

## **Anthrax in Cattle**

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Recent events have spotlighted Anthrax as a method of bio-terrorism. Anthrax is not new to the United States cattle industry and has been in the US for nearly 200 years. Anthrax can be an acute, sudden death in cattle and is caused the bacterium, *Bacillus anthracis*. The bacterium is not easily spread from an infected animal to man because it is not easily airborne to cause the respiratory form of disease and the skin form generally requires that a person have a skin cut while handling an infected animal. What makes this cattle disease unusual is that when the bacteria are exposed to oxygen, spores are formed that remain viable in the soil for years. There are several areas in the United States that have repeated outbreaks of Anthrax because the specific soil type and climatic conditions are conducive to the bacteria and the soils become contaminated. These regions include South Dakota, Nebraska, Arkansas, Mississippi, Louisiana, Texas, and California. Each year small outbreaks of cattle and/or sheep Anthrax are reported in the US. Anthrax has been reported in nearly every state in the US, the last known case of cattle Anthrax in Georgia was over 50 years ago.

Anthrax is a soil born organism that will become infective during periods of environmental change as in time of a drought followed by heavy rain. It has also been associated with close grazing following a draught. The cattle ingest the anthrax spores into their respiratory tracts as they graze dusty, contaminated pastures or into their digestive tracts as they eat dusty contaminated plants. Once the spores are consumed by the cattle, the spores become infective and invade the rest of the body. *Bacillus anthracis* produces toxins that destroy blood cells and tissues of the body.

Cattle, sheep and goats are highly susceptible to infection with anthrax while people and swine are less susceptible. The clinical signs in infected cattle would include sudden death with a tremendous swelling under the skin, especially around the neck area. The blood of infected cattle fails to clot so if the cattle survive long enough there will be blood tinged urine and a bloody diarrhea. Cattle carcasses putrefy rapidly after death and this putrefaction destroys many of the bacteria. The bacteria are generally confined to the carcass and opening the carcass of an Anthrax suspect may cause spread of the disease. It is possible to get a skin infection if you handle a carcass with a cut in your skin.

Anthrax is a treatable disease if diagnosed early. **Penicillin and oxytetracycline are effective antibiotic treatments for cattle.** There is a vaccine available for livestock and vaccination is effective if used 2 – 4 weeks before the season when outbreaks are expected. **Anthrax in Georgia cattle is extremely unlikely. The soil type and climatic conditions are not conducive to the anthrax organism.**