

The Bexar County Beef Cattle Newsletter

September - 2004

Anthrax Infection Confirmed in Uvalde and Valverde Counties; Livestock in the Area Should Be Vaccinated

Test Animal Health Commission

As of August 10, laboratory results have confirmed that Anthrax infection killed three animals -- a cow, kudu and a whitetail deer -- on three premises in Uvalde and Val Verde Counties in Southwest Texas. Anthrax, caused by the spore-forming *Bacillus anthracis* bacteria, can remain dormant in soil for years, but may become vegetative after periods of wet, cool weather, followed by weeks of hot and dry conditions. Animals become infected when they ingest the invisible bacteria as they graze.

“Ranchers in the Uvalde and Val Verde County area are no strangers to naturally occurring anthrax, and this notice should not raise undue concern to producers, vacationers or hunters,” said Dr. Bob Hillman, executive director of the Texas Animal Health Commission (TAHC), the state’s livestock and poultry health regulatory agency.

“Anthrax is a very old disease and occurs worldwide. Wherever an infected animal dies, the ground becomes contaminated with the spores, unless the carcass and soil are burned with a very hot fire. The spores do not spread underground, so it’s common to see death losses in one pasture, but not across the fence,” he said. He explained that TAHC regulations require that the affected animal’s bedding, its carcass, and nearby manure be burned with wood or gasoline (tires and oil create too much pollution), to cleanse the ground. The livestock on the premises must then be vaccinated and held under quarantine for a short time, to ensure that anthrax-exposed animals are not moved.

“We know that anthrax is under-reported, because some ranchers find the dead, bloated or bloody animals and take immediately action on their own, disposing of the carcass and vaccinating livestock, without notifying their private veterinary practitioner,” said Dr. Hillman. “This disease, however, is reportable in Texas. While laboratory tests, conducted by the Texas Veterinary Medical Diagnostic Laboratory in College Station, are needed to confirm infection, suspected cases also are to be called in to the TAHC at 1-800-550-8242.”

“We recommend the producers consult their private veterinary practitioners about vaccinating livestock, if they have livestock in the area where anthrax infection most often occurs, including Crockett, Val Verde, Sutton, Edwards, Kinney, Uvalde and Maverick counties, said Dr. Hillman. “Because we’ve had confirmed cases in the past in Terrell, Webb and Starr Counties, owners in this area also should keep watch and may want to

consider vaccination, too. One of the unanswered challenges is finding a way to effectively deliver anthrax vaccine to grazing

wildlife, which cannot be herded through a chute to be given an injection.

“Deer owners in these counties should check with their private veterinary practitioner or the TAHC, prior to collecting brain tissue from dead deer for routine chronic wasting disease (CWD) surveillance. CWD has not been detected in Texas, and in some cases, we may want to avoid opening carcasses of dead deer with signs of anthrax. Producers in the CWD program, however, are to report death losses,” he said.

Dr. Hillman urged anyone handling or burning carcasses, or vaccinating livestock against anthrax to wear long sleeves and gloves to prevent potential disease exposure. He said skin anthrax, although rare, can cause a nasty, black sore that requires medical attention and antibiotics. General sanitation procedures should be followed after handling livestock, and equipment used on the animals should be disinfected. Pets should be kept away from dead carcasses or bones of dead animals, which pose a disease risk. Healthy animals should be moved from anthrax-contaminated areas.

“Hunters and campers often ask about dangers posed by naturally occurring anthrax. We advise visitors to avoid dead animals, urge them not to swim in creeks or tanks where dead animals have been seen, and not to pick up shed antlers or old animal bones. By the time hunting season starts, cool weather usually puts an end to cases,” said Dr. Hillman. “When hunting, always shoot only healthy-looking animals. By the time an animal displays signs of anthrax, such as staggering, trembling or convulsions, death is inevitable.” He also said hunters and campers should talk to their physician, if they develop an unexplained sore on their hands or arms after an outing.

Dr. Hillman cited several actions that should be taken during an anthrax outbreak:

1. Properly dispose of animal carcasses by burning to prevent exposure to other animals, such as predators or dogs. Remove healthy livestock from the area.

2. Vaccinate livestock if cases occur in the surrounding areas.

Because the anthrax

vaccine is a “live” vaccine, it should not be administered concurrently with

antibiotics. Vaccinated animals are to be withheld from slaughter for two months.

3. Restrict movement of livestock from an affected premise until animals can develop immunity through vaccination.



Premises Quarantined in Three States, Due to Vesicular Stomatitis

Texas Animal Health Commission

Cases of vesicular stomatitis (VS) continue to be detected in Texas, New Mexico and Colorado, but the disease appears to be occurring at lower levels than in previous years' outbreaks. As of July 22, nine premises in Texas and 11 in New Mexico are under quarantine, due to VS infection. In Colorado, 10 horses and

three head of cattle are quarantined on premises in four counties. The viral infection, thought to be spread by sand flies or black flies, can cause horses, cattle and other livestock to develop blister-like lesions that can take several weeks to heal.

"Nationally, we're seeing fewer cases than in 1997, when the disease was confirmed on 380 premises before the outbreak ended in late fall," said Dr. Max Coats, deputy director for Animal Health Programs for the Texas Animal Health Commission (TAHC), the state's livestock and poultry health regulatory agency. "I don't recall Texas ever having this many confirmed cases – a total of 11 so far -- or seeing them as far east as Starr County. Usually, Texas' lone case or two is detected in far west Texas."

"Even though the case numbers have remained fairly low, some states receiving livestock have imposed movement restrictions or testing requirements, as a precaution against potential disease spread," said Dr. Coats. "Therefore, we urge livestock owners to check with the state veterinarian's office in the state of destination prior to travel, to ensure all requirements are met. States with movement restrictions include Kentucky, Tennessee and New Jersey, which depend on their healthy horse industry."

The country's first confirmed case of VS this year was detected in horses on a premise Reeves County, Texas, in mid-May. The TAHC quarantine was released July 10, after a regulatory veterinarian inspected the livestock on the site several times and found the animals to be fully healed. Likewise, a quarantine in Val Verde County was released July 16, leaving nine premises in five Texas counties under VS quarantine. The quarantined premises include five sites in Starr County, two of which include infected cattle. Horses comprise the remainder of the Texas cases, located on one premise each in Dimmit, Uvalde, Kerr and Yoakum Counties. Maps can be reviewed at: <http://www.tahc.state.tx.us>.

Colorado currently has confirmed cases of VS in 10 horses and three cattle. The infection has been detected in Douglas, Las Animas, Park, and Pueblo counties. Updates on the Colorado cases can be accessed on the internet at: <http://www.ag.state.co.us>

New Mexico has horses on 11 premises in four counties under quarantine. These include six small premises "clustered" in Eddy County, near Carlsbad. Three sites in Valencia County remain under movement restriction, as well as one each in San Miguel and Grant counties.

"Please report signs of illness in livestock that resemble vesicular stomatitis," urged Dr. Coats. "These can include blisters or erosions in an animal's mouth or on the muzzle, on the teats, or above the hooves. VS can affect horses and other equine animals,

cattle, deer, goats, swine and a number of other animals. Tests will be run at no charge to the owner, so that we can ensure that we are, in fact, dealing with VS, and not the highly dangerous foot-and-mouth disease, which exhibits similar signs of disease in cloven-hooved animals." Dr. Coats noted that horses and other equine animals are not susceptible to foot-and-mouth disease, but tests can rule out other causes of illness, such as poison, toxic plants or other diseases.

To report potential signs of VS, owners and practitioners should contact their state veterinarian's office, so a disease investigation and appropriate testing can be conducted:

Texas Animal Health Commission -- 1-800-550-8242

New Mexico Livestock Board -- 1-505-841-6161

Colorado Department of Agriculture, State Veterinarian's Office
1-303-239-4161

Beef Cattle Management Tips:

Dr. Steve Hammack, Professor and Extension Beef Cattle Specialist Emeritus

FACTORS AFFECTING COW-CALF PROFIT

Economists say the best measure of profit in the cow-calf business is return on assets (ROA). What factors result in the highest level of ROA? A study of 148 cow-calf enterprises in the Northern Plains showed that highest ROA was associated with below average levels of investment, low annual costs, and excellent marketing, but only average levels of production. High production often comes from high cost, which can lower profit. (Proceedings of Beef Improvement Federation Annual Meeting: 2002, p. 67)

WHAT DO BULL BUYERS PAY FOR?

A Texas A&M study evaluated factors influencing sale price of 790 yearling Gelbvieh, Angus, and Red Angus bulls in six sales conducted by a seedstock marketing cooperative in five states. Available performance records included birth weight, weaning weight, yearling weight, postweaning gain, frame score, and scrotal circumference. Ultrasound estimates were made for ribeye area, fat thickness, and intramuscular fat percent. EPDs were available for Birth, Weaning, Yearling, Milk, and Total Maternal. Data were analyzed separately for Gelbvieh, and Angus/Red Angus (combined). For Gelbvieh, factors significantly affecting price were sire, birth weight, weaning weight, ADG, scrotal circumference, and ribeye area. No EPDs significantly influenced price. For Angus/Red Angus, only Yearling EPD was of significance. In general, buyers preferred actual performance data over EPDs. (J. Animal Sci. 81 Suppl. 1:111)

DOES EXPOSURE TO BULLS AFFECT ESTRUS AND AI CONCEPTION?

Montana workers exposed half of a group of first-calf heifers to bulls for 40 days, while the other half were not exposed. After 40 days, half of each of those two groups were exposed to bulls for 20 days during and after estrous synchronization, and the other half of each group was not exposed. Significantly more of the females exposed for 40 days began cycling before the estrus synchronization period. Conception rate for the long-term exposed group was 80.8%, versus 53.9% for the short-term group. Exposure to bulls resulted in better AI reproductive performance. (Montana Beef Newsletter 9:4)

WEIGHT AND FRAME SCORE OF CROSSBRED COWS

The U. S. Meat Animal Research Center produced F1 crossbred females from Angus and Hereford dams. Sires were Charolais (C), Galloway (G), Nellore (N), Piedmontese (P), Salers (Sa), Shorthorn (Sh), Texas Longhorn (T), and Angus or Hereford to produce Angus-Hereford crosses (AH). For mature crossbred cows, cow weights (pounds) averaged: (C) 1383, (G) 1190, (N) 1222, (P) 1177, (Sa) 1305, (Sh) 1313, (T) 1141, and (AH) 1224. Frame scores averaged: (C) 7.1, (G) 5.1, (N) 7.3, (P) 5.7, (Sa) 6.6, (Sh) 6.6, (T) 5.5, and (AH) 5.9. (J. Animal Sci. 82:74)

HOW UNIFORM ARE CLONES?

The answer is, as with so many biological questions, it depends. A recent review article on advanced reproductive technologies discusses this subject. There is a common misconception that clones will be identical. But it must be remembered that phenotype depends not only on genotype but also on environmental influences. So, only if heritability is 100% will clone mates have complete uniformity. Many production traits have heritabilities on the order of 25%. For that level of heritability, the variability of clones is still expected to be 85-90% of that of uncloned animals. (Proceedings of Beef Improvement Federation Annual Meeting 2004:5)

BREED AVERAGES FOR EPD

A common misunderstanding is that breed average for Expected Progeny Difference is zero. However, that is usually not true. Why? All breeds using EPD establish a base year, when the average for a trait is zero. Over time, most breeds change, and that change affects the EPD average. For example, for yearling weight EPD the American Angus Association has set the base year as 1979. The breed average for 1972 was -14. But the current average is +65. In using EPD, it is helpful to know how individuals stand in the breed. The U. S. Animal Research Center annually compiles current EPD breed averages. Those averages can be seen at

<http://stephenville.tamu.edu/~shammack/epdavg.htm>

The Facts about Optaflexx™: Ractopamine for Cattle

Jason Cleere Ph.D., Extension Beef Cattle Specialist, Texas A&M University

As competition increases at junior livestock shows, many exhibitors look for ways to gain an “extra edge” in the show ring. Today, many commercial nutritional products are available that contain combinations of vitamins, minerals, probiotics, or fat to help improve the nutritional status of steers or heifers. While these products may help move an exhibitor towards the top of the class, they cannot take the place of good genetics, proper management and care.

On January 28, 2004, Elanco Animal Health™ made Optaflexx™ commercially available. Optaflexx™ is a medicated feed additive and is labeled only for use in steers or market heifers during their last 28 to 42 days on feed. It is not approved for use in breeding heifers or bulls. Optaflexx's™ active ingredient is ractopamine hydrochloride, which is the same compound found in Paylean®, labeled for use only in swine.

When considering using a feed additive such as Optaflexx™, one must remember that the foundation of any livestock project begins with selecting a high quality animal. Next, the exhibitor must choose a high quality feed that meets the basic nutritional needs of the calf. Finally, the amount of time and effort an exhibitor invests in his steer or heifer ultimately determines the success of their project.

Optaflexx™ will not turn an average calf into a champion, but it may help improve an animal's performance and slightly increase their muscle conformation. In research trials, Optaflexx™ increased rate of weight gain, improved feed efficiency, increased ribeye area, and increased red meat yield in cattle fed in confinement. Researchers also noticed a slight increase in muscle conformation in the sirloin and round. Since the product takes action at the cellular level, it does not affect the animal's hormonal status and is not considered a steroid.

The following information answers many common questions about feeding Optaflexx™ to show cattle. (Adapted from educational materials by Elanco Animal Health™)

How does Optaflexx™ work? As the animal reaches maturity, Optaflexx™ redirects nutrients that would have become fat and synthesizes them into protein. The protein is synthesized and is used to increase muscle fiber size, which helps increase lean meat yield.

How will Optaflexx™ affect the performance of my steer? Steers fed Optaflexx™ during the last 28-42 days of the feeding period gained 10 to 20 more pounds and had improved feed efficiency of 14 to 21 percent.

How will Optaflexx™ affect the carcass of my steer? In research trials, Optaflexx™ increased ribeye area by up to ½ inch, but it did not affect backfat thickness, marbling score or quality grade.

Are there any negative effects of Optaflexx™ on my steer? Researchers have not observed any negative effects on animal conformation. However, in cattle with skeletal problems (post legged, straight fronted), the added muscle mass could intensify these problems.

Why is Optaflexx™ labeled for use late in the feeding period? As cattle begin to mature they tend to deposit more fat and less muscle. The active ingredient in Optaflexx™ changes this – it increases muscle growth and reduces fat deposition during the last 28-42 days of the finishing period. Young growing cattle will not respond to Optaflexx™ because most of their nutrients are already directed to protein/muscle synthesis rather than fat synthesis. More importantly, feeding young cattle Optaflexx™ is off-label and illegal.

What happens to my market steer or market heifer when I stop feeding Optaflexx™? Approximately 4 to 8 days after removing Optaflexx™ from the animal's diet, performance begins to return to the level prior to using the product. The animal will begin to shift to fat synthesis rather than muscle synthesis.

Bexar County Beef Cattle Scholarship Winners!

Congratulations to Matthew Eckman and Megan Maenius. Each receipt will receive \$500.00 toward their college career.

Private Applicator Training

Bexar County Extension Office will be conducting a Private Application Training on Thursday, September 2, 2004 beginning at 8:30 a.m. located at 3355 Cherry Ridge Dr., Ste 212. Class is \$25.00 which includes the manual and worksheet.

Wildlife Management Workshop (2 “General” CEU’s Offered)

Wildlife Management Workshops for Absentee Landowners are being held in six locations throughout the State by Extension. The workshop for this area will be held at the Helotes 4-H Center (12132 Leslie Rd) on September 15-16, 2004. Registration is \$50.00 before September 8th, after September 8th it will cost \$75.00 (You may pay at the door). A total of 2 CEU’s in the “General” category will be offered. There will also be exhibits at the workshop. Those wishing to exhibit (\$200.00 per booth) should contact Billy Higginbotham at (903/834-6191) Exhibitor space is limited.. For additional information and registration forms please contact Jerry Warren, at 467-6575 .

TDA Predator Management Training Session Scheduled for Travis County

The Texas Department of Agriculture will conduct a Predator Management Training Program at 10:00 a.m., Tuesday, September 14, at the Travis County Extension office, 1600-B Smith Road in Austin.

The M-44 training session will include identifying causes of predation, alternative methods of predator control and M-44 sodium cyanide application. Applicators must pass a 50-question test after the training session.

Individuals who want to use M-44 sodium cyanide to control coyotes, feral dogs and foxes preying on livestock should attend the course. To continue using M-44 sodium cyanide, all M-44 applicators certified prior to April 18, 1988, must take this course and recertified. Proper certification to use M-44 sodium cyanide also requires possession of a private applicator certificate or license, a noncommercial applicator license or a commercial applicator license to purchase restricted-use and state-limited- use pesticides. Information on obtaining these types of licenses will be covered at the training session.

For additional information or to make reservations, contact Brad Pierce, county extension agent, at (512)854-9600.

Mailing List



To help defray costs, we are updating our mailing list. If you no longer wish to receive this newsletter, please contact Sheilah by phone (210/467-6575) or email at (sjwright@ag.tamu.edu). Be sure to indicate that you wish to be removed from the Beef Cattle Newsletter list.

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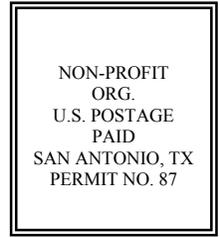
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