



Beef (Dr. Ron DeVecchio) **A DNA Test for Tenderness**

The ability of the beef industry to consistently provide beef consumers a guaranteed tender product took a quantum leap with the introduction of GeneSTAR® Tenderness, a DNA-based test that identifies variants of the calpastatin gene. Calpastatin is a naturally occurring enzyme that inhibits normal meat tenderization during post-harvest aging.

Research that lead to the launching of the industry's first viable pre-harvest tenderness selection tool indicates that testing and selecting for differences in the calpastatin gene reduces the number of tough steaks by at least half. Such an improvement would be tremendously beneficial to the industry considering the fact that consumer taste panels continue to identify beef tenderness as the primary component to eating satisfaction.

Based upon gene marker research conducted by Australia's Cattle and Beef Quality Cooperative Research Center, CSIRO Livestock Industries and Meat and Livestock Australia, the GeneSTAR Tenderness test identifies two variations of the calpastatin gene, one associated with increased tenderness and the other associated with increased toughness.

In independent studies involving 5,016 carcasses, only 8% of the carcasses from cattle with two copies of the tender form of the gene (2-STAR) were regarded as tough, compared to 21% of the carcasses that were devoid of the tender form of the gene (0-STAR). Of the carcasses with a single copy of the tender gene (1-STAR), 13% were measured as tough. Warner-Bratzler Shear Force (WBSF) was used to determine degree of tenderness. 2-STAR carcasses were almost a full pound of WBSF more tender than 0-STAR.

Of those tested, approximately 75% of animals from British breeds were 2-STAR compared to approximately 30% for the Brahman cattle evaluated. However, every British breed in the study had 0-STAR animals indicating that all breeds can make use of the test. GeneSTAR® Tenderness is a powerful, convenient tool for seedstock and commercial producers concerned about enhancing beef eating quality. (Source: Frontier Beef Systems, December 2002)

A New Study Finds Link between Estrus-Suppressor and Heifer Disease

Data from a three year study, funded by the Canada Alberta Beef Industry Development Fund which monitored 900,000 head of cattle, suggests a link between the use of melengestrol acetate (MGA) and the incidence of acute interstitial pneumonia (AIP) in the feedlot.

AIP typically strikes heifers at body weights of 950 to over 1000 pounds. The frequency of the disease is not terribly high but tends to strike in batches, most often in hot, dry weather. A feedlot operator or producer might not have a problem for several months, but then all of a sudden multiple heifers will be stricken.

The disease is caused by toxic metabolites that impair lung tissue. The damaged cells in the lung tissue lose their ability to properly regulate water, resulting in fluid build-up in the lungs. Symptoms include panting, frothing at the mouth, lowering of the head, as well as an increased respiration rate and grunting. The fatality rate among cattle exhibiting these symptoms is reported to be around 50%.

AIP is a complex disease; however, these researchers found that by eliminating MGA from the diet, the risk of AIP was reduced. Also found was that acetylsalicylic acid (ASA) may increase the life expectancy of cattle with the disease; however, further research is required to confirm this finding. Lastly these researchers did confirm a sex component, showing that heifers (with or without MGA) are much more likely to get AIP than steers. (Source: FASS Track, October 2002)

Beef (Dr. Hollis Chapman) **Investing in Beef Cattle**

Like many industries, the beef cattle industry is a cyclical industry and, at the current time, many beef cattle budgets show little profit. Unfortunately, many potential investors are not aware of this. Therefore, you can be helpful to your clients by exposing them to the world of beef production. Arrange a visit with an economist or beef cattle specialist. This is absolutely necessary if the money to be invested is borrowed. Your client then will recognize the professional effort you have made, and they will be more inclined to consult you about management practices. Any profit potential will be closely tied to management expertise.

Poultry (Dr. Theresia Lavergne) **Exotic Newcastle Disease**

Exotic Newcastle Disease (END) is making the national news these days. On October 1, 2002, END was confirmed in southern California in backyard poultry flocks, and has now spread to commercial poultry flocks in California. In addition, END has been confirmed in poultry flocks Nevada and Arizona.

Exotic Newcastle Disease is a contagious and fatal viral disease that affects all species of birds. The death rate of infected birds is almost 100%, and many birds die without showing any signs of the disease. However, the clinical signs of END include

respiratory (sneezing, gasping for air, nasal discharge, coughing), digestive (greenish, watery diarrhea), and nervous (depression, muscular tremors, drooping wings, twisting of head and neck, circling, paralysis) signs. Furthermore, END is spread rapidly by direct contact between healthy birds and the bodily discharges of infected birds.

The only way to eradicate END from poultry is by destroying infected flocks. Also, the infected areas are quarantined and surveillance programs are implemented.

At this time, END is not present in poultry flocks in Louisiana. However, both commercial poultry growers and backyard/hobby flock owners need to take precautions. Biosecurity on commercial poultry farms and backyard/hobby farms needs to be strengthened. Poultry from the states infected with END should not be brought into Louisiana or into any other state that currently is not infected with END.

Additional information on END can be found at: www.ldaf.state.la.us

Dairy (Dr. Charlie Hutchison) **Lower the SCC**

The next National Conference on Interstate Milk Shipments (NCIMS), which meets every other year, will meet this spring and once again there are proposals to lower the national somatic cell count limit. The National Mastitis Council (NMC), for the third time in six years, will submit a proposal to lower the national somatic cell count limit. This time, NMC is proposing to gradually lower the count to 400,000 over eight years. The first drop would be to 650,000 SCC on January 1, 2005. The proposal then incrementally lowers the count every two years, until the 400,000 SCC level is reached on January 1, 2011. The previous two times that the NMC has presented proposals, opponents have argued that milk containing SCCs above 400,000 was not a human health concern. In the current proposal, NMC cites more than a dozen, refereed scientific journal articles showing that human health risks increase above 400,000. Example: The risk of antibiotic residue violations is two to seven times higher in herds with cell counts above 400,000. Another group submitting a proposal is the American Association of Bovine Practitioners (dairy and beef veterinarians). The current draft of the proposal, which must still be approved by the AABP board, would require that producers meet the 400,000 level by 2007.

Milk Production, Price & Cow Numbers

Despite low milk prices during 2002, December milk production in all 50 states was up 1.7%. Milk production increased despite an exodus of 234,000 head of dairy cattle in December, which was up by 22,000 head compared to December 2001 according to the USDA December "Livestock Slaughter" report.

Milk production for the year was 169.6 billion lb. of milk, 4.2 billion lb. more than 2001, which amounted to a 2.6% increase. However, consumption increased only 1.1%. For the year, producers culled 2.6 million head of dairy cattle — 25,000 head more than 2001. And of that total, most of the exits occurred during the second half of the year. However, milk cow numbers nation wide for the fourth quarter of 2002 averaged 9.15 million, which was 43,000 more head than the fourth quarter of 2001.

The numbers coming from these reports do not send the signal that the market needs to hear in order for milk prices to climb. Therefore, it will take a few more months before the gap between demand and supply starts to narrow so that prices can start to climb out of the basement.

Class I price falls 33 cents

The USDA announced the February Class I price at \$10.23 — a 33-cent decline from January. This will cause the Milk Income Loss Contract (MILC) payment for February to increase 15 cents — to \$1.56 per hundredweight.

Since the beginning of the new marketing year in October, MILC payments have averaged \$1.48 per hundredweight.

Horses (Dr. Clint Depew) **Buying Your First Horse**

Horse ownership can be a very exciting and rewarding activity. The primary reason for horse ownership is companionship, recreation and relaxation. Many young people have developed their confidence and self esteem through horse ownership. Additionally horse projects tend to be a family activity and many positive benefits result from family interaction. Therefore, horse ownership is a very desirable and positive self enhancement activity.

The responsibility for daily care and management of the horse comes with horse ownership. Horses need to be groomed, exercised, and fed daily. Their stalls and surrounding areas need to be cleaned and maintained.

The initial investment in the horse is only a small portion of the actual cost of ownership. Therefore when considering purchase of a horse, weigh the benefits against the cost and responsibilities carefully. Before purchasing a horse, it is advisable to take riding lessons and/or work at a riding stable to access your interest and commitment. Spending time with horse trainers and attending horse clinics will give you an opportunity to learn the skills needed to care for horses and evaluate your desire for ownership. Also, you should talk to horse owners, trainers and county agents about the cost of maintaining a horse. The average horse will need a minimum of 2 acres of pasture to provide adequate forage to meet his nutritional requirements. Some type of shelter is needed and facilities for tack, feed,

and hay are needed in order to care for a horse. A wash area is needed for grooming and a trailer will be needed for transportation. By assessing the cost of horse ownership and gaining experience with horses the potential horse owners can make an informed decision about purchasing a horse.

When buying a horse, buy a horse that fits the rider and the rider's goals. For example it is important that inexperienced riders purchased an older experienced horse to learn on. Older horses generally make fewer mistakes and will tolerate more errors by the rider. Young horses are less predictable, more strong willed, and require a more experienced rider. Generally geldings are steadier and more reliable than mares. If trail or recreational riding is the desired goal, an experienced trail horse should be purchased. It is always advisable to obtain professional help when purchasing a horse. Assistance assessing the horse's temperament and ability will require an experienced horseman. Look at the horse several times and in different situations to assess ability and temperament. With good help and a proper evaluation most errors can be avoided and a suitable horse can be purchased.

After the purchase, take regular riding lessons to improve your skill and knowledge. You will need good equipment and tack to have a safe riding experience. Establish a rapport with a veterinarian, a farrier and local trainers to have an appropriate support team for your horse project. For information about horse care and feeding contact your county extension agent.

Horse ownership can be an exciting and rewarding experience. By making contacts with professionals you can ensure that you purchase an appropriate horse and learn to ride and care for your horse correctly. As a result you will enjoy many years of enjoyable horse ownership. Good luck with your horses.