



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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UNIVERSITY OF MINNESOTA

EXTENSION

MN Livestock Investment Grant Program

The Livestock Investment Grant Program recently passed by the 85th Legislative Session is a major change in livestock policy in the State of Minnesota. The legislation was passed to encourage the development of all livestock enterprises (which includes horse farms and operations) in Minnesota.

Horse owners are encouraged to participate in the program and take advantage of the \$1 million dollars that is available in the first year of the program. The competitive grants include expenditures for acquisitions, and construction or improvements of buildings or facilities for the production of horses or horse products. Other qualifying expenditures can be, but are not limited to, pasture development (i.e. fence, seeding, etc...), feed storage equipment, and manure storage facilities (i.e. compost bins). Qualified

expenditures do not include an amount paid to refinance existing debt, or for the purchase of livestock. The legislation allows for grants of 10% of a project with a minimum expense of \$4,000 (\$400 grant) and a maximum expense of \$500,000 (\$50,000 grant) of qualifying expenditures.

More information on the Livestock Investment Grant Program, including the application form, can be found at <http://www.mda.state.mn.us/grants/grants/livestockinvestment.htm> or by contacting Lori Schmitt (651-201-6004) or Curt Zimmerman (651-201-6456). Applications will be accepted thru September 15, 2008.

Horse owners should be proud that the growing horse industry has been recognized and is encouraged by the State of Minnesota. *Author: Harlan Anderson, DVM, Idle Acres*

Research Update: Carrying Capacity

The amount of weight a horse can safely carry on its back depends upon a variety of physical traits. These may include the horse's size, conformation, body condition, age, the duration of the work to be done, as well as the speed at which the work is being performed.

There are a few methods that are currently being used to help estimate how much weight a horse can carry, however, little research evidence can be found to support these methods. The objective of the study conducted in Ohio was to determine whether horse height, cannon bone circumference, and loin width can be used as indicators of weight carrying ability in light horse.

Horses demonstrated higher work rates both at the trot and canter when carrying 25% and 30% of their body weight compared to carrying 15% or 20%. Heart rates after exercise differed when horses carried 25% and 30% of their bodyweight. Horses tended to have a

greater change in muscle soreness and muscle tightness when carrying 25% of their bodyweight, with significant change demonstrated when carrying 30% of their body weight.

Loin width and bone circumference were negatively correlated with change in muscle soreness and tightness, suggesting that the horses having the wider loin area and greater cannon bone circumference became less muscle sore when asked to carry the higher weight loads.

This study shows that when horses are asked to carry over 20% of their bodyweight, the additional weight influences both work rate and heart rate, indicating higher work loads. Further studies using a larger data set will be necessary to assess the importance of loin width and cannon bone circumference when assessing weight carrying capacity in the riding horse. *Authors: Powell, Bennett-Wimbush, Peebles, and Duthie; The Ohio State University Ag Tech. Inst.*

Inside This Issue

Livestock Grant	1
Research Update	1
Ask the Expert	2
Poisonous Plants	2

Upcoming Events

FALL REGIONAL HORSE OWNER PROGRAMS

Online registration is open
www.extension.umn.edu/horse

Saturday, October 4th
Morris, MN

12:30 pm to 4:00 pm

Saturday, October 18th
Bemidji, MN

12:30 pm to 4:00 pm

Saturday, October 25th
Two Harbors, MN

12:30 pm to 4:00 pm

Saturday, November 22nd
Cambridge, MN

9:00 am to 12:30 pm

CRP AND HORSE HAY

The USDA recently released 24 million acres of Conservation Reserve Program (CRP) land. However, horse owners should be leery of purchasing CRP hay. CRP land can include weeds and small trees (some of which are poisons to horses), and most likely will be low quality hay, but may be less expensive. If purchasing hay from CRP land for horse use, inspect the bales carefully for poisonous plants, and have the hay tested for nutritional quality.



Ask the Expert By: Martinson, PhD & Peterson, PhD, U of M

Q: This summer, we have two horses supported on 6 acres of grass pastures. One is an easy keeper and continues to be chubby. The other has always been an easy keeper, (ridden 5-6 times a week) but is quite thin now. Shouldn't the other horse be thin as well? We have no bare spots in our pasture, but the pasture is grazed down. Is there a way to know how much pasture is needed per horse beyond the vague 2 acres per horse guideline?

A: It is very difficult to measure the amount of grass a horse is actually eating on pasture. On average, good pasture produces about 3 tons of grazeable dry matter (DM) per acre per year (June - September) or about 50 pounds a day per acre. A horse needs to eat about 2% of its body weight to maintain a healthy body condition (about 20 pounds a day for a 1,000 pound horse). Each day, each horse should be eating about 40 pounds

of grass.

We recommend 2 acres per horse because the pasture grasses need about 30 days of rest (no grazing) for every 7 to 10 days of grazing (this will vary depending on time of year and weather conditions). Is your 6 acre pasture divided up to provide a rest period for a section of the pasture, while another section is being grazed (i.e. rotational grazing)? When the pasture is eaten down or over grazed, the amount of grass available is very minimal or zero.

I'd recommend getting an exam on the "thin" horse to ensure its teeth are in good chewing condition and that there are no underlying health problems contributing to the weight loss. Riding 5 to 6 times a week is considered more than "recreational", and your horse's energy requirement is beyond the base 2% figure. Are you providing

vitamins and minerals as well?

Even though your pasture looks green, its highly unlikely there is enough available grass if its "eaten down" to support both horses.

Its very common for individual horses to respond differently to grazing in regards to weight loss and gain. Some horses in the same pasture will consume more grass than others. It would not be surprising or uncommon to have one thin and one over weight horse in the same pasture.

We recommend horse owners with horses on pasture monitor their horse's body condition score on a weekly basis, both to monitor weight gain and loss. If a horse is gaining weight, restrict the amount of time allowed to graze. If a horse is losing weight, supplement hay or grain. Monitoring body condition score is one way to estimate the amount of grass a horse is actually ingesting when on pasture.

Poisonous Plants

By: Krishona Martinson, PhD, U of M

The key to preventing problems with poisonous plants is proper identification and avoidance of these plants. Examine pastures, hay fields, roadsides and fence rows for poisonous plants. In a drought year, or a year when feed is short, take extra precautions, and look for these plants in new areas planned for grazing or haying. Horses, under conditions of adequate feed, will avoid most poisonous plants. However, when feed is short, or horses are hungry, plants normally avoided become a tempting source of feed, thus a potential poisoning problem.

When a horse goes off feed, loses weight, colics, or appears unhealthy, poisonous plants may be the cause. Poisonous plants contain toxic compounds which can injure horses or kill, even in small doses. Others contain substances which cause a reduction in performance, such as

weight loss, weakness, rapid pulse, or recumbency. Poisonous plants should be considered as the potential cause of disease, especially if the following situations exist:

1. Forage supply in a pasture is sparse due to overgrazing, drought, or poor early season growth.
2. Animals have recently been moved into a new pasture.
3. Animals have been released into a new pasture when hungry.
4. Herbicides have recently been used to control weeds.
5. Pasture has recently been fertilized with nitrogen.
6. A new forage source (i.e. hay or pasture) has been fed.

Some herbicides may increase the palatability of these weeds. Therefore, it is important to read the herbicide label and follow all grazing restrictions. Also, if there

are poisonous plants in the pasture, it is best to keep all livestock out until the plants have died and the grazing restriction has passed. Other management tips to avoid problems include:

- Avoid overgrazing pastures.
- Avoid turning hungry animals into new pastures.
- Learn to identify poisonous plants.
- Fence off areas in pastures where poisonous plants occur.
- Control and/or manage weeds.
- Follow herbicide grazing restrictions.
- Supply adequate amounts of clean, fresh water at all times.
- Consult your veterinarian to correctly identify and treat a suspected poisoning.

Additional information can be found in the book "Plants Poisonous or Harmful to Horses in the North Central United States". The book is available at: www.extension.umn.edu/horse