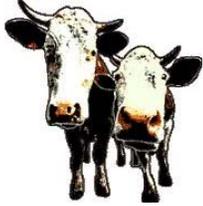




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Local Fodder

December 2002

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UC FARM ADVISOR ENCOURAGING CATTLE RANCHERS TO BEEF UP MARKETING

*Prepared by Christine Tognetti,
ANR Public Information Intern*

YUBA CITY - We have all heard the slogan "Beef, it's what's for dinner," but the people who supply us with that beef are having a hard time putting dinner on their families' plates.

"The cost of cattle production has risen dramatically but the income has stayed the same," said Glenn Nader, a University of California Cooperative Extension (UCCE) farm advisor who works with

cattle ranchers in Yuba, Sutter and Butte counties. Using a combination of research developed by UC and other industry innovations, Nader is helping beef producers capture more income for each dollar spent.

"Ranchers need to find a niche to compete with the big guys," he said. "We are moving them from marketing a commodity, live calves, to a product, processed meat, which is a major difference."

According to Nader, the key to keeping costs down and finding that market niche is transportation. Ranchers must be close to a beef processing plant, as well as a community with disposable income. "If you have a small quantity of beef, it's extremely expensive to truck it all over the state," he said. "The highest demand for niche market products is in places like the Bay Area, where people are willing to vote with their food purchases, not just look for the lowest price."

Another area Nader has been working on is weaning, the process of separating a calf from its mother. Ranchers usually lock the calves in a corral and the mothers are taken away to a pasture. This separation, changes in the physical environment and a new diet of hay instead of grass put the calves through a great deal of stress.

With research developed by UC Davis animal scientist Ed Price and Nader, new weaning techniques are producing healthier calves and, in the long run, a better consumer product. "Fence line weaning" separates the calves and their mothers by only a

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fence. The calves don't become emotionally stressed and it keeps them out of a corral.

"By not having the calves scrunched together in a corral, there is less of a chance for disease to spread," Nader said.

Price's studies on fence line weaning are very successful. Studies show calves that went through fence line weaning had an 80-pound weight gain over those who didn't.

Another revolution in the beef industry is video marketing. Instead of loading up cattle and hauling them miles away and paying heavy transportation costs, buyers can get an early look at them on the Internet. With the click of a mouse, ranchers can have their calves sold without all the excess labor.

"When I was a boy, buyers used to go out to the ranch to look at the calves," Nader said. "Nowadays, it's just too expensive."

The Quality Assurance Program (QAP), created by UCCE, is yet another way to help ranchers get more for their money. QAP improves the administration of veterinary medical products to animals. When giving cows injections, for instance, the needle is slipped under the skin instead of piercing the muscle. This eliminates any chance of bruising the cow's muscle. When the muscle is bruised by injections, it has to be trimmed out, costing the rancher in reduced returns.

Although times aren't the greatest for cattle ranchers, there are still people drawn to the business every day. "I met this guy who is a stockbroker and wants to be a rancher," Nader said. "He is now going into debt because he wants his kids to be brought up in a good lifestyle."

It's the relaxed country lifestyle that keeps many ranchers in the business. "Ranchers stay because they like being outdoors with animals and wildlife," he said. "They like the independent lifestyle."

Changing the traditions of raising cattle involves risk and, Nader acknowledged, it's challenging to get people to listen to new ideas. "Unless you can give them a demonstration, they aren't going to buy into it," he said. "You have to find a neighbor who wants to show off to everyone else and that will set the new

status quo."

Christine Tognetti is a Chico State University journalism student who spent the summer profiling student interns working with academic advisors in UC's Division of Agriculture and Natural Resources. Her stories can be viewed at ANR's News and Information Web site at <http://danr.ucop.edu/news/july%2Ddec2002/internshipprofiles.html>

- UCCE Farm Advisor Glenn Nader can be contacted in his Yuba City office at (530) 822-7515.



LOCAL MARKETING WORKING GROUP

The proximity of Napa, Solano, and Yolo Counties to the Bay Area markets creates a very advantageous position for livestock producers to sell meat products to high-end markets. Over recent years consumers have been showing preferences for locally produced products as well as natural, organic and grass-fed meat. It only makes sense for local producers to tap these markets before producers from other regions fill the niche with not-as-local products.

Developing new products and entering new markets are not easy, but not out of reach. Good market studies must be performed and alliances built in order for such marketing efforts to benefit a broad base of livestock producers. Financial resources are a necessity for any investigation, and can be acquired. The first step, however, is to gather interested parties and explore options and level of interest.

We at Cooperative Extension will host a meeting in late January or February to explore potential projects and possibly form a working group composed of ranchers, members of the business community, academics, and advisors. If you are interested in attending such a meeting, please contact Morgan Doran so that we can send you a letter of invitation.

Contact Morgan Doran at 707-435-2459, or email at mpdoran@ucdavis.edu

FEEDING COWS TO PREVENT SCOURS IN CALVES

Reprinted from the December 2002 issue of California Cattleman's Magazine

Some of you may look at the title and wonder what the connection between feeding cows and preventing calf scours might be. In this month's column we will explore the connections and try to provide some practical advice for the prevention of calf scours in general. However, it is important to know that the prevention of calf scours begins with the way the cows are fed and managed before they calve.

What causes calf scours?

This is an important question and one that should be addressed early on. The potential causes of calf scours are a fairly long list of viruses, bacteria, and protozoal agents. However, in most cases there are only four "bugs" that cause the vast majority of our scours problems in beef calves. These common agents are *E. coli*, Rota virus, Corona virus, and Cryptosporidium. The first organism, *E. coli*, is a bacterial agent that usually causes illness within the first few days of life—typically before 5 days of age. Rota virus and Corona virus are obviously viral agents and they cause disease at 10 days to 21 days of life. Cryptosporidium (*C. parvum*) is a protozoal agent and also usually causes scours at 10 to 21 days. In beef calves, a combined infection with Rota virus and Cryptosporidium is very common. All of these infectious agents can be common in beef herds and in the environment. Each of these "bugs" act in its unique way to cause diarrhea in calves and the diarrhea results in dehydration, electrolyte changes and illness or death. Therefore, preventing disease and death loss depends on how well we manage for prevention.

What prevents the calves from getting scours?

There are basically two factors that prevent the calves from developing diarrhea (scours), becoming ill and dying. One is the dose of the infectious agent(s). The higher the dose in the environment of the calf (the calf's cow and immediate surroundings) the more likely the calf will be exposed to the agent(s) and become ill. Therefore, sanitation is very important in keeping the dose low. Calving the cows in clean fields or pastures is very helpful and keeping the cows spread out (low density) is also important. The second important factor in preventing scours is the immune system of the calf. The calf's immune system has two important facets: (1) the ability of the individual calf to resist disease, and (2) the colostrum the calf receives from the cow or heifer soon after birth. Both of these factors are dependent on good quality nutrition before the calf is born.

How does feeding the cow affect the immune system of the calf?

The immune system of the calf is developing during the time the cow is pregnant. Rapid development of the immune system begins about day 120 of gestation and continues until the calf is born. One of the most important nutrients for the development of the immune system is protein—all the various amino acids that are the building blocks of the enzymes, antibodies, and other functional proteins that make it possible for the immune system to work. So if the cow is short on protein in her diet, the immune system of the calf will not develop normally. The other important factor in feeding during pregnancy is involved with colostrum formation by the cow or heifer. Colostrum is the first milk produced and is rich (very thick) with antibodies that the cow has made to all the pathogens she has encountered (this includes vaccines). These antibodies are proteins and without adequate protein in her diet the quality and quantity of her colostrum will be decreased. This colostrum is vital to the calf's health for the first 2 months of life. The antibodies in the colostrum are so important that the calf doesn't digest colostrum in the normal manner. Normally, protein in the calf's diet is broken down to individual amino acids in the low pH of the abomasum and intestine. This breakdown would destroy the function of the antibodies; however, when the calf ingests colostrum the entire protein antibody is absorbed through "holes" in the intestine. These "holes" close shortly after birth so the timing of the colostrum meal is also important. Thus, the protein fed to the cow or heifer before she calves is vital for the following to occur: (1) the calf must be strong enough to get up and suck soon after birth (the calf's muscles are made from protein), (2) the colostrum of the cow or heifer must be adequate in terms of quality and quantity, (3) the calf's own immune system must be working at maximum efficiency.

Besides protein, what other nutrients are important for the cow?

Protein is important for the reasons mentioned above and you have to feed the cows enough energy so they don't lose weight—particularly during the last three months of pregnancy. If they are losing weight during that time, the calf will be born weak and below normal weight. Also, if not enough energy is fed the cow will break down her muscle tissue and use that protein for energy. So feeding enough energy and protein together is important. Other nutrients that are particularly important for the pregnant cow in California are some of the trace minerals: iodine, copper, and selenium. Iodine is essential for thyroid function and the thyroid hormone functions as the "gas pedal" of growth. Without adequate iodine the calf will be undersized and weak. Copper and selenium are both important for the proper functioning of the immune system. Deficiencies in either one of these trace minerals will result in an increase in sick and/or dead calves.

How do I feed the pregnant cows to help prevent calf scours?

Depending on the size of the cattle, 1.5 to 2.0 pounds of crude protein should be fed per cow per day during pregnancy. On

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permanent pasture this intake will be easily met as the crude protein levels will exceed 15% and the cattle will often consume 25 pounds of dry matter each day—over 3.5 pounds of crude protein per day. On dry foothill range, the crude protein level can be 6% or less and the cattle will only be capable of consuming 10-15 pounds of this material per day—this would equal 0.6 to 0.9 pounds of crude protein per day from the dry feed. Thus, on dry foothill range you should plan on supplementing 0.6 to 1.4 pounds of crude protein each day. This would be equivalent to 4-10 pounds of medium quality alfalfa hay (15% crude protein) per head per day. Many other protein supplements can be fed to achieve these goals and a short table is included for comparison purposes.

Feed	% CP dry matter basis	Pounds per day as fed basis	Supply of crude protein--pounds
Meadow grass hay	12%	9.3	1.0
Oat hay	9%	12.3	1.0
Alfalfa hay (medium)	15%	7.4	1.0
Alfalfa hay (very good quality)	20%	5.6	1.0
Molasses 20% CP	20% as fed	5.0	1.0
Molasses 30% CP	30% as fed	3.3	1.0
Cottonseed meal	44%	2.5	1.0
Soybean meal	50%	2.2	1.0

The important cost factor is the cost per pound of protein you need to supplement, not necessarily the cost per ton of feed. Usually, when protein requirements are met you are feeding enough energy. This may not be true when feeding molasses-based supplements or salt and meal supplements, so be sure to closely watch the body condition of the cows.

Be sure to monitor your trace mineral program. There are a number of good ways to supplement trace minerals: copper boluses, selenium boluses, salt-mineral mixes, molasses based supplements with added minerals, and others. A combination of supplement methods may be necessary to prevent deficiency. The bottom line is how well are they working. A few blood samples at pregnancy checking time will answer that question and allow time to make up deficiencies before the cows calve. Work with your veterinarian on monitoring your program.

Are there vaccines that will help prevent calf scours?

Yes, there are some excellent vaccines for Rota virus, Corona virus, and *E. coli* K99. These are given to the pregnant cows/heifers during the last three months of pregnancy. Remember, these vaccines stimulate the cow to make antibodies that are then transferred to the colostrum, so if you short the cow on protein the vaccine will not do its job for you. At the present time there is no effective vaccine for *Cryptosporidium* on the market.

What are some other management tools I can use to help prevent calf scours?

The important ideas here are sanitation and isolation to help prevent calf scours. Here are a few areas to be aware of in your prevention program.

1. Calve the heifers earlier than the main cowherd in clean fields. The heifers have lower quality colostrum and lower amounts. Their calves are more susceptible and isolation is helpful.
2. Try to calve at a time of year when it is not wet or muddy in the calving fields.
3. Do not bring in outside cattle during the calving season. These cattle can be the source of diseases your cattle have no immunity against. Also, bringing in dairy calves for cows that lose a calf can lead to severe scours outbreaks.
4. Use strict sanitation when treating sick calves. Treat sick calves only after handling the well calves—never before. Disinfect all balling guns or esophageal feeders after treating sick calves, use disposable gloves, wash your clothes and equipment after treating scouring calves, etc. You can carry the “bugs” on your gloves, clothes, and equipment from a sick calf to a healthy calf. Thus, you can become the cause of an outbreak and not the cure.
5. Isolate sick calves and their cows to a separate field or area to avoid the build-up of pathogens in the main cowherd.
6. Try to avoid feeding hay when the calves are very young. This concentrates the cattle and their feces on the hay feeding areas and increases the load of “bugs”. Use of good pastures or fields put aside during the first 2-3 weeks of the calves’ lives is a good idea. Feeding cottonseed meal (or soybean meal) with 30-40% salt in feeders can be a successful way to supplement during this time.

Preventing calf scours is an important part of management; however, it is not simple to accomplish. Feeding the pregnant cows and heifers is a very important part of this equation that is sometimes overlooked. Your veterinarian can provide you with additional helpful information that is specific to your herd.

John Maas, DVM, MS
Diplomate, ACVN & ACVIM
Extension Veterinarian
School of Veterinary Medicine
University of California, Davis

BOVINE TUBERCULOSIS UPDATE

Since the first discovery of bovine TB in a Tulare County dairy herd last May, another positive cow was detected in a Fresno BPI packing facility in September. And yet another cow from a separate South San Joaquin dairy herd is suspected to be infected.

With two herds now testing positive for bovine TB, it is very likely that in 2003 California will move down from the "Accredited-Free TB" status to the "Modified Accredited Advanced" status as designated by the USDA.

What does the status change mean?

The change to "Modified Accredited Advanced" status would mean the following: all of California's breeding cattle more than 6 months of age and older would be required to have a negative TB test within 60 days of interstate movement **OR** be from a TB "Accredited Free Herd" **OR** move directly to slaughter. This would include the cattle herds moving to neighboring states on the "pasture to pasture" permits. Even though these "pasture to pasture" permit herds move as a single herd, TB testing would be required.

It is important to realize that TB testing takes 3 days. The intradermal (in the skin) injection of tuberculin is given and the result is "read" by an accredited veterinarian at 72 hours (plus or minus six hours). So the beef cattle have to be held after the injection and run through the chute again 3 days later. The TB

test usually costs 5-10 dollars per head depending on local conditions. Currently, breeding age dairy cattle (6 months of age or older) leaving California for other states are already being TB tested before being shipped. The discovery of more TB infected cattle herds could lower our status further to "Modified Accredited" status with further requirements for testing and additional movement restrictions.

As of December 8th, the CDFA and USDA have tested 140,906 cattle in 95 herds since the original positive case last May. A total of 490 positive and suspected animals have been slaughtered and 7,015 exposed animals have also been slaughtered.

What is California doing to eradicate the disease?

- ◆ The affected herd was quarantined by the CDFA in May. The dairy was tested for TB on two-month intervals and test positive animals were removed from the herd. In November, the herd was sent to slaughter and the premises was thoroughly cleaned and disinfected. All cattle sold from or associated with the affected herd over the last five years are being traced and tested.
- ◆ Efforts to purchase and slaughter all cattle that left the affected herd are underway.

As a precaution and to protect other states, all dairy breeding animals leaving California that are more than six months of age require a negative TB test within 30 days of movement. At this time, this requirement does not apply to beef cattle.

What can you do to keep TB out of your herd?

There are a number of important steps you can take.

1. Support your cattlemen's associations. No one has the time to do all the necessary work on these issues by themselves. Only through the efforts of your associations can you have a voice for your concerns and someone to represent your interests.
2. Contact your veterinarian, he or she is an excellent source of information about this complicated disease. Also, your veterinarian can help you with practical measures to improve the biosecurity of your herd.
3. Follow the animal import regulations. These are designed to help prevent the introduction of new diseases into your herd, including TB.
4. Know the TB status of the herds you purchase cattle from (including any mandatory TB testing that has been done in those herds).
5. If you share grazing land with other cattle (dairy or beef), know their TB status.
6. If you graze adjacent to Mexican-origin cattle, they are a potential risk for exposure to TB. Maintain excellent fences in these circumstances and increase biosecurity measures if Mexican-origin cattle graze adjacent to your herd.

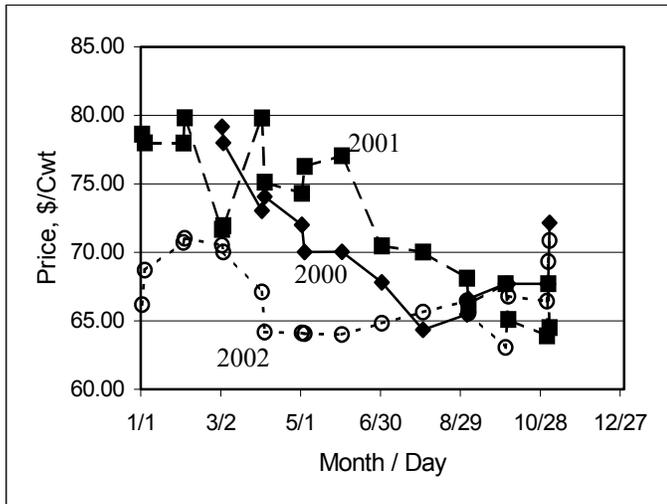
Written with excerpts taken from UCD Vet Views, California Cattlemen's Magazine, November 2002 and CDFA Bovine TB Factsheet, November 2002.



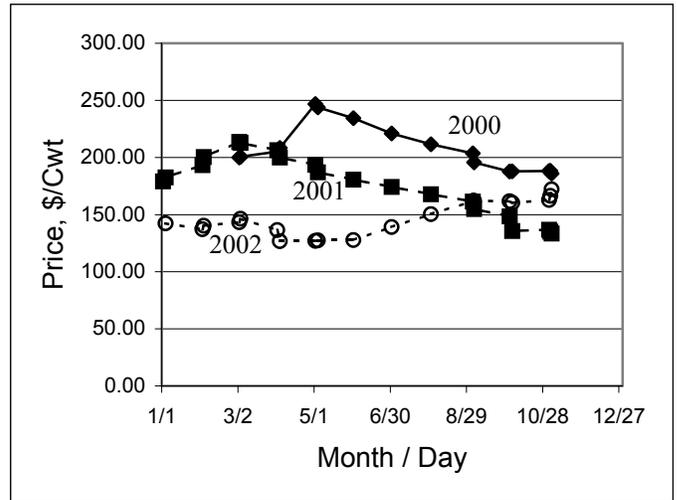
The rural professional and his cowphone

MARKET TRENDS

Live fed steer average prices.



Average price Lamb Cutout (65 Lbs. & Dn.).



WEED CONTROL COST-SHARE PROGRAMS

Weed control on rangelands can be an expensive and daunting task that is made less-costly through a education and cost-share program. In California, weeds such as starthistle and medusahead are causing large economic losses primarily due to reduced live-stock carrying capacity on our rangelands. Additionally, starthistle is notorious for reducing the recreation value of infested land.

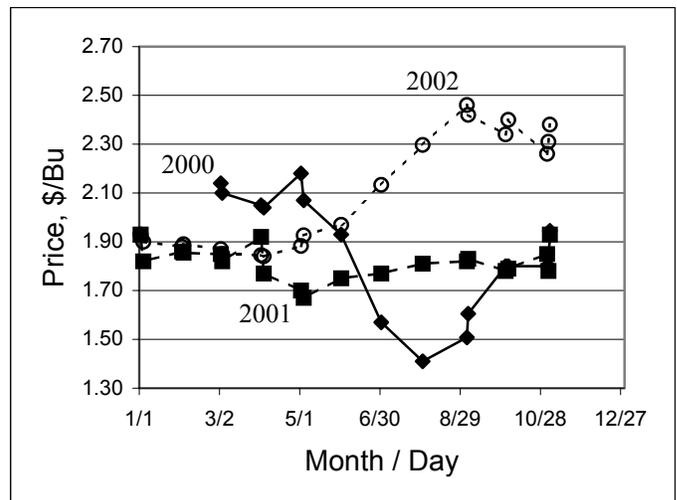
The federal and state governments recognize the magnitude of weed problems and have channeled money into programs that assist landowners and managers control their weed problems.

One source of cost-share funds is through the county Weed Management Area (WMA) which receives money from the State of California and other grant sources. Not every county has a WMA, and in our area Solano, Yolo and Sacramento Counties have active WMA programs. Of these counties, the Solano and Yolo WMAs sponsor cost-share assistance programs.

Another source of cost-share money is through the USDA—Natural Resource Conservation Service (NRCS). A number of range improvement practices, including weed control, can be implemented through cost-share funds with the Environmental Quality Incentive Program (EQIP) available from the NRCS. This is an especially good time to apply for EQIP funds since the new Farm Bill was passed with more money than ever going to livestock operations.

The Solano County WMA is beginning its second cost-share year targeting starthistle control with the herbicide Transline®. If you would like to participate in this cost-share program, attend the Weed Identifica-

Omaha corn prices.



tion and Management Workshop (see next page), or call the WMA coordinator Wendy Rash at 707-678-1655.

Other contacts:

Yolo County WMA: 530-662-2037
 Sacramento County WMA: 916-875-6603
 USDA-NRCS Napa County: 707-252-4189
 USDA-NRCS Solano County: 707-678-1655
 USDA-NRCS Yolo County: 530-662-2037
 USDA-NRCS Sacramento Co.: 916-714-1104

Morgan Doran
 Livestock & Natural Resources Advisor
 Napa, Solano, Yolo, & Sacramento Counties

CALENDAR OF EVENTS

2nd Annual Weed Identification & Management Workshop

Location: Dixon Fairgrounds, 9 AM—12 PM

Free; 1.5 Continuing Education Credits; Cost-Share Program; for more info. contact Tacy Currey 707-678-1655

January 9

23rd Annual Ecological Farming Conference

Location: Asilomar Conference Center, Pacific Grove, CA

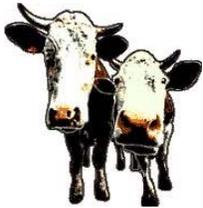
Cost varies with discounts available; For more info. call 831-763-2112 or visit www.eco-farm.org

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Local Fodder
December 2002
Happy Holidays!!

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