



# SISKIYOU STOCKMAN

*What's New in the "Top of the State". A report for Siskiyou Livestock Producers put out by the Farm Advisors Office, Cooperative Extension of the University of California, located at 1655 South Main Street, Yreka, California 96097*

**November 2006**

## **Feed Price Evaluations**



- Feed Price Evaluations
- Temperament of Cattle
- Beef Quality Audit
- Upcoming Meetings

### **Calendar**

- Nov 4 Siskiyou County Cattlemen's and CattleWomen's Fall Dinner, Yreka, CA.
- Nov 15-18 California Cattlemen's Association Annual Convention, Sacramento, CA:  
<http://www.calcattlemen.org/>
- Dec 2-6 California Farm Bureau Federation Annual Meeting, Anahiem, CA:  
<http://cxfb.com/am2006/>
- Dec 11-13 Western Alfalfa and Forage Conference, Reno, NV:  
<http://alfalfa.ucdavis.edu/2006AlfalfaConference/>

How much does hay cost this year and what is it worth? Those are two very different questions. The first is relatively easy. You can ask your friendly hay grower or check the various hay reports to find out how much hay costs this year. How much hay is worth depends. It depends on the specific uses. For cattle producers it depends on 3 factors:

1. The nutrient requirements of the cattle being fed
2. The nutrient content of the feeds
3. The cost of the feeds

Controlling feed costs are important according to reports of rising cash costs to carry a cow and that total feed costs are about 60 percent of those costs. We will evaluate feed prices for a fall calving cowherd to explore potential hay savings during the wintertime hay feeding period.

The first item in this evaluation is to determine the nutrient requirements of the cattle. Using recommendations provided by the National Research Council I have shown the requirements for 1,200 pound mature cows during their period immediately after calving (Table 1). Both average and above average milking cows are shown. Similarly, requirements for these same cattle as 2 and 3 year olds are shown. This step in the evaluation process is the most difficult.

Table 1. Nutrient requirements of cattle 1,200 pounds mature weight for the period after calving. Based on National Research Council, 2000.

	Adult cows Above Average Milk	Adult cows Average Milk	2 <sup>nd</sup> Calf (3 yr old) cows	1 <sup>st</sup> Calf (2 yr old) heifers
Number in herd	35	30	15	20
Intake, lbs. <sup>1</sup>	27.8	24.9	22.4	21.1
TDN, %	59.9	56	62.9	59.9
Crude protein, %	10.7	8.8	10.9	10.2
Calcium, %	.31	.25	.33	.30
Phosphorus, %	.21	.17	.23	.22

<sup>1</sup>At least 5% more feed must be fed due to wastage.

Most producers do not have their cattle in 4 groups, although as you will see there may be sufficient cost savings to repair that old fence so they can be split.

Various feeds have been considered and their energy (TDN%) and protein (CP%) values are shown (Table 2). Energy is estimated as total digestible nutrients (TDN) and protein as crude protein. The evaluation also considers calcium and phosphorus (not shown).

Feed prices are also needed to evaluate the “value” of feeds. These were obtained from market reports. In this analysis most of the feeds do not have a price affixed to them (Table 2, Section C). Their value (Opportunity Price) is determined based on the three factors all considered together: cattle nutrient requirements, the nutrient content of the feeds and feed price (Table 2, Price fob ranch).

Ten specific feeds (Table 2, Section B, numbers 1-10) were evaluated by least cost computer formulation, with rations formulated for each of four classes of cattle (see Table 2; Rations for:). The amount of each feed and the daily cost to provide the required nutrients is shown (Table 2, A). This is the least cost ration from among the 10 feeds that will provide the required amount of nutrients. In this example, with the 10 feeds considered the *Above Average Milking*

*Cow* would need 18 pounds of “Fair plus” rated alfalfa hay and 12.8 pounds of “Supreme” alfalfa hay daily, at a cost of \$1.71. Certainly above average milking cows are not always fed rations of this quality, but they also often lose weight, going down in condition, and may suffer from subsequent reduced reproductive performance. Rations and costs for the other classes of cattle are shown in each column.

One of the more interesting and useful aspects of this exercise is the determination of the value of other feeds not used in the ration. These values are shown in the columns under “Opportunity Price of Feeds”. Note that the value of each feed whether in Section B or C varies depending on whether it is for *Above Average, Average, 3 year old or 2 year old cattle*.

Let’s closely examine the column for *Above Average Cows* to see how we can put the information to use. Out of the 10 feeds listed (Section B) the lowest cost ration that meets the nutrient requirements of *Above Average Milking Cows* includes Fair+ quality alfalfa and some Supreme quality alfalfa. These are marked as “used”. For each of the remaining 8 feeds their value or Opportunity Price is shown, for example, Oat Hy is valued or worth \$57/ton. Its market price was \$80, so it was not used in the ration. All of these 8 feeds had market prices higher than what they were worth for *above average cows*. So, they were not used in the ration. There is also a long list of other feeds that have no market price and were not considered in the ration formulation, but do have a calculated Opportunity Price. Note that the grains, barley and wheat are worth over \$300/ton. They could be purchased for far less than their Opportunity Price, so should be considered as a possible feed. In fact, if barley is included as a potential feed at \$175/ton (along with the previous 10 feeds) the lowest cost ration consists of 18.4 lbs. of Fair+ alfalfa, 9.5 lbs. of Fair- alfalfa and 3 lbs. of barley. I have

Table 2. Feed Price Evaluation

Feed TDN%/CP%	Price fob ranch	Rations for:			
		Above Average Cows	Average Cows	Average 3 year old cows	Average 2 year old heifers
<b>Section A</b>	\$/ton	Pounds/head/day			
Alfalfa Fair+ 58/17	95	18.0		0.3	15.4
Alfalfa Supreme 63/22	133	12.8		24.6	8.0
Alfalfa Fair- 56/15	85		24.1		
Oat Hy 53/11	80		3.7		
Cost/head/day		\$1.71	\$1.17	\$1.65	\$1.27
<b>Section B</b>		<b>Opportunity Price of Feeds</b>			
1 Oat Hy 53/11	80	57	used	57	57
2 Alfalfa Fair- 56/15	85	80	used	80	80
3 Alfalfa Fair 57/16	90	87	87	87	87
4 Alfalfa Fair+ 58/17	95	used	88	used	used
5 Fescue Hy 56/9.2	95	80	85	80	80
6 Alfalfa Good 58/19	122	95	88	95	95
7 Pellet 10% grain 55/8	124	75	84	75	75
8 Alfalfa Prem 61/20.5	128	120	94	120	120
9 Pellet 20% grain 58/8	128	101	90	101	101
10 Alfalfa Supreme 63/22	133	used	97	used	used
<b>Section C</b>					
Alfalfa 55/15		72	83	72	72
Barley grain 86/10.8		304	134	304	304
Barley Hy 56/8.7		77	82	77	77
Block Suppl 72/28		215	119	215	215
Corn grain 80/9.2		259	124	259	259
Cottonseed meal 73/41.9		214	116	214	214
Grass Hy 52/8		49	78	49	49
Liq. Suppl 52/44		31	49	31	31
Meadow Hy 50/7.5		34	75	34	34
Molasses 75/8.5		194	101	194	194
Oat grain 70/10		188	110	188	188
Orchardgrass Hy 59/10		104	91	104	104
Rice bran 76/14.1		234	120	234	234
Rice straw 41/4.8		-37	62	-37	-37
Triticale Hy 56/10		88	94	88	88
Triticale Hy 58/8		95	88	95	95
Walnut meal 67/17		169	107	169	169
Wheat grain 90/11		338	142	338	338

limited the barley to 3 pounds as higher levels will usually depress fiber digestion and the hay won't be used as efficiently. This ration with 3 pounds of barley is \$1.54/head/day, a savings of \$0.17/head/day. For 100 cows fed for 90 days on hay, this would be a savings of \$1,530. That savings might make someone look into ways to feed limited amounts of grain.

The list shows Triticale Hy 58/8 is worth \$95/ton. It can probably be produced for less than that, so would be another option to consider. Rice bran, a by-product of rice milling, is worth \$234/ton to *Above Average Milking Cows*, and may be available for less than that amount.

Each of the other classes of cattle have similar columns of information. In some cases the

values are similar to the *above average cow* column because the animal requirements are similar.

This illustrates that if the nutrient composition of your feeds are known, lowest cost rations can be developed for specific classes of cattle. Additional information will help evaluate other feeds to give them a value specific for your cattle. In some cases you may be able to sell some hay and replace it with other types of hay. The information may help point out new crops that would produce cost effective hays. If you are purchasing hay, the projected feeding value may also help you determine the kind of hay you need, and how much you can or should pay for it.

### Temperament of Cattle

Temperament in cattle, long a concern of those with poor fences and slow horses, has become more researched and more widely recognized as not only a safety factor but also an affect on performance. Numerous trials are showing that cattle easily observed as "more aggressive" have reduced rates of gain, higher medical treatment costs, reduced quality grade and lower profit. Typically, cattle observed when being "worked" in corrals or chutes, for example, have been rated as to their docility. Some researchers have clocked the exit speed of cattle leaving a chute and found temperament scores based on the high tech method are about the same as observations. Others have found some cattle that are aggressive and wild will calm down after being worked a few times, what they call habituation, while other cattle never will calm down. They could not detect those that

habituate and those that don't by a single test or observation. Dr. Temple Grandin from Colorado State University has used hair pattern (hair whorls) location and shape on the head to predict temperament. Limited work suggests low to moderate heritability of temperament (up to 0.36) and habituation (up to 0.46), indicating selection against aggressive temperament would be effective. Further, Canadian researchers found six locations on chromosomes that appear related to temperament. Some of those locations are similar to those found in other species. It's not fun working cranky cattle, not safe, hard on equipment and less profitable. It's pretty easy to spot the aggressive animal – the one going over or through the fence. They might calm down, habituate if you will, but is it worth the wait and risk?

### Beef Quality Audit

Periodically audits are conducted to evaluate the quality of beef. This provides a summary based on various viewpoints of the status of beef in the U.S. The latest National Beef Quality Audit is

being conducted and preliminary results provide a snapshot of the industry.

	<b>Seedstock, Cow/calf, stocker/background, feedlot</b>	<b>Packers</b>	<b>Purveyor, restaurateur and supermarkets</b>
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	<b>producers</b>		
1	Insufficient Marbling & low quality grades	Reduced grade and tenderness due to use of implants	Insufficient marbling
2	Lack of uniformity	Lack of uniformity	Cut weights too heavy
3	Inadequate tenderness	Excessive carcass wt	Lack of uniformity
4	Yield grades too high	Yield grades too high	Inadequate tenderness
5	Low cutability	Bruises	Excess fat cover
6	Excessive carcass wt	Hide damages due to hot iron brands	Inadequate juiciness
7	Injection site lesions		Inadequate flavor
8	Inadequate flavor		Inadequate overall palatability
9	Inadequate muscling		Low cutability
10	Excess fat cover		Too large ribeyes

Other groups have also been consulted on their opinions of the current status. A group representing various segments of the industry have developed suggestions for reducing quality defects and nonconformities as challenges to the industry. These are:

1. Lack of traceability/Individual Animal ID/Source & Age Verification/Chronological Age.
2. Low Overall Uniformity
3. Need for implementation of instrument grading
4. Inappropriate market signs
5. Segmentation of groups with the beef industry
6. Carcass and cut weights too heavy
7. Yield grades too high/Low cutability
8. Inappropriate ribeye size (too small or large)
9. Reduced quality grade and tenderness due to use of implants
10. Insufficient marbling

Several items were also cited as successful activities by the industry including: developing a “story” of beef, reducing E. coli 0157:H7, merchandising “quick” (to prepare) beef, merchandising new beef “value” cuts, reducing excess fat cover at the end-user level, developing “brands” of beef, increasing beef demand and making the industry profitable.

From Beef Improvement Federation, Proceeding, June 2006.  
<http://msucare.com/livestock/beef/bif2006proceedings.pdf>

**Upcoming Meetings**

Opportunities to meet with fellow livestock producers and agriculturalists are upcoming. Several events are occurring over the next 60 days before the Holidays.

Locally, the Siskiyou County Cattlemen’s and CattleWomen have their fall dinner. Holly Foster and Laura Norman are speakers discussing California Beef Council programs.

Sacramento is the place, November 15-18, for the annual meeting of the California Cattlemen’s Association (<http://www.calcattlemen.org/>).

Hay and grass growers will be interested in the Western Alfalfa and Forage meeting in Reno, Nevada December 11-13 (<http://alfalfa.ucdavis.edu/2006AlfalfaConference/>).

More southernly, the California Farm Bureau Federation is meeting in Anaheim on December 2-6 (<http://cfbf.com/am2006/>).

This is your copy of the Siskiyou Stockman, which you requested, or which we thought would be of interest to you.

Sincerely,



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