

## Livestock Anthrax Facts Sheet

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*Provided to you by the Farm Animal Council of Saskatchewan*

1. **What is anthrax?** Anthrax is a disease caused by the bacterium *Bacillus anthracis*. It has been reported for thousands of years and is found worldwide. There are 3 forms: gastrointestinal, cutaneous, and inhalation. The most common form in animals is the gastrointestinal form. Anthrax is a reportable disease in Canada under the Health of Animals Act. Animal anthrax is a naturally occurring disease, which is a very different disease than the "white powder" made in a laboratory and used for bioterrorism.
2. **How is anthrax transmitted in animals?** Anthrax is not a typical contagious disease. Animals must ingest the spores from the environment. It is, therefore, called an "environmental disease" and not a contagious disease. It is not transmitted from animal to animal and there are not healthy carriers of the disease. The spores are already in the environment from cases of deadly anthrax decades ago.
3. **Who is susceptible?** Most mammals are susceptible, including humans. Herbivores (plant eaters), such as cattle, horses, sheep, goats, bison, elk and deer, are most susceptible.
4. **Is there a vaccine?** Yes, it is made by the Colorado Serum Company and is available through your local veterinarian. The vaccine is labeled for use in cattle, horses, sheep and goats. It is given subcutaneously (under the skin). See vaccine label for instructions. Withdrawal time, according to the label, for meat is 42 days after the last dose of vaccine and there is no withdrawal time for milk. Do not treat animals (with antibiotics) within 8 days before or after administering the anthrax vaccine. The vaccine is a modified live bacteria and antibiotics will inactivate the vaccine. The manufacturer indicates the vaccine to be protective 8-10 days after vaccination.
5. **Is the vaccine safe to use?** Yes, if used according to the label instructions. Reported side effects of the vaccine are anaphylactic reactions (rare) and local tissue swelling. The manufacturer suggests that dividing the vaccine dose between both sides of the neck in horses will decrease the local reaction.
6. **What are the common signs of anthrax in livestock?** Animals are typically found dead and may have bloody discharge from body openings. Occasionally, animals will be depressed, off feed, with diarrhea and a high fever for a couple days preceding death.
7. **What do I do if I have sudden deaths of livestock?** Do not touch or move the carcass. Try to prevent scavenging of the carcass and do not open the carcass for an autopsy. Call your local veterinarian and they will contact the CFIA to test for anthrax.
8. **What is the risk to humans?** Minimal. The cutaneous form is the most common form in humans and is usually not fatal. This form is the result of spores entering the skin through existing cuts/abrasions during contaminated carcass handling. Typical lesions appear as black ulcers on the skin. If you are suspicious of being exposed to anthrax please contact your medical doctor.
9. **What happens if my farm has a positive case of anthrax?** All animals on the farm will be vaccinated for anthrax. The first dose is paid for by the CFIA and any boosters are at the expense of the producer. A quarantine on animal movement will be in effect on the premises for 21 days after the last animal is vaccinated or 21 days after the last positive anthrax case on the premises. However, milk will not be quarantined. An indemnity is paid by the CFIA for animals confirmed by the CFIA to have died due to anthrax. The anthrax positive carcass will be disposed of under the guidelines of the CFIA including deep burial (8 feet or deeper) or incineration and decontamination of the area and equipment used to handle the carcass with lime or formalin.
10. **Life cycle of anthrax:** When an animal dies of anthrax the tissues are loaded with the bacteria. If the bacteria are exposed to oxygen from the carcass being opened they form spores. The spores are very hardy, surviving in the environment for many decades allowing cases to occur sporadically. The spores are brought up to the soil surface by digging and flooding and can be spread by scavengers. Herbivores ingest the spores and they are reactivated in the intestines and release a toxin causing death of the animal.
11. **Do animals survive anthrax?** Prognosis for animals with anthrax is very poor. Some may be treated with antibiotics and supportive care if diagnosis and treatment begin early in disease.
12. **When is it recommended to vaccinate my livestock?** Vaccination is required for those premises with a confirmed positive anthrax case and will be administered by the CFIA. It is recommended that all livestock within 10km of the positive premises also be vaccinated. Producers should contact their local veterinarian for advice on vaccination.

### References:

[www.inspection.gc.ca](http://www.inspection.gc.ca)

[www.facs.sk.ca](http://www.facs.sk.ca) (accessed Aug. 2, 2006)

[www.colorado-serum.com](http://www.colorado-serum.com) (accessed Aug. 4, 2006)