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This is number ninety-six of a continuing series of multispecies quarterly reviews and practice tips for veterinarians in Texas. Information in the *Veterinary Quarterly Review* is intended to be timely, concise and of practical value. Ideas and input from practicing veterinarians are encouraged. Sources of abstracts, articles or practice tips will be credited. Questions/comments may be directed to blawhorn@cvm.tamu.edu.



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BEEF CATTLE PRACTICE



Technical and Financial Assistance to Fight Cattle Fever Tick Available Through USDA-NRCS

The USDA-Natural Resources Conservation Service (NRCS) is providing technical and financial assistance to ranchers in a 17-county area to help fight the spread of the cattle fever tick. The assistance will be available through the Environmental Quality Incentives Program (EQIP) for the Rio Grande Domestic Animal Stress/Mortality Statewide Resource Concern. Cattle fever ticks can carry and transmit a tiny blood parasite called *babesia*, which can be deadly to cattle.

The 17 counties included are Brooks, Cameron, Dimmit, Duval,

Frio, Hidalgo, Jim Hogg, Jim Wells, La Salle, Kinney, Maverick, Starr, Val Verde, Webb, Willacy, Zapata and Zavala.

Livestock producers can voluntarily work with their local NRCS and soil and water conservation district (SWCD) to develop a conservation plan with land management practices that help them meet their land

management goals and objectives. Producers will also receive technical assistance to implement the conservation plan and install land management practices to fight the spread of cattle fever tick.

Conservation and land management practices that are eligible for financial assistance in the cattle fever tick initiative are cross fencing, live-

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stock water sources (such as troughs, ponds, wells), brush management, range planting, prescribed burning, prescribed grazing, and wildlife upland habitat management. These practices facilitate livestock handling, alter or destroy the cattle fever tick habitat, and also help manage the wildlife that may be potential carriers/hosts of the fever tick.

"We know that in working together with the landowners and other partners to fight the cattle fever ticks we will be that much closer to eradication," said Don Gohmert, Texas state conservationist with NRCS. "By utilizing the delivery system already on the ground, NRCS and the SWCDs can work with landowners to develop and implement conservation plans that address the whole property in order to protect their natural resources while disrupting the life cycle of the cattle fever tick." Conservation plans help landowners meet their natural resource management objectives.

Gohmert reminded agricultural producers that a conservation plan is not a contract. Only when the landowner receives financial assistance on practices identified in the plan will he/she have contracts drawn up for those specific practices. The assistance and services provided through NRCS and the SWCDs are provided without a fee and are available to all agricultural producers.

NRCS is working in partnership with the SWCDs, Resource Conservation and Development (RC&D) Councils, Texas State Soil and Water Conservation Board (TSSWCB), Texas Animal Health Commission (TAHC), and the USDA-Animal and Plant Health Inspection Service (APHIS) on this fever tick initiative.

Interested livestock producers should visit their nearest NRCS office for more information about technical and financial assistance available to help them fight the cattle fever tick through conservation planning and the implementation of land management practices.

From May 29, 2009 news release, "Technical and Financial Assistance to Fight Cattle Fever Tick Available Through USDA-NRCS," Melissa Blair, 361-241-0609, Melissa.blair@tx.usda.gov, Natural Resources Conservation Service, 13434 Leopard St, Suite A14, Corpus Christi, TX 78410.

2009 Texas A&M Beef Cattle Short Course, August 3-5

The 55th annual Texas A&M Beef Cattle Short Course is scheduled August 3-5 at Texas A&M University in College Station. "Planning committee members from around the state have met with us and helped us put together another outstanding program," said Dr. Jason Cleere, Texas AgriLife Extension beef cattle specialist and conference coordinator. Drought, high production costs, emerging diseases and a weakened market have made this a challenging year for cattle producers, Cleere said. The short course, sponsored by Texas AgriLife Extension Service, will address these and other topics, providing information for both the novice and experienced rancher.

"The short course has become one of the most comprehensive beef cattle educational programs in the U.S., with 20 different educational sessions taught by more than 50 different speakers," Cleere said. The Cattleman's College portion of the short course gives participants an opportunity to choose workshops based on their level of production experience and the needs of their ranch. Concurrent workshops will feature information on ranch management, nutrition, reproduction, genetics, pastures, carcass evaluation, record keeping, brush busting, cattle handling, landowner issues and much more.

In addition, participants can attend one of the popular demonstrations. Dr. Larry Boleman, associate vice chancellor for agriculture and life sciences at Texas A&M and conference director, said, "There will be demonstrations on chute-side calf working, cattle behavior, penning, selection and brush busting. These help

ranchers see beef cattle production practices put to use."

"The goal of the Beef Cattle Short Course each year is to provide the most cutting-edge information needed by beef cattle producers," Cleere said. This year's program is titled "Ranching for the Future." Participants also can receive a pesticide applicator's license during the short course, and can earn pesticide continuing education units if already licensed.

An industry trade show featuring more than 100 agricultural businesses and service exhibits is part of the event.

Registration, which is \$140 per person, includes educational materials, a copy of the 600-page Beef Cattle Short Course proceedings, trade show admittance, admission to the prime rib dinner, meals and daily refreshments.

Registration information and a tentative schedule will be mailed to previous participants in June. It can also be found on the short course Web site. Register online at <http://beef.tamu.edu> or contact Dr. Jason Cleere at (979) 845-6931 or jjcleere@tamu.edu.

From May 1, 2009 news release, "2009 Texas A&M Beef Cattle Short Course Aug. 3-5," Blair Fannin, 979-845-2259, b-fannin@tamu.edu. (<http://agnews.tamu.edu/>)

New Publication E-563, "Texas Bovine Trichomoniasis Control Program," Available

This new publication by Richard V. Machen, Ronald J. Gill, Floron C. Faries Jr. and Thomas Hairgrove (4 pages) summarizes the disease and transmission characteristics of bovine trichomoniasis in bulls and cows. It outlines new measures being implemented in Texas to control the spread of the disease. This publication is available from the Texas AgriLife Extension Bookstore at <http://agrilifebookstore.org>.

**Veterinary Continuing Education Seminars
College of Veterinary Medicine & Biomedical Sciences
Texas A&M University, 2009**

- *July 24-26, 2009 Practical Dentistry for Small Animal Practitioners
(Dr. Bert Dodd)
- *August 7-9, 2009 Orthopedics Conference
(Dr. Don Hulse)
- *August 21-23, 2009 Oncology/Cytology Conference
(Dr. Heather Wilson)
- *September 11-13, 2009 Annual Canine Medicine Conference
(Dr. Audrey Cook)
- *October 2-4, 2009 Annual Clinical Neurology Conference
(Dr. John Levine)
- *October 16-18, 2009 Annual Equine Reproduction Symposium
(Dr. Dickson Varner)
- *October 23-25, 2009 Annual Equine Conference
(Dr. Peter Rakestraw)
- *November 6-8, 2009 Small Animal Emergency Medicine & Critical Care
(Dr. David Nelson)
- *November 13-14, 2009 Small Animal Anesthesia Conference
(Dr. Elizabeth Martinez)
- *December 4-6, 2009 Annual Exotic Pets Conference
(Dr. Sharman Hoppes)

*Confirmed

Calendar is subject to revision.

For more information on these programs of self-study and personalized continuing education opportunities, please call 979-845-9102; (fax) 979-862-2832; or e-mail ceoffice@cvm.tamu.edu. Visit our Web site at <http://www.cvm.tamu.edu/vtce>.

From the Office of Veterinary Continuing Education, Texas Veterinary Medical Center, College Station, Texas.

canine cystoliths, and 0.17% of feline cystoliths and 4% of recurrent feline cystoliths. Intact and neutered male dogs were more likely to have suture-associated cystoliths than spayed female dogs. Shih Tzus, Lhasa Apsos and Pomeranians were significantly predisposed to form suture-associated cystoliths. In dogs, compound suture-associated cystoliths were significantly more likely than other cystolith types. Dogs with suture-associated cystoliths had significantly shorter recurrence times than did control dogs.

Clinical implications: These results indicate that suture remnants in the bladder have an important role in recurrent cystolithiasis in dogs. Therefore, during cystotomies, veterinary surgeons should place suture material so as not to enter the bladder lumen and take care not to leave any suture "clippings" loose in the bladder.

Abstracted from "Evaluation of Risk Factors Associated with Suture-Nidus Cystoliths in Dogs and Cats: 176 cases (1999-2006)," Appel S.L., Lefebvre S.L., Houston D.M., et al, *Journal of the American Veterinary Medical Association*, Volume 233, No. 12, December 15, 2008, 1889-1895.

GENERAL PRACTICE

New Publication E-566, "The April 2009 Influenza Outbreak," Available

This publication contains information about the recent influenza virus outbreak called swine flu, H1N1 and North American Influenza. There are tips for protecting yourself from the disease and precautions swine producers can take to avoid introducing this disease into their herds (bilingual; 2 pages). This publication is available at the Texas AgriLife Extension Bookstore (<http://agrilifebookstore.org>).

CANINE AND FELINE PRACTICE



Importance of Suture-Nidus Cystoliths in Dogs and Cats

A retrospective case-control study was conducted to characterize and evaluate risk factors for suture-associated cystoliths. The records of 163 and 13 affected dogs and cats, respectively, were compared to records of 326 dogs and 26 cats (controls) with non-suture-associated cystoliths.

Results: Cases included 92 dogs and 7 cats with visible suture in the bladder and 71 dogs and 6 cats with dissolved suture. Suture-associated cystoliths represented 0.6% of canine cystoliths and 9.4% of recurrent

Many Springtime Landscape Plants Toxic to Dogs and Cats

Many springtime house and garden plants may be potentially toxic to pets. Examples are brunfelsia, cycads, lilies, kalanchoe and oleander.

Brunfelsia, commonly called "yesterday, today and tomorrow plant," causes convulsions in dogs that look like strychnine poisoning. Brunfelsia is mostly a house plant but is also found in sheltered gardens in southern Texas.

Cycads are low-growing palm trees that are used as indoor and outdoor ornamentals. Dogs tend to become intoxicated by chewing on the roots. However, both the stems and roots are toxic to the liver. In an affected dog, normal clotting factors are severely compromised so that there is severe hemorrhage to the point of bleeding to death.

While brunnfelsia and cycads are not known to cause problems in cats, lilies are especially harmful and cause nausea and vomiting, followed by depression and anorexia. It is unknown why cats ingest lilies, but prompt treatment by a veterinarian within 24 to 48 hours is necessary to minimize the very toxic effect on the kidneys.

Kolanchoe is a house plant that contains a chemical similar to digoxin and is toxic to the heart.

Oleander, a common garden plant, also contains digoxin-like compounds. Both kolanche and oleander can be toxic to all animals, including dogs and cats.

Adapted from Dr. Murl Bailey's comments for the article, "Springtime Yard Hazards for Pets," in Pet Talk, a service of the College of Veterinary Medicine and Biomedical Sciences, Texas A&M University. Pet Talk stories may be viewed at <http://tamunews.tamu.edu/>.

AQUATIC PRACTICE

New "Texas Crawdads" Field Guide Available

The recently published field guide for the crawfish of Texas is available. This 2008 book is a one-of-a-kind reference compiled by the father and son team Sterling K. and Nathan K. Johnson. Sterling Ken Johnson is a retired professor and aquatic animal disease specialist at Texas A&M University. In its 160 pages, this book includes more than 50 distribution maps, more than 150 line drawings, and more than 140 color photos of all the crawfish species (and several varieties) found in Texas. Multiple photos of each species help readers understand how appearance may vary in an individual species. It is the most comprehensive publication about Texas crawfish produced to date.

Texas Crawdads is written for mentors of young people interested in aquatic life, youngsters with experience at catching crawfish, naturalists, biologists and anyone interested in na-

ture. Readers will learn about the life and habitat of Texas crawfish and how to identify, locate, catch, show, grow, collect, photograph and draw them. The book also depicts animals that are likely to be caught along with crawfish.

Texas Crawdads may be ordered at <http://www.texasrawdads.com> for \$24.95 each.

From "Crawfish Chronicles," Texas Parks and Wildlife, page 15, April 2009, and Texas Crawdads website <http://www.texasrawdads.com>.

SWINE PRACTICE

Mexican Farm Tests Negative for H1N1 Influenza Virus

The Mexican Ministry of Agriculture, Ranching, Rural Development, Fisheries and Food confirmed that the H1N1 Influenza A virus was not in pigs at the Granjas Carroll de Mexico (GCM) farm in the Valley of Perote, Veracruz, Mexico. C. Larry Pope, President and CEO of Smithfield (GCM is a joint venture with Smithfield Foods), sent a letter to all Smithfield employees confirming that the current pandemic human strain of H1N1 Influenza A virus was not present in pigs at GCM.

Perote, headquarters for GCM operations, is near the community of La Gloria, which had been suggested as a possible epicenter of the recent pandemic H1N1 influenza outbreak. A young boy from La Gloria has been identified as the first known case of the disease. Locals and media groups speculated a possible connection to GCM swine farms in the area. The company responded by cooperating with authorities to collect samples from pigs for analysis at government laboratories. The samples were collected on April 30 and the results were announced on May 13, 2009.

Adapted from "GCM Reports H1N1 Test Results," American Association of Swine Veterinarians Web site <http://www.aasv.org/news/story.php?id+3582> and "Mexican Farm Has No H1N1," *Feedstuffs*, May 18, 2009.

2009 H1N1 Influenza A Virus

Soon after the emergence of the H1N1 virus in April 2009, Agricultural Research Service (ARS) scientists at the National Disease Center in Ames, Iowa, began research using virus samples provided by the Centers for Disease Control and Prevention (CDC). The first step was to evaluate whether current U.S. H1N1 swine influenza vaccines can protect pigs from infection with the 2009 H1N1 influenza virus that is circulating in people. This research also evaluated whether pre-existing titers in pigs previously infected with endemic H1N1 swine influenza viruses circulating in the U.S. could protect against the 2009 H1N1 influenza virus.

Classical swine influenza virus infections are enzootic among pigs in North America. Sporadic cases of human infection have been reported in the U.S. and elsewhere. Worldwide, more than 50 human cases of swine influenza infection, mostly due to classical swine influenza virus, have been documented in the past 35 years. At greatest risk are people who work with live pigs.

Experts believe pigs can act as a "mixing vessel" for the reassortment of avian, swine and human influenza viruses, and might play an important role in the emergence of novel influenza viruses that could cause a human pandemic similar to the virus in the current outbreak.

However, by the late 1990s, multiple strains and subtypes of triple reassortment swine influenza viruses—whose genomes include combinations of avian, human and swine influenza virus genome segments—had emerged and they became predominant among North American pigs. The 2009 H1N1 influenza virus is also a triple reassortment, but its lineage is different than the H1N1 influenza viruses currently circulating in U.S. pigs.

Background

The genetic makeup of swine influenza viruses is identical to other influenza A viruses. It consists of eight segments of RNA that code for different proteins. Influenza viruses can exchange these segments to create new, genetically different viruses. Influenza A viruses are identified by two major surface glycoproteins called hemagglutinin (H) and neuraminidase (N). These glycoproteins also determine the host range, antigenicity and the pathogenicity of the viruses. The H and N proteins are important targets for diagnostics and are used to designate the subtype of the virus.

Currently, 16 different hemagglutinins and nine neuraminidases have been identified. Most of these viral subtypes are found in waterfowl, with only a few combinations found in humans and swine.

Swine influenza virus (SIV) is one of the primary causes of respiratory disease in growing pigs and can lead to major economic losses. Currently, only H1N1, H1N2 and H3N2 subtypes are circulating in U.S. swine population.

Pigs have long been considered a potential source for new and novel influenza viruses that infect humans, as they have receptors on their cells that bind both mammalian and avian influenza viruses, increasing the opportunity for the exchange of genetic segments of the virus.

Previously, the CDC had reported approximately one case of human infection with a swine influenza virus every 1 to 2 years.

Recent ARS Research Results

ARS researchers tested serum samples from pigs previously infected with U.S. swine influenza viruses or vaccinated with commercial vaccines to determine if U.S. commercial swine herds are susceptible to the new 2009 H1N1 influenza virus circulating in humans. They found

that there was a limited cross reactivity against the 2009 H1N1 virus. This suggests that pre-existing immunity induced by swine influenza viruses previously circulating in the U.S. may not protect pigs against the 2009 H1N1 influenza virus presently circulating in people. Importantly, vaccines currently used to protect pigs on U.S. swine farm operations against swine influenza viruses may not be effective against the 2009 H1N1 influenza virus.

ARS scientists will be testing the efficacy of swine influenza virus vaccines in a pig vaccination challenge study to determine whether finding measurable antibody titers in vaccinated pigs correlates with protection against the new virus.

For more information about ARS research on H1N1 (swine) influenza viruses, contact Cyril Gay, ARS Senior National Program Leader, Animal Health, cyril.gay@ars.usda.gov.

Adapted from "2009 H1N1 Influenza A Virus," USDA/ARS website <http://www.ars.usda.gov/2009H1N1>.

Barriers to Understanding Antibiotic Resistance Relationship to Food-Borne Illness

As a risk analyst specializing in food-borne illness, I often ask myself, "How can conscientious public health officials and scientists so diametrically disagree on whether use of antibiotics in food animals is causing risk of human disease?" I think there are three reasons.

First, I don't think the public health community understands it's a long, long way from the farm to the fork. And a number of interventions take place along the way to prevent people from getting sick from food-borne pathogens—antibiotic-resistant or not!

Second, I think people forget that if you support the argument for taking antibiotics away from the farm,

then you should meet the burden of proof to establish a specific causal relationship, linked all the way from the farm to the sick individual. When the microbiology of resistance is explored in a general sense, we know that most bacteria grown in the presence of an antibiotic will develop resistance mechanisms. But a lot of people have taken that understanding of microbes in the test tube and made assumptions on which to make national policy. The problem is the data does not support the pathway of cause and effect. For example, in Denmark, where growth-promoting antibiotics were removed from pig production, the World Health Organization (WHO) studied the issue about 4 years after the ban. WHO found that little or no improvement occurred after the ban and, in fact, WHO suggested the possibility of some increased risk to public health because of the ban.

Third, any cause and effect relationship concerning antibiotic resistance varies, depending on which antibiotic and which bacteria one is looking at. So it really has to be approached on a case-by-case basis—there are no shortcuts! When one examines antibiotic resistance on a case-by-case basis, a review of the few risk assessments that have been published for specific drugs shows an extremely low risk that people are going to have any extra illness because of farm antibiotic use.

The FDA has stated that we need to assess risk on a case-by-case basis, and drug sponsors have responded. A broad-based ban like Europe's and the one proposed in Congress, which are aimed at entire classes of antibiotics based simply on the way they are used, short-circuits that scientific risk-assessment process. It is throwing out the baby with the bath water.

From Dr. Scott Hurd (former USDA Deputy Under Secretary for Food Safety; currently Associate Professor, Iowa State University Institute for Food Safety and Security) "Why Can't We All Agree," *Pork*, May 2009.



“Information on Equine Plasma and Serum Products for the Equine Practitioner,” Recently Released by AAEP

There can be much confusion over the claims of therapeutic efficacy, safety and regulatory oversight of the many equine serum and plasma products available. The American Association of Equine Practitioner’s

(AAEP) Biologic and Therapeutics Agents Committee developed and released the document “Information on Equine Plasma and Serum Products for the Equine Practitioner,” which contains references for product background information, a review of recent publications, and a listing of licensed manufacturers for these products. For more information, go to www.aaep.org.

From American Association of Equine Practitioners, www.aaep.org, May 2009.