





MINISTÉRIO DA AGRICULTURA, PECUÁRIA E ABASTECIMENTO



## Joint Technical Note Nr. 001/2017

**Subject**: Occurrence of bovine mortality in Mato Grosso do Sul State and adopted measures **Date**: August 8<sup>th</sup> 2017

In response to the broadcasting several reports on the mortality of cattle with nervous symptoms in the State of Mato Grosso do Sul, the Secretariat of Environment, Economic Development, Production and Family Agriculture (Semagro), through the State Agency of Animal and Plant Health Protection (lagro), together with the Ministry of Agriculture, Livestock and Supply (MAPA), informs that all necessary measures are being taken to identify the cause, as well as the resolution of the problem.

It is worth mentioning that there are innumerous possibilies within the Complex of Nervous Diseases that affect the cattle. Among the main ones are botulism, fungal intoxications, rabies.

Historic:

1. August 3<sup>th</sup> 2017, samples from Ribas do Rio Pardo for the differential diagnosis of rabies and botulism were sent to the Laboratorial Unit of Rabies and Botulism of the Laboratory of Diagnoses of Animal Diseases and Food Analysis - LADDAN/IAGRO. These samples were referred by the Department of Pathological Anatomy of the Federal University of Mato Grosso do Sul (UFMS), with clinical hypothesis of botulism;

2. August 4<sup>th</sup> 2017, the Local Veterinary Unit of Ribas do Rio Pardo went to the property to verify the notification and appropriate measures. It was reported by the owner of the property that it has 1700 cattle raised in feedlot and that 600 animals have perished to date;

3. On the same day more samples of the animals were sent to LADDAN, as well as parts of the ingredients that used to feed them, coming from the same property.

4. August 7<sup>th</sup> 2017 the IAGRO team went back to the property, where it was verified the death of other 500 animals, making a total of 1100 cattle. It is noteworthy that there were also lots of cattle and sheep outside the feedlot, which did not present any symptoms and or death. Other infectious-contagious diseases were not found in the other animals on the farm.

With respect to the suspicion, botulism is a toxinfection, that is, the animal acquires the disease through the ingestion of toxins produced by the bacterium of the genus Clostridium under conditions of anaerobiosis.

It is worth mentioning that this toxin binds to neuroreceptors present in the musculature, preventing muscle contraction, causing flaccid paralysis and leading to death. Clinical symptoms appear 1 to 17 days after ingestion of the contaminated food, depending on the amount of toxin ingested by the animal.









The ingredients for the feed production in the property are compliant to applicable laws and regulation, but there may have been failures in the conservation, providing favorable conditions for the Clostridium development and consequent production of the toxin.

GOVERNO

DO ESTADO

Mato Grosso do Sul

In relation to dead animals, it was forbidden to use the carcasses for human consumption, which have already been destroyed and buried in the property.

The diagnosis of the disease is based mainly on the clinical, pathological and epidemiological history. The laboratory diagnosis, which can take up to 20 days to be completed, is a complementary tool and is not exhaustive.

The role of the various sectors of agriculture, including veterinarians, zootechnicians, is essential for the prevention, early detection and containment of the disease. Rapid diagnosis of diseased or infected animals is important to prevent their spread.

IAGRO

SEMAGRO

SFA-MS/MAPA