AVMA News
Resurgence of Concern about Leptospirosis Reported

A resurgence of concern about a major reproductive disease in cattle has been reported just as one of the few antibiotics that has been effective in treating has been withdrawn from the market in the U.S.

Leptospirosis, caused by a bacterial infection that affects all mammals, was the first recognized nearly 100 years ago and thought to have peaked a generation ago, reported Carole A. Bolin, D.V.M., Ph.D., research leader at the U.S. Department of Agriculture's National Animal Disease Center in Ames, IA.

"Now we're seeing a resurgence of interest, partly because vaccines do not provide protection against common types of the disease, and it is often difficult to diagnose and treat," Dr. Bolin said. Tests at the slaughterhouse show that up to 10-15 percent of U.S. cattle are infected, according to Dr. Bolin.

Leptospirosis is so named because it is caused by infection with the bacterium *Leptospira interrogans*, of which approximately 200 different serovars have been identified. In cattle, the most common serovar is *hardjo*. "Vaccines for *hardjo* are not providing optimum protection of cattle. Improvement in their efficacy is necessary," said Dr. Bolin.

In addition, the antibiotic that has provided the most effective treatment for leptospirosis, dihydrostreptomycin, has been withdrawn from the market in the U.S., according to Dr. Bolin.

Leptospirosis is an important cause of bovine abortions, stillbirths and birth of weak calves. It also affects swine and dogs and is commonly transmitted from wildlife carriers, including skunks, opossums, raccoons, rats and mice. In its acute form, Leptospirosis may cause serious liver and kidney disease that can be fatal to any mammal.

"In herds in which *hardjo* infection is endemic, the incidence of abortions, stillbirths and weak calves can be reduced by assuring that heifers are exposed to older cows and, therefore, to *hardjo* before breeding," she said. "In some herds, however, this may lead to breeding difficulties associated with persistent infection of the reproductive tract. Another disadvantage of this approach is that infected cattle may remain persistently infected and shed *hardjo* in their urine for long periods of time, serving as a reservoir of infection for other animals and humans," she added.

Harmless Fly’s Bite a Fatal Encounter for Horses in U.S.

For hundreds of horses in the U.S. each year, a seemingly harmless bite from a horsefly or deerfly becomes a fatal encounter, according to a report at the annual meeting of the AVMA.

In most cases, owners of the infected horses are not aware that their animals have become carriers of dreaded Equine Infectious Anemia (EIA), known also as Coggins' disease, reported Pamela A. Pintchuk, D.V.M., of Oklahoma State University, Stillwater.

"We'll probably never eradicate EIA, because we would have to test every horse in the country to do it," Dr. Pintchuk said. Once a horse gets EIA, it's permanent. The animal may not show frequent signs of illness, but it will never recover. Infected horses will continue to contaminate other horses unless kept in lifelong quarantine or destroyed. The disease is passed by insects that bite an infected horse, then pass EIA on to others. A simple blood test detects the offending virus.

Last year, 1,974 of the 1,057,377 horse tested (0.18 percent) were positive for EIA, according to Tim Cordes, of the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, Riverdale, MD. The most cases were found in the lower Mississippi River/Gulf Coast states: Louisiana (428), Texas (416), Arkansas (226), Oklahoma (177), Missouri (139) and Mississippi (135).

Prevalence of EIA edged up in 1994, but it is down from 1979, when 4,571 of 658,944 animals tested positive. EIA has been infecting U.S. horses for over 100 years. "The problem has suffered from lack of interest in the last decade. Efforts to increase surveillance are now underway to help us do a better job of controlling EIA," Dr. Pintchuk said.

Most infected horses carry the virus in its apparent form and show few, if any, clinical signs. Horses with acute EIA are listless and suffer fever, anemia, weight loss, edema and can die. In a sub-acute form, these clinical signs can come and go, but the animal never recovers.