

Lead Poisoning

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One of the frequently encountered poisonings in cattle by the California Animal Health and Food Safety Laboratory is lead poisoning. Lead poisoning most commonly occurs in cattle when they ingest some form of lead. The common sources of lead in these cases are lead paint pigments from discarded boards or paint cans, electric storage batteries, used motor oil, grease from engines fueled with leaded gas and putties from plumbing fixtures. In a recent CAH&FS report, old auto batteries were found in a pasture where lead poisoning occurred and small pieces of the batteries were found in the rumen content of dying calves from the pasture. While lead gunshot is a current concern of beef processors, it not likely to cause lead poisoning in cattle unless fatally wounded.

The clinical signs of lead poisoning are usually related to central nervous system derangements even though the major necropsy findings maybe in the GI tract, liver and kidneys. The clinical signs may include any or all of the following:

- Bawling with an altered voice
- Frequent urination
- Muscle trembling
- Champing of jaws resulting in lots of salivation, slobbering and choking
- Twitching of ears or lips
- Rolling back of eyeballs
- Walking in circles or head pushing on objects
- Blindness and walking into objects

Most animals are also off feed and frequently constipated.

In dying cattle, the GI tract may be inflamed and ulcerated. As a result of the formation of lead sulfides in the bowel, the lining may appear dirty gray in color. Lesions may also be found in the liver, kidneys, brain and spinal cord.

The clinical signs of lead poisoning may also suggest rabies or listeriosis. To confirm a diagnosis of lead poisoning, your veterinarian will probably submit samples of blood, feces or urine to the diagnostic laboratory. If a necropsy is done, kidney and liver samples may also be submitted for analyses. Treatment for suspected lead poisonings may include repeated doses of calcium EDTA and broad-spectrum antibiotics. When lead poisoning is suspected, cattle should be moved to another location and a thorough search of the premises should be undertaken to find and remove the lead source.

To prevent lead poisoning, dairy owners should insure that their workers are aware of the dangers from discarding any source of lead where cattle may have access to it. Lead poisoning need not be a problem on well-managed dairies and more often occurs when part-time farmers put cattle on junk laden pastures where undetected lead source lay in wait.