

Vet's Corner: Food Safety for Cows, too

Food safety for pets and humans has been the topic of recent headlines, so now dairy farmers may turn their attention to harvesting safe forage for their cows. Years ago, little soil got into forage; this made for a short list of diseases to consider that could be introduced through soil in the feed. Some of the older diseases that are rare but still seen in the Northeast include:

Actinomycosis (Lumpy Jaw) is manifested as osteomyelitis (swelling of bony tissue) of the upper or lower jaw. Actinomyces bovis from soil enters through a wound in the cow's mouth to cause the typical bony swelling. This disease was not widespread and tended to occur on a few river bottom farms.

Listeriosis, seen as circling disease or sporadic abortion, was seen in herds which were fed corn silage which had poor fermentation as evidenced by alkaline pH.

With the introduction of improved mowing equipment in the past 15 years, it has been noted that more soil gets into hay crop silage and corn. Consequently, we have seen more herds suffer sudden deaths due to soil borne Clostridia spp.

Clostridia spp. are old familiar causes of sudden death, caused by the ingestion of spores in the soil. Thirty years ago, **Clostridium perfringes C & D** were considered to be the consequent of over feeding grain to young stock and **Clostridia chauvoei** was considered to be a problem in heifers on too closely grazed pasture. At the time it was not considered to be necessary to vaccinate animals over 24 months old and only pastured cattle were vaccinated. In the past 10 years, our practice has had many occasions to change this recommendation. Several farms on high concentrate diets are including Clostridia vaccination in the dry cow vaccine list to prevent sudden death in high producing fresh cows. Due to improper fermentation of forage, Clostridia which originate from spores in the soil, proliferate in spoiled feed and can overwhelm fresh cows with compromised immune systems.

In the past 5 years, **Hemorrhagic Bowel Syndrome** has been seen in some herds that struggle with acidosis-rumenitis-laminitis. There is research and debate about the specific organism that causes the disease. Clostridium perfringes A, another soil borne organism is one of the pathogens that is suspected to be involved.

Now a new pathogen is on our list of possible soil feed contaminants. **Klebsiella** is a coliform type mastitis case, which usually causes loss of the quarter and/or the cow. Thirty years ago, we were taught that Klebsiella was brought under the cow from wet sawdust made from logs that had been dragged through mud. Klebsiella can also be isolated from feces, and PCR testing tells if the mastitis strain comes from the sawdust or feces. In cases where the mastitis pathogen is the fecal strain, is the Klebsiella entering the GI tract as soil in the forage or fecal contamination of the feed? Until further research answers the question, this is another reason to be careful to keep soil out of forages.

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