



Anthrax in Louisiana



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What is anthrax?

Anthrax, often called “charbon,” is a fatal, infectious disease of all warm-blooded animals, including people. Anthrax is a reportable disease that often occurs on many farms simultaneously. Prompt diagnosis is essential for alerting livestock and horse owners of the need for protective action.

History of anthrax in Louisiana

Anthrax has been recognized as an important disease of livestock in Louisiana for more than 200 years. Soon after the French arrived, anthrax was observed in deer in the salt marshes west of the mouth of the Mississippi River. The disease has occurred sporadically in coastal pastures of Louisiana and Texas.

Anthrax was occasionally seen along the Red River north of Alexandria before 1960. In 1919, a veterinarian described an outbreak in cattle grazing a swamp pasture along the Comite River north of Baton Rouge at Slaughter. A major outbreak occurred east of Bastrop after the great Mississippi River flood in 1927. In 1946 and 1958, outbreaks of anthrax killed livestock and horses along the Ouachita River east of Monroe. Drought in the Midwest caused the Mississippi River below New Orleans to recede in 1954 and an anthrax outbreak followed. The last major anthrax outbreak occurred in the summer of 1971 in a 10-parish area south and west of Baton Rouge.

What is the source most common of infection?

In Louisiana, most outbreaks of anthrax occur during warm weather when the organism *Bacillus anthracis* is ingested by animals grazing areas previously contaminated by an animal dead or dying of the disease. Spores of the anthrax organism can survive for many years in soil that has a pH above 6.0. Contaminated soil from anthrax graves may be unearthed by ditch digging, bull dozing or similar activities.

It is thought that resistant spores remain until favorable conditions allow active growth and reproduction of the organism. Drought followed by heavy rains and then dry, hot weather often precedes an anthrax outbreak. The anthrax organism is thought to reproduce in decaying plant material at the edges of receding ponds or lakes during drought. Similar areas may be formed where water stands after heavy rains or flooding of pastures. Experts suggest that it is also possible that, during local flooding of pastures, spores are floated to the soil surface and then concentrated as floodwaters dry up. Animals grazing short grass ingest a considerable amount of dirt, increasing their exposure.

Are there other sources of infection besides soil?

Yes, so anthrax-positive cases should be investigated to determine the source. Animal-origin feed materials such as bone meal, meat byproducts, meat meal, possibly certain fertilizer materials, discharges or wastes from tanneries and carcasses fed to zoo animals have been

sources of anthrax exposure in other regions of this nation and in other countries.

Dogs feeding on anthrax carcasses have developed intestinal anthrax in previous Louisiana outbreaks. Their bloody stool material spreads the disease. Skinning a carcass to “save the hide” has led to anthrax carbuncles in the skin of people. Veterinarians are obviously at risk while doing necropsies on animals.

What signs are suggestive of anthrax?

Signs of illness develop two to 10 days after exposure. Often a cow, horse, sheep or goat is found dead, with dark blood oozing from the nostrils and anus. The carcass is bloated, with the legs distended shortly after death.

A sick animal may have a fever of 106 degrees or higher, appear depressed and isolate itself. Large swellings (hematomas) may appear on the shoulder, brisket or side. A “blackberry jam” stool may be passed. Death comes within hours to two days after signs of illness develop. Affected swine have difficulty breathing because of swelling in the throat, but they may survive longer than other species.

How is anthrax confirmed?

Prompt diagnosis of this disease is vital for protection of animal and human health. It is important that an anthrax-suspect carcass not be opened. A veterinarian will draw a small amount of blood from the jugular vein and submit this sample to the Louisiana Animal Disease Diagnostic Laboratory for examination if he or she suspects anthrax. A postmortem (necropsy) examination can be conducted if microscopic examination of the blood proves negative.

Is there an effective treatment?

Penicillin and tetracycline are effective in animals in the very early stages of the disease. Livestock producers should contact their veterinarian for advice on antibiotic and other supportive treatment.

What actions do the state animal health authorities take when anthrax is diagnosed?

The Office of the State Veterinarian, Louisiana Department of Agriculture and Forestry, is notified of confirmed anthrax cases. Veterinarians and animal owners are alerted. Recommendation is made for immediate vaccination of all livestock and horses in the area of the outbreak. People are urged to report sick or dead animals or to have a veterinarian collect specimens for diagnosis.

How are contaminated carcasses and body discharges disposed of?

When carcasses of anthrax infected animals are opened, the exposure to air causes the anthrax bacteria to form resistant spores. These spores are capable of surviving for years. The organisms die in unopened carcasses. Carcasses should be buried or burned where found, if at all possible, so that contaminated feces, urine and blood discharges will not be

spread about.

Disposal should be supervised by a state or federal veterinarian. It is important that the carcass, blood and other discharges be burned or buried.

How do I protect my animals when anthrax is diagnosed on my farm or in the area?

Vaccination using Sterne's non-encapsulated spore vaccine will induce protection for most animals within eight days. This protection is strong, probably lasting one to two years. Supply could be limited during an outbreak.

Animals sick at time of vaccination should be treated with antibiotics for several days. They should be held separately from the herd, then vaccinated seven days after the last dose of antibiotic. The antibiotic will interfere with the action of the vaccine.

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