



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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The Cost of Horse Ownership By: Julie Christie, MS, RCTC

With the dwindling economy and increasing price of hay and fuel, the cost of buying a horse has decreased. The costs and responsibilities associated with owning a horse, however, have not decreased, but increased. On a yearly basis, how much money does it cost to own a horse?

Owning a horse means that you are the advocate (and responsible) for that animals' health, safety, and training. Even if you pay someone to feed and care for your horse, you still need to be actively involved in checking for injuries, weight loss (or gain), abnormal behaviors, and ensure the environment is safe. At a minimum, an owner is responsible for ensuring that hooves are trimmed (every 6 to 10 weeks), vaccination and deworming are done regularly, the nutritional needs are being met, and the horse is exercised or has access to turnout.

The yearly cost of owning a horse will vary on whether you keep your horse at your facility or board the horse at a stable. Costs will also depend on where you live (boarding and land rates), if the horse is shod (has shoes), if the horse is in training, has special medical needs, and the type of activities that you do with the horse. Table 1 gives a range of costs per year associated with owning one healthy horse. Even if you do not board, there

are significant costs associated with keeping a horse on your own property, including the costs of land, fencing, shelter, hay, watering systems, manure removal, etc. Boarding rates are still good estimates to follow for owners who keep their horses on their own property.

The costs in the table do not account for specialty feeds or supplements, training, lessons, veterinary care, a truck or trailer (fuel), tack, blankets, or insurance for your horse. When calculating the actual cost of horse ownership, you should add any additional costs to the total that pertain to you.

Unfortunately, horses do get sick, become lame, and sometimes cause property damage. When deciding if you can afford to own a horse (or how many horses), consider your ability to pay for a colic surgery, an emergency veterinary visit, or other unforeseen events. Alternatives to buying a horse include leasing a horse or taking lessons at a local barn.

Horses are amazing athletes and wonderful companions, but are a significant investment of both time and money. While there are several factors that will affect how much money you spend on a horse, the minimum that you can expect to spend is \$6,400 per year for one healthy horse.

Table 1. Average base cost per year to own one healthy horse

Item	Cost Per Unit*	Cost Per Year
Board (includes hay & shelter)	\$300 to 600/month	\$3,600 to 7,200 (avg. \$5,400)
Deworming	\$12/dose (6 times/year)	\$72
Hoof Trimming/Shoeing	\$40/trim (8 times/year) or \$100/shoeing (8 times/year)	\$320 or \$800 (avg. \$560)
Core Vaccinations	\$200	\$200
Other (i.e. fly spray)	\$200	\$200
Total Average Cost Per Year		\$6,432

* these prices are estimates and will depend on various factors, especially location.

Inside This Issue

The Cost of Horse Ownership	1
Hay Analysis Continued	2
Research Update	2

Upcoming Events

FALL REGIONAL HORSE OWNER PROGRAM

Register online (secure) at: www.extension.umn.edu/horse

Saturday, November 22nd
 Cambridge-Isanti High School
 Cambridge, MN
 9:30 am to 12:30 pm
 Registration Deadline: Nov. 19

PLAN TO ATTEND THE 2009 WINTER HORSE OWNER PROGRAMS

Saturday, January 31st
 Equine Center
 St. Paul, MN

Saturday, February 21st
 UW-River Falls
 River Falls, WI

Saturday, March 14th
 Thomper Pond Resort
 Ottertail, MN

Additional information on these programs will be in the December Newsletter. Registration will begin on December 1.

Know a Horse Hay Supplier or Auction Site?

The U of M is compiling a list of horse hay suppliers and auction sites. Contact Krishona at krishona@umn.edu with any additions to the list.



Forage Testing Continued - Sugar

By: Krishona Martinson, PhD, U of M

Recently, there has been significant interest in the sugar and carbohydrate content of hays. The below analyses can be very useful in helping to select a suitable feed for horses, especially those that show sensitivity to starch and sugar. Some labs are test for the following (may be an additional charge):

- **Non-fiber Carbohydrate (NFC)** : is a mathematical estimate of non-cell wall (non-fiber) carbohydrates consisting of starch, sugar, pectin and fermentation acids that can serve as energy sources for the animal. Although not always perfect, the NFC value is often used as an indicator of the level of starches and sugar in a forage

sample.

- **Non Structural Carbohydrates (NSC)** : an analysis of the non structural carbohydrates (starches and sugars) in the forage. Not to be confused with NFC, which is calculated, not actually analyzed for. Since some horses can be very sensitive to dietary starch and sugar (i.e. horses with Cushings Disease or laminitis), the NSC level can be helpful in selecting hay choices. Hay containing greater than 10% NSC should not be fed to these horses.

Unfortunately, neither NFC nor NSC can give an exact measure of fructans, the complex sugar correlated with founder and other horse health issues.

- **Starch (a sub-component of the NSC)**: Starch is a good source of energy. However, no more than 15% of total daily calories from starch should be fed to horses diagnosed with PSSM (polysaccharide storage myopathy).

- **Ethanol Soluble Carbohydrates (ESC)** : carbohydrates solubilized and extracted in 80% ethanol. Includes primarily monosaccharides (glucose and fructose) and disaccharide. Some forage labs will refer to ESC simply as "Sugar".

To read the latest recommendations on equine nutrient requirements, consult the National Research Council's *Nutrient Requirements of Horses* publication.

Research Update: Gastric Ulcer Syndrome and Hay

Equine gastric ulcer syndrome (EGUS) is recognized as a health problem in horses and can be detrimental to a horse's athletic performance. The increased availability of endoscopic equipment suitable for performing equine gastroscopy has facilitated more routine evaluation of horses for EGUS.

Up to 93% of racehorses and over 60% of arena performance horses have ulcers of varying severity. Factors implicated as contributors to EGUS include stress, feed deprivation, stall confinement, increased intraluminal pressure with dorsal displacement of acid during exercise and intensive training, retention of gastric acid, and diet. These factors may be directly linked to excessive acid secretion and decreased pH, which increases the opportunity for acid-induced injury.

Research has demonstrated stomach ulcers will heal spontaneously if provided a more basic environment. The relationship of diet and gastric ulcers has been the focus of numerous investigators, including a proposal that proteins in alfalfa may offer some buffering capabilities within the stomach and a strong correlation between dietary alfalfa hay and lower degree of gastric ulceration.

The objective of this study was to further investigate anti-ulcerogenic properties of alfalfa hay. Twenty-four Quarter Horse yearling geldings, in an exercise program, were used and fed either alfalfa or grass hay. There was no significant difference in ulcer severity score between the groups at day 0, when the study was initiated.

There was a significant effect of diet on ulcer score. Horses fed grass hay had higher ulcer scores. The effect of diet was strong, with an estimated effect of increasing the ulcer score by 1.5 times. The alfalfa hay contained 1.5 times the amount of protein and 3.4 times the amount of calcium than the grass hay and may have had buffering capabilities.

Whether or not the differences observed in ulcer score were due to protein intake, protein quality intake, or calcium intake, could not be determined. Additional research is needed to better determine those characteristics in alfalfa that contribute to a decreased severity of gastric ulcers compared to horses eating grasses. In this study, alfalfa hay exhibited preventative or therapeutic capabilities of gastric ulcers in horses.

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