

December 2003

In This Issue...

Beef Management Calendar	2
Latest Indicator of Feed Efficiency Could Spur New Generation of Efficient Cattle	2
Feeding Corn Gluten Feed to Beef Cattle	3
Differences in Milk EPD Were Reflective of Differences In Weaning Weight EPD	4
Impact of Repetitive Use of Growth Implants on Beef Quality and Palatability	5
Don't Try This At Home: UF Vet Heals Sick Horses With Acupuncture	5
United States Animal Identification Plan (USAIP)	7
USDA Announces New Food Safety and Security Guidelines for Consumers	8



Dates to Remember

December 2003

- 4-5** FCA Board of Directors Quarterly Meeting - Gainesville, FL
- 6** 4-H Livestock Evaluation School and 4-H/FFA Horse Judging School - Gainesville, FL
- 13** 5th Annual Desoto County 4-H Prospect Show - Turner Agri-Civic Center
- 25** Christmas Day
- 29** Okeechobee Slaughter Cow Sale - Okeechobee, FL

January 2004

- 1** New Year's Day
- 15** 21st Annual Florida Cattlemen's Institute and Allied Trade Show - Kissimmee, FL
- 22-23** 2004 Florida Ruminant Nutrition Symposium - Gainesville, FL
- 24** Bull Test Sale - Marianna, FL

Prepared by Extension Specialists in Animal Sciences

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Beef Cattle Nutrition

Just a reminder that the official Florida Bull Test web page is located at <http://flbulltest.ifas.ufl.edu/>. This is a great source for information on the bull test program.



UNIVERSITY OF
FLORIDA
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Institute of Food and Agricultural Sciences



IFAS

Florida Bull Test

NFREC Beef Research Unit,
Marianna



- Calendar of Events
- Bull Test Rules
- Bull Test Forms
- Bull Test Results
- Sale Information
- Directions to Bull Test
- Links to Sites of Interest



**UNIVERSITY OF
FLORIDA**

Institute of Food and Agricultural Sciences
North Florida Research and Education Center
Marianna
Beef and Forage Programs
Bull Test Programs

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Beef Management Calendar

December

- ☑ Begin grazing small grain pastures (if ready).
- ☑ Check mineral feeder.
- ☑ Check for external parasites and treat if needed.
- ☑ Deworm cows and heifers prior to winter feeding season.
- ☑ Observe regularly for calving difficulties.
- ☑ Rotate calving pastures to prevent diseases.
- ☑ Watch for scours in calves.
- ☑ Investigate health of bulls before you buy.
- ☑ Have dead animals posted by a veterinarian or diagnostic laboratory.
- ☑ Complete review of management plan and update for next year. Check replacement heifers to be sure they will be ready to breed 3 - 4 weeks prior to the main cow herd.

January

- ☑ Apply lime for summer crops.
- ☑ Check for lice and treat if necessary.
- ☑ Control weeds in cool season pastures.
- ☑ Begin grazing winter clover pastures when approximately 6 inches high. Rye should be 12-8 inches high.
- ☑ Check mineral feeders.
- ☑ Put bulls out for October calving season.
- ☑ Make up breeding herd lists if using single sire herds.
- ☑ Watch for calf scours.
- ☑ Give bulls extra feed and care so they will be in condition for breeding season.
- ☑ Make sure cow herd has access to adequate fresh water.
- ☑ Buy only performance tested bulls with superior records.
- ☑ Get taxes filed.
- ☑ Discuss herd health with you veterinarian and outline a program for the year. Review herd health program with your veterinarian regularly.
- ☑ Carry a pocket notebook to record heat, breeding abnormalities, discharges, abortions, retained placentas, difficult calvings and other data.
- ☑ Observe cow herd for calving difficulties.

- ☑ Watch for grass tetany on winter pastures.
- ☑ Increase magnesium levels in mineral mixes if grass tetany has been previous problem (if you are not already using a high magnesium mineral).
- ☑ Examine bulls for breeding soundness and semen quality prior to the breeding season.
- ☑ Vaccinate cows and heifers against vibriosis and leptospirosis prior to the breeding season.

February

- ☑ Top dress winter forages, if needed.
- ☑ Check and fill mineral feeders.
- ☑ Put bulls out with breeding herd.
- ☑ Work calves (identify, implant with growth stimulant, vaccinate, etc.).
- ☑ Make sure lactating cows are receiving an adequate level of energy.
- ☑ Watch calves for signs of respiratory diseases.
- ☑ Cull cows that failed to calve while prices are seasonally up.
- ☑ Check for lice and treat if needed.



Latest Indicator of Feed Efficiency Could Spur New Generation of Efficient Cattle

The concept of net feed intake was expanded in the 1990s by Australian beef researchers, and now a research project led by Basarab and funded by the Canada Alberta Beef Industry Development Fund (CABIDF) backs the Australian findings.

"We now feel that we have an excellent method to measure the feed efficiency of cattle, and that feed costs can be significantly reduced by selecting low net feed intake cattle over high net feed intake cattle," says Basarab. "Low net feed intake cattle also produce less manure and methane than high net feed intake cattle, producing a positive environmental spin-off."

Here's an example of how net feed intake works: A British-cross steer with a 453.6 kg bodyweight gaining 1.76 kg per day on a finishing diet has an expected feed

intake of 14.5 kg per day, according to the National Research Council's Nutrient Requirements for Beef Cattle. However, if the actual feed intake for the steer were 10.2 kg per day, 4.3 kg less than expected, the net feed intake would be - 4.3 kg per day.

"Like a golf score, a negative value is better and indicates an efficient animal," he says. "In the past, it was thought if cattle were selected for improved average daily gain, feed efficiency would follow. But what seems to have happened is that we selected for a faster-growing, larger animal with increased appetite, but no better in terms of feed efficiency."

In a two-year serial slaughter study conducted by Basarab's team, 148 steers from five genetic strains were monitored for individual animal feed intake over a finishing period ranging from 71 to 183 days.

The variation in feed intake among different animals can be large and costly. Steers grew at 1.52 kg/day and had an actual feed intake of 12.3 kg/day while consuming a finishing diet. Even in a small pen of 75 head, individuals varied in net feed intake from efficient (-1.95 kg/day) to inefficient (+1.82 kg/day). This means that the efficient animal consumed 3.77 kg per day less than the inefficient animal for the same level of weight gain.

The study found that this variation in net feed intake represented a difference of more than \$45 in feed costs (with feed costs pegged at \$0.101/kg. as fed) during a 120-day test period, which represents about \$109 million a year in feed savings for feedlot operators alone. "The benefit to cow-calf producers and seedstock operators is estimated to be at least as high," says Basarab.

The Alberta study revealed for the first time that animals with different net feed intakes were similar in carcass characteristics, empty body weight, relative proportions of most organs and tissues in empty body weight, he says. "This is important because people were worried low net feed intake cattle might have less fat and marbling, reducing meat quality," he says. "But that is not the case."

The major difference Basarab found among net feed intake groups was in heat production, with low net feed intake steers having an 11.2 percent lower heat production value than medium net feed intake steers and 17 percent lower than high net feed intake steers. "This

confirms previous studies indicating that high net feed intake cattle have higher maintenance energy costs than low net feed intake cattle," he says.

Currently, Basarab is working with private and public partners to hone a testing system that singles out feed-efficient breeding bulls, in order to begin passing the valuable trait to Alberta's future cattle herd. "The Australians are ahead on getting low net feed intake genetics into their herd, so this also a matter of staying competitive," he says.

CABIDF is a joint \$16.4 million fund of Alberta Agriculture, Food and Rural Development and Agriculture and Agri-Food Canada and has supported more than 50 projects in five categories. The fund is administered by the Alberta Beef Producers.

SOURCE: Federation of Animal Science Societies (FASS)
<http://www.fass.org/contact.asp>
 Release - November 20, 2003

-RSS-

Feeding Corn Gluten Feed to Beef Cattle

Corn gluten feed is a by-product of the wet milling industry. The wet milling industry isolates starch from corn, which is used to make sweeteners. Corn gluten feed is produced in a wet form (60% water) and dry form (10% water). Producers in Georgia use the dry form of corn gluten feed. Gluten feed is what is left of the corn kernel after the removal of the starch, oil, and gluten. Corn gluten feed consists of bran, germmeal, and solubles that are produced when the grain is soaked during the initial stages of processing.

Dry corn gluten feed can be used to feed any class of beef cattle. The chemical composition is typically 90% dry matter, 21% protein, and 78% TDN. It is low in calcium and high in phosphorus, potassium and sulfur. Corn gluten feed is usually pelleted to increase bulk density and decrease transportation costs. Nutrient composition can vary depending on processing methods between plants. Therefore, it is wise to have the feed analyzed for nutrient content prior to feeding.

Corn gluten feed is an excellent supplement when cattle are grazing low quality forages or fed hay. Because of the high starch content of corn, depressions in forage intake and digestibility occur when corn is a component of a forage based diet. Corn gluten feed has a low starch content, and the depression in forage intake and digestion are much less for corn gluten feed than for corn grain. Because of the high protein level of corn gluten feed, it can provide both supplemental energy and protein. For example, low quality bermudagrass hay containing 6% crude protein could be balanced by feeding 5 lb per day of corn gluten feed to a dry cow and 10 lbs per day to a lactating cow. In this scenario, corn gluten feed is twice as valuable as hay on an energy basis and three times as valuable as hay on a protein basis. In most cases, corn gluten feed is to 1.5 times as expensive as hay. Thus, corn gluten feed is almost always cheaper than hay when compared on a nutrient basis. However, corn gluten prices vary greatly by location within the state and time of year purchased.

Corn gluten feed has also been used to completely replace forage for cows during periods of drought. A University of Arkansas researcher fed dry pregnant cows (1,100 lbs), 10.6 lbs per day corn gluten feed and 2.7 lbs per day cottonseed hulls. Cows fed the corn gluten feed were able to maintain the same condition score as cows fed bermudagrass hay. However, feed costs were twice as much for the cows fed hay than for cows fed corn gluten feed. Feed costs were calculated using values of \$70 per ton for hay and \$74 per ton for gluten feed.

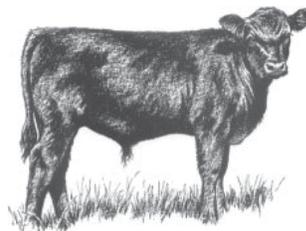
Corn gluten feed has also been used successfully in growing diets for calves. Corn gluten feed is equal to corn in energy when included in diets with greater than 50% roughage. Studies have also been conducted to evaluate corn gluten feed in limit-fed growing diets. In one study, corn gluten feed was incorporated into a diet with 15% roughage and fed at two percent of body weight. Calves fed the corn gluten feed ration had 12% lower daily gains and feed efficiencies compared to calves fed a corn based diet with 15% roughage at two percent of body weight. Corn gluten feed has lower energy values than corn when fed in high concentrate diets, but equal energy values as corn when utilized in a high forage diet.

Corn gluten feed is used extensively in feedlot diets to provide both energy and protein. The feeding value of gluten is approximately 10 to 15% less than corn when

used as the primary energy and protein source in feedlot diets. Wet corn gluten feed can substitute for 50% of corn in a ration before weight gain and feed efficiency is decreased, whereas dry corn gluten feed can replace 25% of the corn in a ration before gain begins to decline. Because corn gluten feed contributes a significant amount of protein, feed costs are usually decreased when corn gluten feed replaces a portion of the corn in the diet.

SOURCE: Johnny Rossi
Extension Animal Specialist
University of Georgia
Athens, GA

-TTM-



Differences in Milk EPD Were Reflective of Differences in Weaning Weight EPD

A large five-state, five-year study was conducted to validate the hypothesis that milk EPD truly reflects differences in weaning weight due to milk. Cows were maintained at six different locations representing relatively diverse environments throughout the southeastern quadrant of the U.S. Twenty-four Angus sires were selected for either low or high milk EPD, but with similar growth EPDs, and mated to Angus cows. The average spread in milk EPD between the low and high lines was 39 lb (-13 to +26). Lactation records for 192 daughters were used to evaluate 12-hour milk yield and weaning weight of progeny. The correlation between sires milk EPD and 12-hour milk yield was moderate to high (0.56). The difference between lines for 12 hour milk yield was 1.45 lb. The difference between low and high lines in calf weaning weight was 34 lb, which compared favorably with the spread between lines in milk EPD (39 lb). There was no statistical interaction between genetic line and location, which means that sires tended to rank similarly within each location. When milk EPDs were first published in the 1980s, there was considerable skepticism among beef producers. However, this study,

along with previous studies, indicates that differences in milk EPD are reflective of differences in weaning weight between progeny (Baker et al. 2003. J. Anim. Sci. 81:1406).

SOURCE: Harlan Ritchie, Steven Rust, and Daniel Buskirk
Beef Cattle Specialists
Beef Cattle Research Update
Michigan State University
Release - Fall 2003

-TTM-

Impact of Repetitive Use of Growth Implants on Beef Quality and Palatability

In a large study involving 550 crossbred steer calves, Colorado State Univ. researchers investigated the effect of repetitive use of growth implants on carcass quality and palatability attributes on beef. Steers were allocated to 11 treatments (nonimplanted Control and 10 different lifetime implant strategies). Cattle in the 10 treated groups were implanted at some or all of five production phases (branding, weaning, backgrounding, feedlot entry, or reimplant time). Of the 10 treated groups, one received two implants, three received three implants, three received four implants, and three received five implants. Products used were Synovex-C at branding; Ralgro at weaning; Ralgro or Synovex-S at backgrounding; Synovex-S or Revalor-S during finishing.

- Control carcasses had significantly higher ($P < 0.05$) marbling scores than carcasses in all other groups.
- Steers implanted twice had higher marbling scores than those implanted a total of four or five times.
- Steaks from Control carcasses had lower ($P < 0.05$) shear force values and were rated higher by consumers for tenderness, flavor and juiciness than steaks from all other treatment groups.

- Steaks from Control carcasses were rated as more desirable ($P < 0.05$) in overall eating quality than steaks from steers implanted two, three, four, or five times.
- Implanting increased ($P < 0.05$) average daily gain by 11.8 to 20.5% from weaning to harvest and increased carcass weight by 8.9 to 13.8% compared with Controls.
- Implants increased ribeye area and decreased percentage of kidney/pelvic/heart fat, but did not affect dressing percentage or external fat thickness.

The authors concluded that lifetime implant protocols can influence marbling and eating quality of beef and emphasized the importance of selecting implant strategies based on specific market targets for cattle (Platter et al. 2003. J. Anim. Sci. 81:984).

SOURCE: Harlan Ritchie, Steven Rust, and Daniel Buskirk
Beef Cattle Specialists
Beef Cattle Research Update
Michigan State University
Release - Fall 2003

-TTM-

Don't Try This At Home: UF Vet Heals Sick Horses With Acupuncture

Lost the Triple Crown again? Been a bit slow out of the gate? Four years old and already feeling like a 20-year-old nag?

To help keep animal athletes from going to the glue factory instead of the racetrack, the University of Florida has become one of the few universities to offer acupuncture treatment for horses.

The Chinese have been using the treatment for thousands of years, but despite its versatility, acupuncture on animals hasn't been recognized - or practiced - in the United States until recent years. And universities have been even slower to adopt the treatment, with UF



Huisheng Xie, a lecturer in veterinary medicine at the University of Florida's Institute of Food and Agricultural Sciences, performs acupuncture on Tripp, Wednesday, November 12, 2003, a horse diagnosed with anhydrosis, a common and sometimes dangerous ailment that robs horses of the ability to sweat. Using acupuncture techniques developed in China thousands of years ago, Xie says he has been able to relieve symptoms of anhydrosis in about half the horses brought to him for treatment. AP Photo: University of Florida/IFAS/Thomas Wright.

acupuncturist Huisheng Xie thought to be the only full-time alternative-medicine practitioner on staff at an American veterinary college.

“Not too many people know about it here, but acupuncture for horses has been done for a long time in China,” said Xie, a lecturer in veterinary medicine at UF’s Institute for Food and Agricultural Sciences.

There is one modern twist to Xie’s acupuncture practice: he uses electric needles that carry a mild current - about 4 volts - into a horse’s body. The charge, he says, stimulates nerve endings, making the treatment more effective.

Most Americans are familiar with acupuncture, the ancient Chinese practice that uses needles to treat a variety of illnesses, from headaches to high blood pressure. But most aren’t aware that Asian healers have also used acupuncture techniques on horses for thousands of years.

It appears to be effective in curing a number of illnesses that vex horse owners - illnesses such as founder, a condition that causes foot pain that keeps a horse from standing up, and colic, a painful intestinal condition.

Many of Xie’s patients suffer from anhydrosis, or the inability to sweat, a condition that can be life threatening in the summer months, particularly for horses

that are being transported in horse trailers. Anhydrosis is a common ailment, affecting as many as one-fourth of all horses at some time, but its cause is unknown.

Exactly how acupuncture works is also a mystery, Xie says, though researchers suspect the practice encourages the release of endorphins, the pain-killing hormones naturally produced by the body.

At least, that’s the story according to conventional Western medicine. Practitioners of traditional Chinese medicine have long offered a different explanation: Acupuncture, they say, clears channels through which qi, or energy, flows through the body, restoring a natural balance that leads to good health.

Modern science hasn’t found proof of anything analogous to qi or its channels, but there is evidence that acupuncture does cure certain ailments. For instance, Xie says he has been able to relieve symptoms of anhydrosis in about half of the horses brought to him for treatment.

Though his practice is focused on acupuncture, Xie advocates a blend of traditional Chinese and modern medicine.

“They are merely two different ways of viewing the world, and each system has its own strengths and weaknesses,” he said. “Western medicine deals well with acute diseases and can utilize advanced surgical techniques. Eastern medicine can be beneficial for chronic diseases, especially those that Western medicine can only partially control but not cure.”

While technological advances have radically altered the nature of Western medicine over the past century, the techniques of acupuncture have remained virtually unchanged by modern technology. One important exception is the use of electrically charged needles like those Xie uses on his horse patients.

Acupuncturists often find it necessary to gently rotate needles after they’re inserted in order to stimulate nerve endings, Xie said. By running a mild electric charge through the needle, an acupuncturist can achieve the same effect.

Xie says he sees about 10 patients per week at UF College of Veterinary Medicine teaching hospital. Most of the horses don’t seem to mind a few pinpricks.

Xie says in 20 years of working with horses he has encountered only a handful too frightened to stand still for the treatment.

“Some of the horses are actually very relaxed,” he said.

Xie’s work has even won over some human doubters.

“I have to admit I was a skeptic,” said Melbourne lawyer Wes Howze, who brought his daughter’s horse, Tripp, to Xie to be treated for anhydrosis. “But it’s working, and if it works I’m all for it.”

SOURCE: Huisheng Xie
(352) 392-4700, ext. 4076
Veterinary Medicine - Large Animal
Clinical Sciences
University of Florida
Gainesville, FL
Release - November 12, 2003

-ELJ-



United States Animal Identification Plan (USAIP)

USAIP Executive Summary

Protecting American animal agriculture by safeguarding animal health is vital to the wellbeing of all U. S. citizens. It promotes human health; provides wholesome, reliable, and secure food resources; mitigates national economic threats; and enhances a sustainable environment. Essential to achieving this goal is an efficient and effective animal identification program. Building upon previously established and successful animal health and animal identification programs involving many animal industries, an industry-state-federal partnership, aided by the National Institute for Animal Agriculture (NIAA), was formed in 2002 to more uniformly coordinate a national animal identification plan. This

resulting plan, requested by the United States Animal Health Association (USAHA) and facilitated by USDA’s Animal and Plant Health Inspection Service (APHIS), was formulated in 2003 for presentation at the October, 2003 annual meeting of the USAHA. More than 100 animal industry and state-federal government professionals representing more than 70 allied associations/organizations collectively assessed and suggested workable improvements to the plan to meet future U. S. animal identification needs.

Fundamental to controlling any disease threat, foreign or domestic, to the nation’s animal resources is to have a system that can identify individual animals or groups, the premises where they are located, and the date of entry to that premises. Further, in order to achieve optimal success in controlling or eradicating an animal health threat, the ability to retrieve that information within 48 hours of confirmation of a disease outbreak and to implement intervention strategies is necessary. The USAIP is focused on utilizing state-of-the-art national and international standards with the best available and practical technologies. It is dynamic and flexible, and will incorporate new and proven technologies as they become available. States’ needs in implementing animal identification will receive priority within the uniformity provided by federal oversight.

The USAIP currently supports the following species and/or industries: bison, beef cattle, dairy cattle, swine, sheep, goats, camelids (alpacas and llamas), horses, cervids (deer and elk), poultry (eight species including game birds), and aquaculture (eleven species). Implementation will be in three phases: Phase I involves premises identification; Phase II involves individual or group/lot identification for interstate and intrastate commerce; and Phase III involves retrofitting remaining processing plants and markets and other industry segments with appropriate technology that will enhance our ability to track animals throughout the livestock marketing chain to protect and improve the health of the national herd. Initial implementation will focus on the cattle, swine, and small

ruminant industries. In transition, the USAIP recommends that: all states have a premises identification system in place by July, 2004; unique, individual or group/lot numbers be available for issuance by February, 2005; all cattle, swine, and small ruminants possess individual or group/lot identification for interstate movement by July, 2005; all animals of the remaining species/industries identified above be in similar compliance by July, 2006.

These standards will apply to all animals within the represented industries regardless of their intended use as seedstock, commercial, pets or other personal uses.

It is well acknowledged that costs associated with the USAIP will be substantial and that a public/private funding plan is justified. Significant state and federal costs will be incurred in overseeing, maintaining, updating, and improving necessary infrastructure. Continued efforts will be required to seek federal and state financial support for this integral component of safeguarding animal health in protecting American animal agriculture.

For the Current Work Plan Draft, please visit: http://usaip.info/US_AIP_Plan_Draft_092903_Ver_4_0_Master_.pdf (74 pages - pdf).

SOURCE: Scott Stuart
(719) 538-8843
USAIP Communication
Subcommittee Co-Chair
Release - November 12, 2003

-RSS-



USDA Announces New Food Safety and Security Guidelines for Consumers

Do you know what to do or who to call to report possible food tampering? Do you know how long to safely keep canned tomatoes, versus meat and vegetables? What are the right temperatures for cooking chicken, beef and lamb? And do you know the four food handling rules to minimize the chances you or your family

will experience foodborne illness?

The answers to these questions—and many more—can be found in the United States Department of Agriculture’s new publication, Food Safety and Food Security: What Consumers Need to Know.

“This Administration is dedicated to protecting our nation’s food supply,” said Agriculture Secretary Ann M. Veneman. “This brochure provides consumers important and useful information to help them keep food safe.”

The brochure, developed by USDA’s Food Safety and Inspection Service, will be available in both English and Spanish. It provides useful tips for safe food preparation and for keeping foods safe from contamination. In a concise and easy to follow format, Food Safety and Food Security: What Consumers Need to Know, lays out comprehensive and practical information about safe food handling practices, foodborne illness, product recalls, keeping foods safe during an emergency and reporting suspected instances of food tampering.

“Our food safety professionals have condensed vitally important information covering many topics into a 15-page reference manual,” said FSIS Administrator Dr. Garry L. McKee, at an appearance at the annual meeting of the American Public Health Association. “In addition to practical information on safe food handling and cooking tips, the brochure also describes the extensive programs FSIS has instituted to prevent and respond to deliberate threats. We want consumers to be assured that we are on alert every day in every meat, poultry and egg products plant in America”

For additional information about food safety and security in English and Spanish, consumers can call the toll-free USDA Meat and Poultry Hotline at 1-888-MPHotline (1-888-674-6854); for the hearing-impaired (TTY) 1-800-256-7072. Additional information can be found at <http://www.usda.gov>.

SOURCE: Alisa Harrison, (202) 720-4623
Steven Cohen, (202) 720-9113
<http://www.usda.gov>
USDA, Washington, DC
Release - November 17, 2003

-RSS-