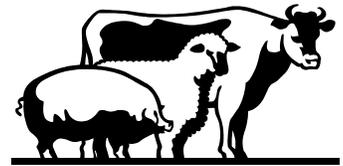




**LIVESTOCK LINES**



Stanislaus & San Joaquin Counties

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**DID YOU KNOW...**

The Institute of Food Technologies has recently shown that the use of antibiotics in food animals does not increase the resistance of pathogenic bacteria in humans. (SOURCE: Western Livestock/Drovers Reporters)

by  
Theresa Becchetti

Livestock and Natural Resources Farm Advisor

To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products which are not mentioned.

**Feeding Strategies for Enhancing Value of Cull Beef Cows**

The objective of this collaborative study between Texas A & M and New Mexico State Universities was to evaluate short-term feeding strategies for marketing cull beef cows. A total of 48 market cows were assigned to one of four treatments: 1) Blue grama pasture + mineral supplement (Control); 2) Control + 2 lb/day 38% protein supplement (Protein); 3) Control + 3.8 lb/day 20% protein supplement (Energy); and 4) Confined feedlot (Feedlot). The Feedlot cows were fed an average of 13.9 lb/day of a 10% forage diet. Duration of the study was 49 days. Results are summarized in the following table.

Item	Treatment			
	Control	Protein	Energy	Feedlot
Days on feed	49	49	49	49
Average daily gain, lb/day	0.09 <sup>a</sup>	0.21 <sup>a</sup>	0.21 <sup>a</sup>	2.05 <sup>b</sup>
Final body weight, lb	910.0 <sup>a</sup>	923.7 <sup>a</sup>	923.4 <sup>a</sup>	1117.7 <sup>b</sup>
Final body condition score	4.33 <sup>a</sup>	4.51 <sup>b</sup>	4.50 <sup>b</sup>	6.03 <sup>c</sup>
Cow cost/ \$/cow	310.31	311.76	313.69	313.59
Feed costs, \$/cow	24.43 <sup>a</sup>	37.41 <sup>b</sup>	51.66 <sup>c</sup>	112.90 <sup>d</sup>
Total costs, \$/cow	334.74 <sup>a</sup>	349.17 <sup>b</sup>	365.35 <sup>c</sup>	426.49 <sup>d</sup>
Sale price, \$/cwt	39.54 <sup>a</sup>	39.14 <sup>a</sup>	40.98 <sup>a</sup>	42.82 <sup>b</sup>
Sale value, \$/cow	361.05 <sup>a</sup>	364.31 <sup>a</sup>	380.27 <sup>a</sup>	478.97 <sup>b</sup>
Net return, \$/cow	26.31 <sup>a</sup>	15.14 <sup>a</sup>	14.91 <sup>a</sup>	52.48 <sup>b</sup>

<sup>a,b,c,d</sup> Figures in same row are significantly different (P<0.01).

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As shown on the table from the previous page, even though the Feedlot cows had considerably higher costs than the other treatments, they had the highest net return. It did not pay to supplement pasture with either protein or energy. These results suggest that productivity and profits can be maximized with feedlot management of market cows (Sawyer et al. 2006. Prof. Anim. Sci. 22:132).

## Effects of Accelerated and “Natural” Feeding Systems on Performance and Carcass Traits

Kansas State University scientists allotted crossbred yearling steers (801 lb) to two different feeding systems: 1) Accelerated, in which steers were implanted with an aggressive implant (Component TE-S), supplemented with Tylan and Rumensin, and fed 200 mg/steer/day of ractopamine-HCl (Optaflexx) during the last 33 days of feeding; and 2) “Natural,” in which the steers were neither implanted nor given feed additives.

Accelerated steers had improved gain, better feed conversions, heavier final weights, heavier carcasses, larger ribeye areas, and less kidney, heart, and pelvic fat. Natural steers had more marbling, higher quality grades, and more tender steaks (lower shear force values). Net return was \$24.46 higher per steer for the Accelerated group. Consequently, Natural cattle would require a \$3/cwt carcass premium to offset the advantages in performance of accelerated cattle (Velooso et al. 2006. Kansas State University Beef Cattle Research Report of Progress 959).

## Top Ten Beef Quality Challenges

Results of the 2005 National Beef Quality Audit were reported at the annual meeting of the Beef Improvement Federation (BIF) in Choctah, Mississippi. A Strategy Workshop representing all segments of the beef industry ranked the “Top Ten Quality Challenges” faced by the industry. They are as follows (Smith et al. 2006. Proceedings, BIF) in true David Letterman style . . .

- 10<sup>th</sup> Insufficient Marbling
- 9<sup>th</sup> Reduced Quality Grade & Tenderness Due to Use of Implants
- 8<sup>th</sup> Inappropriate Ribeye Size (Too Small or Too Large)
- 7<sup>th</sup> Yield Grades Too High/Low Cutability.
- 6<sup>th</sup> Carcass & Cut Weights Too Heavy.
- 5<sup>th</sup> Segmentation of Groups Within the Beef Industry
- 4<sup>th</sup> Inappropriate Market Signals
- 3<sup>rd</sup> Need for Implementation of Instrument Grading
- 2<sup>nd</sup> Low Overall Uniformity of Cattle, Carcass & Cuts

### And the Number One Challenge is....

- 1<sup>st</sup> Lack of Traceability/Individual Animal ID/Source & Age Verification/Chronological Age

With the trend right now for heavier carcasses (now averaging 816 lbs in 2005, up 75 lbs in 15 years), some of these challenges may not be going away for a while. The National Animal ID System is making slow progress, with some states beginning to refuse to participate, it is clear that the market does want some traceability for one reason or another, so the idea of individual animal ID will not be going away any time soon.

## Poor Temperament Adversely Affected Performance and Profit

Mississippi State University researchers used a total of 210 feeder cattle consigned by 19 producers in a “Farm to Feedlot” program to evaluate the effect of temperament on performance, carcass characteristics, and net profit. Temperament was scored on a 1 to 5 scale (1 = non-aggressive, docile; 5 = very aggressive, excitable). Three measurements were used: pen score, chute score, and exit velocity. Measurements were taken on the day of shipment to the feedlot. Following is a summary of results.

- Exit velocity and pen scores were highly correlated. As pen scores increased, so did exit velocity.
- Breed of sire had a significant effect on all three temperament measurements and on feedlot performance and carcass traits.
- As pen score and exit velocity increased, treatment costs and number of days treated increased, while average daily gain and final body weight decreased.
- As pen score increased, net profit per head tended to decline: 1 = \$121.89; 2 = \$100.98; 3 = \$107.18; 4 = \$83.75; 5 = \$80.81.

These results are in agreement with similar research conducted at Iowa State, Texas A & M, and elsewhere (Vann et al. 2006. ASAS Southern Section Meeting, Orlando, FL).

## Effect of Temperament on Feedlot Performance, Health, and Quality Grade

In this Iowa State University study, a total of 13,315 feeder calves were fed at eight Iowa feedlots to determine the effect of temperament on feedlot performance, calf health, and carcass traits. A temperament score (1 = very docile; 6 = very aggressive) was assigned at on-test weighing, re-implant time, and pre-harvest. These scores were then averaged to come up with an overall temperament score. The average temperament scores were split into three groups for statistical analysis: 1 and 2 = docile; 3 and 4 = restless; 5 and 6 = aggressive. Cattle were harvested when they were visually evaluated to have 0.4 in. of backfat. Results are summarized in the following table.

Item	Temperament score		
	1 and 2 (docile)	3 and 4 (restless)	5 and 6 (aggressive)
No. of calves	9,642	2,915	758
Arrival wt., lb	630.5 <sup>a</sup>	626.4 <sup>a</sup>	610.8 <sup>b</sup>
Feedlot avg. daily gain, lb/day	3.17 <sup>a</sup>	3.11 <sup>b</sup>	2.91 <sup>c</sup>
<b>Health</b>			
Morbidity rate, %	19.23	16.82	16.18
Mortality rate, %	1.09	1.02	1.91
<b>Quality grade</b>			
Prime, %	1.69 <sup>a</sup>	1.17 <sup>b</sup>	0.13 <sup>c</sup>
Choice, %	72.45 <sup>a</sup>	67.91 <sup>b</sup>	58.12 <sup>c</sup>
Select, %	23.29 <sup>a</sup>	27.49 <sup>b</sup>	36.20 <sup>c</sup>
Standard, %	2.55 <sup>a</sup>	3.43 <sup>b</sup>	5.55 <sup>c</sup>
Certified Angus Beef®, %	29.07 <sup>a</sup>	22.83 <sup>b</sup>	14.31 <sup>c</sup>
Net dollar returned, \$/head	\$54.93 <sup>a</sup>	\$41.80 <sup>b</sup>	-\$7.26 <sup>c</sup>

<sup>a,b,c</sup> Values with different superscripts differ significantly (P<.01).

As shown on the previous table, average daily gain declined as temperament scores increased. Interestingly, morbidity and mortality rates were not significantly different. Temperament score significantly influenced the percentage of carcasses in each quality grade and the percentages of carcasses qualifying for Certified Angus Beef®. Furthermore, net returns declined as temperament score increased. These results indicate clearly that poor temperament has a negative effect on performance, quality grade, and profit (Busby et al. 2006. Iowa State University Animal Industry Report).

## Impact of Feedlot Morbidity on Performance, Carcass Traits, and Profitability

In a collaborative study, New Mexico State University and Texas A & M University scientists used records from 813 steers enrolled in the New Mexico Ranch to Rail program from 2001 to 2004 to evaluate effects of feedlot morbidity on performance, carcass traits, and profitability. Steers were classified as follows based on the number of medical treatments during the finishing period: zero medical treatments (Healthy), one treatment (One), and two or more treatments (Two+). Twenty-two percent (177 hd) of the steers received treatment. Results are summarized in the following table.

Item	No. of treatments per head		
	0	One	Two+
Days on feed	192 <sup>a</sup>	197 <sup>b</sup>	209 <sup>c</sup>
Avg. daily gain, lb/d	3.19 <sup>a</sup>	3.06 <sup>b</sup>	2.77 <sup>c</sup>
Total cost of gain, \$/cwt	57.20 <sup>a</sup>	64.92 <sup>b</sup>	79.90 <sup>c</sup>
Carcass value, \$/cwt	113.95 <sup>a</sup>	108.51 <sup>b</sup>	98.97 <sup>c</sup>
Net income, \$/hd	14.01 <sup>a</sup>	-69.63 <sup>b</sup>	-253.70 <sup>c</sup>

<sup>a,b,c</sup> Statistically different (<0.01).

As shown above, morbidity had a significant effect on all traits, including net income. Furthermore, steers needing two treatments were affected to a much greater extent than those needing only one (SOURCE: Waggoner et al. 2006. Proc. Cattle Growers' Short Course, Clovis, NM).

While temperament can be hereditary, and some breeds can be more temperamental than others, our actions can also affect temperament, especially the first few times cattle are brought up and worked. Temple Grandin would appreciate this comic!

**STAMPEDE** By Jerry Palen



“Go ahead. Start yelling. I want to try something.”

## **“New” NRCS program - Conservation Security Program**

The Conservation Security Program (CSP) was part of the 2002 Farm Bill and is slowly being rolled out. The CSP program will help cost share management practices that safeguard resources (soil and water quality are topping the list but air quality and wildlife habitat are also included) that are already in place. This program is different in a few ways most notably that it is being rolled out watershed by watershed, so you need to be aware of the announcements every year to see if your watershed is included. Since it is also essentially paying you for practices you are already doing, it does require records over the past few years to document that you have been conducting the practices (can include grazing schedules, fertilizer applications, etc.). And projects done with EQIP funds can be used to qualify for CSP. More information can be found on-line at <http://www.nrcs.usda.gov/programs/csp/> or by calling your local NRCS office. When watersheds in our area are selected for sign ups, the announcement will be in the Livestock Lines.

## **Consumers' Perception of Meat Safety**

Even as the American Meat Institute celebrates the 100<sup>th</sup> anniversary of the Federal Meat Inspection Act, many consumers still do not recognize the level of inspection that exists. An opinion poll taken this summer showed many consumers thought the banking industry was more heavily regulated and inspected than the meat industry (35% to 21% respectively). 60% of the consumers believed that inspectors visit meat plants “occasionally.” Only 12% of those surveyed realized that meat inspectors are on site every minute that a plant is running, as required by law under the Federal Meat Inspection Act. 100 years later only a small percent of the population realize this law has been protecting them all along.....

## ***E.coli* and spinach... and maybe now lettuce?**

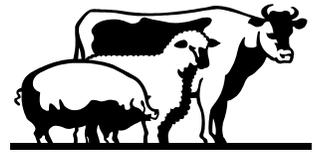
The pointing of fingers has begun in the Salinas Valley. Investigators have found *E.coli* in manure samples taken from a pasture. That's not surprising; we could have told them that if they looked for it, they would find it. We, within Cooperative Extension, have been working on this issue and similar issues for about 10 years now- Water Quality and Livestock Grazing. We could have told them much more than that too, like bmps to reduce the risk of *E.coli*, or any other possible bad thing, from moving off the site. Current research from Specialists on campus have been showing that managed buffers of only 1 foot can be effective in filtering out *E.coli* approximately 98% of the time, this under annual rangelands, different slopes, and normal rainfall. Instead of looking to blame, we should be focusing on positive things we can do to prevent any future outbreaks. We know that even with irrigated pastures, there are simple things that can be done to reduce the amount of bacteria, sediment, and nutrients that could move off a pasture. Want to know more? Plan on being at the **55<sup>th</sup> Annual Oakdale Livestock Forum** for current research results on this and many other topics- **February 27<sup>th</sup>, 2007!**

## **Labor Management Questions?**

Do you have any labor management issues on your ranch? Other than family related issues that is. Well, if so, please don't forget that we have a Labor Management Advisor here to help answer questions or work on a project. Gregory is housed here in Stanislaus County but does have a multiple county assignment with San Joaquin and Merced and is quickly becoming known throughout the country for his expertise. Feel free to give him a call here in the Modesto office.



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**Mark Your Calendars:**

**55<sup>TH</sup> ANNUAL OAKDALE LIVESTOCK FORUM - FEBRUARY 27<sup>TH</sup>, 2007**

**Look for more information in the January Livestock Lines !**

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