Survey**

CDFA is funding a study on the economic impacts of Yellow Starthistle. This data is crucuial to understanding and building a case for more for funding

and support for WMA's and private landowners. We are working with the University of Nevada Reno and the University of British Columbia.
The counties of Tehama, Calaveras and Mariposa were chosen for comprehensive direct mailings, however there is a need to get many more surveys filled out by private landowners.
The survey can be accessed and filled out over the Internet at http://repa.econ.uvic.ca/survey

**Sierra College Pond Management Class**
**Saturday, May 24th**
**Grass Valley Campus**

You can register for the class on-line or contact Keith Crabtree at 530-269-1217 for more information

**California Browsing Academy**
**September 12-14**
**Sierra Research and Extension Center Browns Valley, CA**

Class is currently full. Call to be put on a mailing list at 530-889-7385

**Placer County Agricultural Tour Wednesday, June 4th**

**Fruitvale School, Lincoln**

This year's agricultural tour will highlight the beef cattle industry. Contact Roger Ingram at 530-889-7385 for more information.

**Do you know How Many Acres You Need To Carry A Cow?**

Research at the Sierra Research and Extension Center revealed some new information on stocking rates on foothill rangeland conditions. They showed the following:

1.23 AUM / Acre for 8.5 months = 6.9 acres per cow

.38 AUM / Acre for 3.5 months = 9.2 acres per cow

Total acres for one cow = 16.1 acres

Normal ballpark estimates have always been 10-12 acres. However, you never deal with uniform conditions. You must factor impacts of slope, aspect, canopy cover of trees and brush, and others. You may need more acres to carry a cow than you think..

**You Need Roots**

Researchers at the University of Iowa grew a single winter rye plant for four months in a cubic foot of soil. When they extracted the roots from the soil they found a total of over 13 million roots with a length of over 385 miles and a surface area of 2,250 square feet. They estimated that on these roots there were 14 billion root hairs with a total length of over 6,600 miles and surface area of over 4,320 square feet. Overgrazing can reduce root mass by 90%.

***Roger Ingram***
Farm Advisor/Livestock & Natural Resources

# The Budget Situation

**by**
**Sharon Junge**

I continue to receive many questions concerning the effect of the current budget situation on Cooperative Extension in Placer and Nevada Counties. Following is a brief review of the current situation for UC Cooperative Extension at the State level. Please note that we also receive funds from both Placer and Nevada County governments. I will discuss those situations in next month's issue and update you on the state budget.

- The University of California took significant budget cuts this year, including a 5% cut to Cooperative Extension and 10% for research. Deeper cuts are proposed next year.
- UC agriculture and natural resources programs, delivering research results and practical information to users in every community, will be especially hard hit by next year's cuts.
- Unless the Legislature reduces the cuts, UC Cooperative Extension will take an additional 25% cut and UC state-funded research another 10%.

What cuts have been proposed for Cooperative Extension this year? The 5% cut to Cooperative Extension, which comes eight months into the budget cycle, will be managed through further reductions in temporary and discretionary funds and a hiring freeze. This will postpone the need to make the cut permanent until July 1.

## *Are further budget cuts proposed for next year?*

Yes. The governor's budget, released in January, proposes an additional 10% cut to UC state-funded research. UC Cooperative Extension is scheduled for an additional 25% cut. If the Legislature approves these cuts, UC agricultural research will take a 20% ($19 million) permanent reduction in less than two years. Cooperative Extension's state funding will be cut by 30% ($14.6 million) over the same period.

## *How will the Division take these cuts?*

No final decisions have been made about next year's cuts, nor how they will be applied. However, one thing is certain - the Division will need to make significant reductions in programs and personnel if the cuts are approved by the Legislature. Why? Because over 90% of state funds allocated for Cooperative Extension and UC agricultural research are used to pay salaries and benefits for county-based advisors, campus-based specialists, AES research scientists and the staff that support them. Even if all non-salary support funds were eliminated (e.g., supplies, telephones, travel, computers, equipment, etc.), they would not cover the proposed cuts.

## *UC research and Cooperative Extension took substantial budget cuts in the early 1990s, but the Division was able to avoid layoffs . . . what is different about next year's cuts?*

While it is true that UC agricultural research and Cooperative Extension absorbed spending cuts of about 20% during the early 1990s, these cuts were spread over a four-year period. In addition, UC offered an early retirement incentive program (VERIP) that saw a significant number of scientists, advisors and specialists leave the University voluntarily. The combination of budget reductions over a four-year period, early retirements, and targeted cuts in program support and administration avoided layoffs. This round of cuts is much different. For example, the 30% spending cut for Cooperative Extension (5% this year and 25% next year) will need to be implemented in less than a year, rather than over four years. With 90% of state funds for UCCE allocated for salaries and benefits, a cut of this magnitude cannot be achieved without layoffs.