

Anthrax in Animals

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Article Title: ANTHRAX -AUSTRALIA: (NEW SOUTH WALES) SHEEP

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The article is about a first confirmed reported case of Anthrax in New South Wales. The Department of Primary Industries and Local Land Services in Australia confirmed the case in a farm where an outbreak had never been reported before (ProMedMail.org, 2020). Following the incident, farmers are being urged to vaccinate their livestock to avoid the occurrence. However, as an immediate precaution, the department ensured all biosecurity measures around the farm including isolation and vaccination of healthy animals. It was observed that the animals had not been vaccinated against anthrax. The reported conditions that may have promoted the disease are promoted by the impending drought. Animals exposure to sand during the dry season leads to ingestion of soils which is a key risk factor for anthrax.

Researchers put it that the ecology and distribution of Bacillus anthracis is not properly understood despite its various occurrences in the Eastern states of Australia (Barro et. al., 2016). The geographical special estimations put the outbreaks occurring between northern Victoria down to New South Wales to southeast Queensland. However, the geographical belt provided by the researchers does not provide for the environmental conditions leading to the distribution of Bacillus anthracis (Barro et.al., 2016).

Additional Information on Disease

Causes of Anthrax

The disease is bacterial and can occur in both animals and human beings. It is caused by bacterium *Bacillus anthracis*. The bacteria are relatively hardy because it can remain viable in the soil for up to 50 years. This is the reason for maximum quarantine in the areas that are affected. On the other hand, the bacterium is viable in the bones of affected animals for up to 200 years. The outbreaks are observed to be experienced during long periods of rainfall or during cases of prolonged drought. Anthrax affects a variety of livestock species including cattle, sheep, horses, pigs and goats. It is important to note that exposed dogs can also be infected. Human beings are infected by close proximity with infected carcasses as well as potentially infected meat.

Symptoms and Diagnosis

The symptoms that farmers are told to look out for include a drop in milk production in the case of milk producing animals. Any significant drop in milk production should inform the farmer of some form of disease in the herd. On the other hand, additional signs to look for are red stained milk or animal urine. The stains indicate tissues tears and should be an indication of internal displeasure. Anthrax is a disease whose rate of acceleration is very fast, for this reason, farmers are told to look out for signs of weakness in the animals as well as staggering, an accelerated rate of deterioration indicates anthrax. The weakness can be followed by sudden death of many animals. Most animals also have discharge from the mouth, nose or anus. Some animals show unique signs such as colic and or diarrhea in horse and symptoms like throat swelling in non-ruminants like dogs and pigs.

Spread

Grazing animals are affected by ingesting the spores in the soil which later activate and multiply rapidly in the body of the host animal. Human beings get infected when the spores get into their

bodies from exposure to the affected animals. In the same way, the bacterium multiplies and becomes a severe disease. In human beings, it happens when they breath in the spores or eat food contaminated by the spores. It is important to note that spread in animals rarely occurs through respiration.

References

Barro, A.S., Fegan, M., M, Moloney, B., Porter, K., Muller, J., Warner, S., & Blackburn, J. K. (2016). Redefining the Australian Anthrax Belt: Modelling the Ecological Niche and Predicting the Geographical Distribution of *Bacillus anthracis*. *PLoS neglected tropical diseases*, 10(6), e0004689. <https://doi.org/10.1371/journal.pntd0004689>.

www.cdc.gov/anthrax/basics/index.html

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