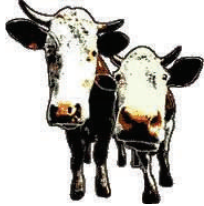


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# Local Fodder

June 2008

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## MEETINGS IN JUNE TO ADDRESS LIVESTOCK PROCESSING FACILITIES

*By Morgan Doran*

Livestock processing facilities that provide slaughter and butcher services for small-scale users are in short supply these days. Local producers trying to sell their livestock as cut and wrapped meat products to local consumers must transport live animals and the final meat products long distances in search of processing facilities. The ongoing increase in fuel prices makes this a money-losing business venture.

In an effort to better understand the demand for small-scale livestock processing facilities, I and several other UCCE Livestock Advisors sent surveys to thousands of livestock producers in Northern California almost two years ago. The results of that survey are still being analyzed, but they definitely show a strong desire for more processing facilities.

As a follow-up to that survey we are conducting meetings in approximately 12 counties to present preliminary survey results and to collect more information on the local need for livestock processing facilities.

Three meetings will be held in the local area during the month of June. The first meeting will be Tuesday, June 10 in the Napa County UCCE office (1710 Soscol Ave., Napa). The second meeting will be Thursday, June 12 in the Solano County UCCE office (501 Texas Street, Fairfield). The third meeting will be Wednesday, June 18 in the Yolo County UCCE office (70 Cottonwood Street, Woodland). All three meeting will start at 7 PM and end around 9 PM.

### **Who should attend:**

Any producer of cattle, sheep, goats and swine who is or may be interested in using a processing facility. We want all producers, large and small, to attend, even if you completed the survey that was mailed in 2006.

For more information, please contact me, Morgan Doran, by email or by phone.

Phone: (707) 784-1326

Email: [mpdoran@ucdavis.edu](mailto:mpdoran@ucdavis.edu)

Thanks, and see you at one of the meetings.

## MANAGING WITH DROUGHT

*By Morgan Doran*

This past spring mother nature has been stingy with the rain resulting in a less than average forage crop on the rangelands. This is especially bad news when considering the poor forage crop we had last year. How you cope with the poor forage conditions will vary according to the resources that are available to you. If you depend on rangelands for year-round forage utilization as opposed to summer use of irrigated pasture or mountain meadows, then some adjustments may be necessary to maintain adequate animal health and production. Below are some problems to watch for and tips to help get you through the tough times ahead.

### **Poor Body Condition**

One of the most obvious consequences of poor forage conditions and low nutrient intake is a decline in body condition, a.k.a. skinny animals. The effects of poor body condition aren't just immediate reductions in gain by current offspring, but poor body condition also reduces the mother's fertility the following year. There is ample research showing that cows with a low body condition score (BCS) at calving will take longer to rebreed, which ultimately reduces the number of calves per year. The same evidence of longer breeding intervals has been shown in sheep.

The optimal BCS will vary according to an animal's physiological stage or her stage in the breeding and gestation cycle. At calving a cow should have a BCS of 5 or 6 on a scale of 1 to 9. To learn more about BCS in beef cattle and pictures of cows at various scores, use the following web site.

<http://osuextra.okstate.edu/pdfs/F-3283web.pdf>

The scoring system used to assess the body condition of sheep is on a scale of 1 to 5 rather than the 1 to 9 scale used for cattle. Ewes should have a BSC of 3.5 to 4 at lambing. You can find more information on the BCS for sheep at the following web site.

<http://extension.oregonstate.edu/catalog/pdf/ec/ec1433.pdf>

### **Toxicity Problems**

Challenging nutritional conditions caused by drought and overgrazing force livestock to consume plants they normally avoid due to toxic compounds found in those plants. When nutritionally stressed, animals will seek nutrients in almost any form. It is during these stressful conditions that toxicity problems tend to increase when livestock have very little to eat except toxic plants, including oak leaves and acorns, and especially during the late-summer and fall months.

Toxicity symptoms will vary depending on the plant species consumed and the toxin present in the plant. Different animals will also have different reactions to the same plant. Goats tend to be more resistant to many toxins that affect sheep and cattle. The most commonly observed symptom is a dead animal. Other symptoms that may be observed include dark diarrhea, weakness, listlessness, depression and photosensitization (sunburned skin that may be blistered or scaly).

If you suspect toxicity in your livestock you should contact your veterinarian for proper diagnosis and treatment. Another option is to take your animal, dead or alive, to the California Animal Health & Food Safety (CAHFS) laboratory at UC Davis. For a fee they will perform a necropsy on dead animals and collect samples from live animals to properly diagnose disease causing agents. Below is the address and contact information for the CAHFS laboratory:

West Health Science Drive  
Davis, California 95616  
Phone (530) 752-8700, Fax (530) 752-6253  
<http://cahfs.ucdavis.edu/>

For information specific to oak leaf and acorn toxicity:

[http://www.vetmed.ucdavis.edu/vetext/INF-BE\\_cca/INF-BE\\_cca08/cca0801-oak-toxicity.pdf](http://www.vetmed.ucdavis.edu/vetext/INF-BE_cca/INF-BE_cca08/cca0801-oak-toxicity.pdf)

### **Feed Supplementation**

Providing adequate feed for your livestock is an effective method to avoid the problems associated with drought. Unfortunately the high prices for grains, hay and other feed supplements severely limits the ability to use alternative feeds. Remember that it is economically very difficult to feed your way out of a drought.

### **De-stocking**

One of the most useful options for managing livestock through a drought is to have a plan for selling livestock. Your plan should prioritize which animals to sell and when they should be marketed. Heifers and ewe lambs may have different optimal selling dates than cull cows and ewes. Consider reducing the herd by heavily culling the older and open animals and keeping fewer replacement animals. Keep the most desirable animals for building the herd after the drought. Try to match the number of animals with amount of feed you have available. Call me if you need assistance in making such feed estimates.

A useful UC publication titled Livestock Management During Drought can be found at the following web site:

<http://anrcatalog.ucdavis.edu/GrasslandsHardwoodRangelands/8034.aspx>

## IRRIGATED PASTURE UPDATES

The following two articles were written by Rob Wilson and Steve Orloff, Farm Advisors in Lassen and Siskiyou counties, respectively. These articles are written for producers in Lassen and Siskiyou counties, but provide useful information on fertilizer use that is applicable to irrigated pasture systems in the Sacramento Valley. You can also find more information on irrigated pasture management in a new UC publication "Irrigated Pasture Production in the Central Valley of California," which is available for \$12.00 in our office or on-line at <http://anrcatalog.ucdavis.edu/FieldCrops/21628.aspx>

### TIPS FOR DEALING WITH SKYROCKETING

#### FERTILIZER PRICES

If you purchased fertilizer lately, you likely passed out after you heard the price quote. Fertilizer prices are at record highs, and they have more than doubled compared to prices a few years ago. Two nutrients with a dramatic price increase are nitrogen and phosphorus, and unfortunately, these nutrients are needed on almost all intermountain farms. Below are some tips to help ease the pain and keep fertilizer costs as low as possible.

**Start soil and tissue sampling to determine crop nutrient needs.** The importance of this cannot be overstated. Soil and plant tissue tests are very inexpensive considering the cost of fertilizer or the cost of lost yield. Many farmers unknowingly over apply fertilizer to prevent deficiencies. They often use a "recipe" that has worked in the past and apply the same amount each year. Some nutrients could be building up over years while others could be gradually depleted. Soil and plant tissue sampling allows farmers to accurately estimate current soil nutrient levels and only apply enough fertilizer to satisfy crop needs. For most nutrients, tissue sampling is the more accurate method. Phosphorus and potassium levels can be estimated with a soil test but plant tissue tests are still more accurate and are FAR more accurate or sulfur, boron, and molybdenum. Below is a brief list of some of the more commonly used CA labs that will analyze your samples. Call your UCCE office with sampling questions.

A&L Western Ag. Laboratories Modesto, CA 209-529-4080  
Dellavalle Laboratory, Inc. Fresno, CA 209-233-6129  
Monarch Laboratory Chico, CA 916-343-5818

**Don't skip applying fertilizer if the crop needs it.** Many people have mentioned they plan to forgo applying fertilizer this year. This approach is appropriate if soil and tissue samples suggest fields have adequate nutrient levels. But, if fields have nutrient deficiencies, yield loss will likely greatly outweigh any savings in fertilizer cost. Most crop prices are expected to be up again this year, so yield increases should outweigh the high fertilizer cost. The UCCE office has several publications discussing crop nutrient needs and fertilization practices.

**Become a stripper.** If fields' soil or plant tissue samples come back in the marginal category, test strips are an effective way to estimate the potential for an economical yield response with fertilizer. This spring apply a couple fertilizer test strips in questionable fields with different fertilizer rates including an untreated strip. Did the fertilizer increase yield?

**Apply fertilizers in the most efficient way.** Fertilizer application methods differ in their efficiency (% of fertilizer that becomes available to the crop). For nitrogen fertilizer, it's important to irrigate or incorporate the fertilizer into the soil within a couple days of application to prevent volatility losses. Banding nitrogen fertilizer a couple inches into the soil may also improve efficiency with some crops. For phosphorus, banding P fertilizer can improve efficiency compared to broadcast applications especially on high pH soils where some of the phosphorus can become "fixed" or tied up.

**Consider split applications of N for pasture or grass hay.** Split applications of nitrogen are more efficient than a large single application. A large single application does not last long enough to supply the crop needs for the season. With a single large application the possibility of leaching some of the N out of the root zone is greater and there is greatly likelihood of "luxury consumption" where the plant takes up more than what is needed for maximum yield. See the article **Does It Pay to Fertilize Perennial Grass Hay Considering High Nitrogen Fertilizer Prices** in this newsletter for more information on split applications for grass crops.

**Fertilize alfalfa at the optimum time.** Fertilize alfalfa at least 60 to 90 days before the first cutting. This is how long it takes to get maximum uptake and benefit from the fertilizer. Fertilizing closer to a cutting or between alfalfa cuttings is not as efficient. The first cutting is typically the highest yield cutting and soil temperatures are lower at this time so there is less microbial activity in the soils. Therefore, you get the most bang for your buck fertilizing in spring (or fall) rather than between cuttings.

**Buy the cheapest source of fertilizer per lb. of nutrient.** Several studies have shown that fertilizer type (liquid vs. granular, and formulation) usually has little influence on fertilizer efficiency. For this reason, buy fertilizer products with the lowest price per lb of nutrient. Since fertilizers contain different nutrient concentrations, always price fertilizer by price per lb of nutrient instead of price per ton. For example, ammonium sulfate has 21% nitrogen and urea has 46% nitrogen. This means that each ton of ammonium sulfate contains 420 lbs of N, and each ton of urea contains 920 lbs of N. Use the formula below to convert price per ton to price per lb of nutrient.

Price per ton of fertilizer ÷ lbs of nutrient in a ton = price per lb  
Example: Urea at \$575/ton ÷ 920 lbs/ton = \$0.62 per lb N

**Apply the appropriate amount of irrigation water.** Fertilizer use efficiency declines considerably if the crop is not adequately irrigated. In other words, if the crop is under-irrigated the full benefit of the fertilizer is not realized. If you have adequate water supplies, make sure the irrigation water applied keeps pace with the crop demand. However, if you know that irrigation water will be inadequate, fertilize for the realistic expected yield rather than the maximum theoretical potential yield.

**Buy stock in fertilizer companies.** In 2007, some of the greatest returns in the stock market came from companies that produce fertilizer. Many companies posted gains of 44% to 394%. If you can't beat them, join them!

## DOES IT PAY TO FERTILIZE PERENNIAL GRASS HAY CONSIDERING HIGH NITROGEN FERTILIZER PRICES

Present record high nitrogen fertilizer prices have many producers contemplating their fertilizer plans for 2008. Some producers may be tempted to reduce their nitrogen fertilization, while others may wonder if they should fertilize at all. Before farmers make decisions, they should consider that nitrogen fertilization of grasses is very important to high yields. In UC trials, nitrogen fertilization often more than doubles grass hay yield. With elevated hay prices and soaring feed costs, high grass yields are an important consideration—probably more important than high fertilizer prices. This article discusses the economics of nitrogen fertilization and answers some questions about the yield/fertilizer cost tradeoff.

From 2004 to 2007, UC farm advisors in Northeastern California conducted experiments investigating nitrogen fertilization of orchard grass and tall fescue. Results showed nitrogen fertilization was critical to maximize grass-hay yield and economic return. Yield and net return reached a plateau around 400 lb N/acre for both grass species in a 3-cut system. Under-irrigated fields with only two cuts had lower yield and economic return compared to fully irrigated fields with 3-cuttings, however N fertilization, albeit at lower rates, was still beneficial in a 2-cut system where plants were drought-stressed in mid-summer.

Split fertilizer applications applied in early spring and after each cutting gave the highest yield and efficiency. Fertilizing with 100 to 150 lb N/acre applied at spring grass green-up was best for first-cut yield. Then depending on irrigation and summer growth rates, lower fertilizer rates, 75 lb N/acre after 1st cutting and 50 lb N/acre after 2nd cutting, maximized second and third cut yield.

Table 1 shows a partial economic budget for nitrogen fertilization of retail grass hay considering fertilizer price, application cost, forage yield, and hay price. Under current economic conditions, the benefit of nitrogen fertilization greatly outweighs the cost of fertilizer. Although fertilizer prices have skyrocketed in recent years, fertilizer price is still below the breakeven point. At current hay prices, fertilizing with the recommended fertilizer program increased net returns \$170 to \$400 per acre compared to not fertilizing.

Table 1 shows net returns (gross return – fertilizer cost) for different hay prices and fertilizer costs. The value of increased crude protein (CP) from fertilization was not factored into this economic evaluation because grass hay in the West is normally not sold based on forage quality analysis as is alfalfa. Although CP was not factored into returns, fertilization increases CP content by 2 to 4% at each cutting. Since higher CP increases daily weight gain for most livestock, producers should consider this as an additional benefit of nitrogen fertilization of hay

Table 1. Economics of nitrogen fertilization of orchard grass and tall fescue at different hay and fertilizer prices. Nitrogen fertilizer used in this trial was based on results from UC trials and equals 150 lbs N/acre

Hay price (\$ per ton)	Urea fertilizer price (\$ per ton)	Gross return <sup>a</sup>	Fertilizer cost <sup>b</sup>	Net return <sup>c</sup> (fertilized)	Net return <sup>d</sup> (unfertilized)	Increase in return from fertilization
<b>Under-irrigated orchard grass (2-cut system)</b>						
\$ per acre						
100	500	478	138	340	239	101
100	700	478	187	291	239	52
100	500	717	138	579	359	220
150	700	717	187	530	359	172
200	500	956	138	818	478	340
200	700	956	187	769	478	291
225	500	1076	138	937	538	400
225	700	1076	187	889	538	351
<b>Orchard grass (3-cut system)</b>						
100	500	658	173	458	326	159
100	700	658	233	425	326	99
150	500	987	173	814	489	325
150	700	987	233	754	489	265
200	500	1316	173	1143	652	491
200	700	1316	233	1083	652	431
225	500	1481	173	1307	734	574
225	700	1481	233	1248	734	514
<b>Tall fescue (3-cut system)</b>						
100	500	490	173	317	273	44
100	700	490	233	257	273	-16
150	500	735	173	562	410	152
150	700	735	233	502	410	93
200	500	980	173	807	546	261
200	700	980	233	747	546	201
225	500	1103	173	929	614	315
225	700	1103	233	870	614	255

a Gross return was calculated as total DM yield (tons per acre) \* hay price (\$ per ton).

b Fertilizer cost was calculated as urea fertilizer price per acre + fertilizer application cost (\$8 per acre per application).

c Net return was calculated as gross return – fertilizer cost. Net return above fertilizer cost does not reflect other costs such as irrigation, harvest, and pesticides. These costs were assumed to stay the same.

d Net return if the field was not fertilized.

## WHAT WILL BE REQUIRED OF COW-CALF PRODUCERS UNDER THE COUNTRY OF ORIGIN LABEL RULES THIS SEPTEMBER?

*By Jack C. Whittier, Colorado State University  
May 2008*

The title of this article asks a question that is not yet totally answered. However, the answer is beginning to be clearer and soon may be finalized. As you likely know, in 2002, the US Congress passed a law requiring certain “covered commodities” to be verified and labeled as to their country of origin. The acronym used commonly for this law is COOL, denoting Country of Origin Labeling. Final rules for COOL will be written following final passage of the 2007 Farm Bill which has passed the Senate and House Conference Committee and will likely be sent to the President’s desk soon. If the President signs the Farm Bill, final rules will then be written. As of now, the following definitions and requirements are likely to become rules. Let’s examine some of these as they apply to cow-calf producers in Colorado.

**Beef as a Covered Commodity:** Meat cuts and ground product from beef are defined as a “covered commodity”. More specifically, under the current rules, “a meat product from beef (including veal), pork, and lamb must bear a COOL label or is subject to labeling providing COOL information if: 1. It is sold at retail, AND, 2. It is a muscle cut, or 3. It is a ground product. The product is EXEMPT from COOL labeling requirements if: 1. The meat product is sold at foodservice (e.g., restaurants, institutions, etc.), OR, 2. The meat product is an ingredient in a processed product or, in effect, is processed.” (Source: <http://www.countryoforiginlabel.org>, link to DOES A MEAT PRODUCT NEED A LABEL?, accessed 13 May 2008).

**Jack’s Comment:** From this we can assume that home-raised and harvested beef that is not sold at retail will not be required to be COOL labeled. Beef served on a menu at a restaurant will be exempt, as will beef served in a cafeteria or other food service institutions.

**Recordkeeping Requirements:** The current language states: “Any person engaged in the business of supplying a covered commodity to a retailer, directly or indirectly, must maintain records to establish and identify the immediate previous source (if applicable) and immediate subsequent recipient of the product. The record must identify the product unique to that transaction by means of a lot number or other unique identifier, for a period of one (1) year from the date of the transaction.

“Establishments that slaughter livestock are considered initiating suppliers of a covered commodity. The Agricultural Marketing Service (AMS) has indicated that the initiating supplier (packer) either must have the records in its possession or have access to records of the livestock supplier that substantiate the country of origin of the meat product at issue.” (Source: <http://www.countryoforiginlabel.org>, link to Recordkeeping Requirements, accessed 13 May 2008.).

**Jack’s Comment:** Since cow-calf producers indirectly supply beef to packers, I interpret this to mean that cow-calf producers will be responsible to have records to substantiate the country of

origin of their calves, cull cows and bulls. While these records may not be required at time of sale, it is likely that there will be an increasing demand for such record verification at the time of sale.

**Seed Stock / Cow Calf Responsibility:** “Provide enough information for an auditor to verify the origin and ownership of the animals identified and to verify the stated designation. Properly identify and record all animals according to the designation.” (Source: <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3103374>, accessed 13 May 2008.).

**Jack’s Comment:** I interpret this to mean that a rancher must have sufficient documentation so that in the event of an audit from USDA, they can verify the country of origin of the cattle they sold into the marketplace.

Examples of records and activities that may be useful. The following record examples are listed in the 2002 version of COOL. “Birth records, receiving records, purchase records, cow/calf tag ID system, sales receipts, feed bills, feeding records, animal inventory, acreage inventory, site maps, APHIS VS forms, production estimates, health records, ownership records, segregation plan, state brand requirements, replacement activities, beef quality program (BQA), breeding stock information.” (Source: <http://www.ams.usda.gov/AMSV1.0/getfile?dDocName=STELDEV3103374>, accessed 13 May 2008.).

**Jack’s Comment:** In reality, it will likely be a combination of information that will be used to substantiate the origin of cattle. Records such as brand inspections, bangs vaccination records, sales receipts, etc. will be used to verify that the cattle did in fact originate at the ranch, or were purchased from a qualifying location.

“In the Normal Conduct of Business” clause: The National Cattlemen’s Beef Association (NCBA) website explains recent revisions language in the current Farm Bill legislation as follows: “Language in both the Senate and House bills helps alleviate the paperwork burden on producers requiring only documents used “in the normal conduct of business” to verify origin.... While the current law is far from perfect, the compromise language in the Farm Bill is an improvement for cattle producers. Mandatory country-of-origin labeling is scheduled to take effect on September 30, 2008.” (Source: <http://www.beefusa.org/goveFarmBill.aspx>, accessed 13 May 2008.).

**Jack’s Comment:** In my opinion the implementation of COOL should not be viewed in a panic mode for cow-calf producers. Most, if not all, of the documentation needed to meet the COOL requirements is likely already part of your normal cow-calf production system. However, I suggest that we all do a better job as record-keepers and make certain that the history of our cattle can be substantiated. I also foresee that such records will enhance the value of cattle when they leave the farm of origin. One of the great principles of our market-driven system is the reward for value and the discount for absence of value. As we look back in 10 years, my prediction is that COOL will add value at the ranch level for those who document and market country of origin information.

Morgan Doran

Morgan Doran,  
Livestock & Natural Resources Advisor

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**MARK YOUR CALENDAR**  
Livestock Processing Facilities Meetings  
Location: Napa, Fairfield and Woodland (see page 1 for details)  
Cost: Free  
For more info, call Morgan Doran at (707) 784-1326

California Browsing Academy  
Location: Colfax, CA  
Cost: \$175 per person  
For more info, contact Roger Ingram at (530) 889-7385, or email at [rsingram@ucdavis.edu](mailto:rsingram@ucdavis.edu)

September 5-7

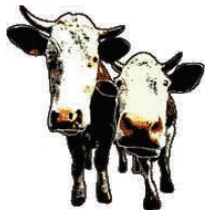
California Sheep Academy  
Location: Auburn, CA  
Cost: \$80 if registered before March 18  
For more info, contact Roger Ingram at (530) 889-7385, or email at [rsingram@ucdavis.edu](mailto:rsingram@ucdavis.edu)

September 12-14

June 10, 12 & 18



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Local Fodder  
June 2008

Si desea folletos en Español, llámame a teléfono 707-784-1326, informame de su nombre y dirección de correo.