



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Research Update: Equine Neglect Investigations

Every state in the US has regulations prohibiting acts of neglect and cruelty against animals. Local law enforcement and animal control agencies are responsible in many communities to enforce these statutes. As society's perception of horses has changed from their origin as livestock to companion animals in modern times, owners have transitioned their care and management.

The goal of this study, conducted at the University of California Davis, was to identify the role and capacities of local animal control services in the US that investigate equine neglect, cruelty, and abandonment investigations, and to identify challenges and outcomes of the investigations.

A 128-question on-line survey was accessible for animal agencies to complete. A total of 165 respondents from 26 states completed all or the majority of the questions. A total of 6864 equine investigations were initiated between 2007 and 2009 by 90 agencies, which extrapolates to 38 investigations annually per agency. A typical agency has an average annual budget of \$740,000, employs 7 animal control officers, and spends about \$10,000 annually on equine

cases. Neglect was ranked as the most common reason for investigation. Owner ignorance, economic hardship and lack of responsibility were the highest ranked causes of neglect and cruelty. Individual cases were provided by 91 agencies concerning 749 equines. The physical condition of the horse was the primary factor of investigation, and low body condition, parasite infestation, and compromised dental condition were present in most seized horses.

Over half of the equine owners previously had been investigated or charged with neglect or cruelty of animals or were identified with cruelty or abuse offenses to people. Less than 3% of the cases advanced to adjudication, and these were likely to be decided by a judge rather than a jury. Judgments of guilty verdicts and pleas were nine times more common than acquittal.

Challenges for equine investigations cases included lack of funding, limited availability of facilities for horses, and providing educational materials for horse owners to aid in prevention and resolution of neglect cases.

Summarized by Krishona Martinson, PhD, University of Minnesota

Disposal of Equine Carcasses in Minnesota

MN horse owners have options for disposal of a carcass. The State of MN regulates these options and involves the Departments of Ag, Natural Resources, Pollution Control Agency (MPCA), and Board of Animal Health (MBAH).

The legal options for disposing of horse carcasses in MN include burial, composting, incineration, and rendering.

Carcasses must be buried 5 feet above the season-high water table and not in soils that are within 10 feet of bedrock.

When composting, the carcass must be completely covered by a carbon source (i.e. sawdust) and monitored for temperature, oxygen level and moisture. With incineration, carcasses must be incinerated in a MPCA approved incinerator. Vehicles that haul carcasses for rendering services need to be inspected and permitted by the MBAH.

For more information on carcass disposal in MN, click [here](#). By: *Krishona Martinson, PhD, University of Minnesota*

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Upcoming Events

Equine Pasture

Management Program

One farm visit and a customized pasture and grazing management plan.

Registration open from April 1 through August 1.

\$650 per farm. To register:

www.regonline.com/EquinePastureManag2014

5th Annual Horse Forage Field Day

Wednesday, August 20

6:30 to 8:00 pm

St. Paul Campus

\$15 per person

To register, visit:

www.regonline.com/HorseFieldDay2014

Lunch and Learn Webinar

September 10, 2014

"Equine Winter Care"

presented by Abby Neu,

Univ. of Minn. Extension

75th Annual Minnesota Nutrition Conference

September 17 and 18, 2014

Mystic Lake Casino

Prior Lake, MN

For more information, visit

www.mnnutritionconf.umn.edu

Full day equine session on

September 18, 2014

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Ask the Expert: Trees to Plant in a Horse Pasture

Question: Our horses pasture is along a residential road. In attempts to filter out the exhaust, we are proposing to plant shrubs/trees along the inside of our fence. The city requires these plantings to be on "our side" of the fence. What trees/shrubs are "safe" for horses, in case their curiosity results in a nibble?

Answer: It is more practical to provide a list of trees that should not be planted and why. Do not plant:

- Plants in the cherry family (*Prunus* species). For example, chokecherry, most parts of the plant contain cyanide which causes death if ingested. Black cherry is a common food source

of eastern tent caterpillars which are associated with Mare Reproductive Loss Syndrome.

- Ornamental shrubs including rhododendron, Japanese yew, and oleander. These ornamental shrubs will cause death when ingested in small amounts.

Be cautious when planting the following trees:

- Oak. New buds and green acorns hulls contain tannins. Ingesting large amounts for more than a few days can lead to diarrhea, colic, swelling, and frequent urination.
- Maple. Ingestion of 1 to 3 pound of dried or wilted leave (not fresh leaves) can cause

toxicity. Signs include red/brown urine, depression, and possibly death.

- Female boxelder trees. Seeds may contain a toxin that is known to cause seasonal pasture myopathy. Male trees do not produce seeds.

Oak, maple and boxelder trees are common in horse pastures. They can be planted, but owners should be aware of the potential issues. The only way to ensure the horse will not ingest parts of the tree is to fence the horse out of the trees. Most horses who are well fed will rarely seek out 'alternative' food sources like trees.

By: *Krishona Martinson, PhD, University of Minnesota*

Lyme Disease in Horses

By: Julia Wilson, DVM, MN Veterinary Medical Association

Ticks can transmit a number of disease-causing organisms to horses. Two of the most common diseases which horse owners in Minnesota should be aware of are Lyme disease and anaplasmosis.

Lyme disease, caused by the bacterium *Borrelia burgdorferi*, is rarely a source of illness in horses. Many horses are exposed to this organism through tick bites and very few develop clinical illness, usually months post tick bite.

Research to experimentally recreate the disease in horses has so far failed to demonstrate significant clinical problems. As in dogs and people, the possible diagnosis of Lyme disease often arises when more common causes of lameness, joint swelling, kidney disease, moon blindness or incoordination have been ruled out.

Typically, two blood samples are taken 2 to 3 weeks apart to see if

anti-Borrelia antibody levels have changed significantly to indicate active infection. The two samples are important because many normal horses may carry high antibody levels. The disease can also be diagnosed by finding the organism in tissue taken by biopsy from an affected joint or lymph node. The SNAP test kits utilized for testing dogs for Lyme disease are likely valid for use in the horse but so far are not licensed for that purpose.

If evidence of Lyme disease is found, a veterinarian may try a course of the same antibiotics used to treat anaplasmosis to see if it will improve the horse's clinical abnormalities. The antibiotic of choice to treat anaplasmosis is oxytetracycline, which is administered intravenously at least once a day for 5 to 10 days. Oral doxycycline may be recommended either following initial

oxytetracycline treatment, or in settings where daily veterinary visits are not feasible. Both antibiotics carry a slight risk of causing diarrhea. Relapses may occur if antibiotic treatment is too short. Other supportive care, such as nonsteroidal anti-inflammatory drugs (NSAID, eg. Banamine), and leg support wraps, are often employed. There are currently no Lyme disease vaccines approved for use in the horse.

Horse owners need to be tick-vigilant and manage their horses' environment to reduce tick habitat. Clearing brush out of pastures and along both sides of fence lines is recommended. Keeping pastures mowed may also be helpful. Before riding through long grass or brush, use of topical insecticides is highly recommended.

Next month, we will discuss diagnosing and treating anaplasmosis.