

Equine Economics: Optimizing Horse Health and Management on a Budget

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Horse Program

Providing research-based information to Minnesota Horse Owners

Owning a horse is a major responsibility, and a significant investment of both time and money. Most owners do not generate income from their horse, but are intent on spending time with their equine companion. During tough economic times, horse owners need to explore and implement options to reduce costs. Most cost reducing opportunities fall in the area of preventative medicine and education. Specifically, horse owners can reduce costs associated with management, veterinary care, hoof care, and nutrition.

MANAGEMENT

There are several things horse owner can do to minimize costs associated with horse management.

Housing. Healthy horses thrive outdoors and only require shelter from adverse weather, including excessive heat or cold (below 18 F), and freezing rain. Keeping a horse outdoors with access to a loafing or run-in shed saves the cost of building and maintaining a barn as well as labor expenses associated with stall cleaning. Although it is not practical to keep all horses outdoors, healthy adult horses who are not in a year round training program are good candidates.

Horses that get along with herd mates are less likely to fight, become injured, and develop stress related diseases like ulcers. If multiple horses are housed together, study their social interactions (3). Determine which horse is dominant and if all horses get along with each other. If you add or remove a horse(s) from the herd, expect the herd dynamics to change.

It is usually more cost efficient to keep a horse on the owner's property/farm compared to boarding. Boarding is necessary for some horse owners, but can be expensive. Consider ways to decrease

boarding costs including, cleaning stalls, feeding, and assisting with weekend chores.

Cleanliness. Flies, mosquitoes, and ticks are responsible for a number of bacterial and viral diseases of horses (5). Reduce the risk (and expense) of these diseases by discouraging these insects and ticks in your horse's environment. Remove and spread or compost manure promptly to reduce fly breeding areas. Minimize pools of standing water, including water standing in old tires, unused buckets, and drainage areas. Outdoor water tanks should be cleaned weekly. Brushy areas in the pasture and along the fence lines should be removed, and tall grass should be mowed to reduce tick populations. If a horse is housed in a wooded area, a long-acting fly, mosquito, and/or tick repellent can be used.

Safety. An ounce of prevention is worth a pound of cure (12). Improving barn safety can prevent accidents and unnecessary injuries. Remove all barbed-wire fencing and cap T-posts. Avoid corners where horses can become trapped by other herd mates. Make sure feeders, waterers, and other necessary items in your horse's pen are in good working condition and free of sharp edges, nails, or rust. Check that paddocks and pastures are free of poisonous plants (9) as well as large rocks, stumps, brush, holes, and debris that could cause injury.

Grading high traffic areas to promote good drainage will result in less mud as well as lower the likelihood of losing shoes or developing skin disease of the pasterns. Consider passive solar options for heating outdoor water tanks. Manage dust to reduce airway irritation and the risk of *Rhodococcus equi pneumonia* in foals.

Bio-security. Think about bio-security and how it can help maintain your horse's health. To reduce the risk of some diseases, consider having visitors wash hands before handling horses. If coming from another farm, visitors should change boots and clothing, particularly if there has been an illness or disease on the other farm. Restricting and/or reducing visitor interactions with horses are other bio-security methods to consider implementing.

Viral respiratory diseases and strangles are most often transmitted between horses through respiratory secretions. When traveling with horses, avoid nose to nose contact, sharing water and grain buckets, or bits with other horses. Inspect off-site stalls and paddocks and ensure they are clean, sanitized, and free of injury opportunities before housing your horse. Avoid farms or show grounds where respiratory diseases, particularly strangles, have been recently confirmed.

Tack. A poor fitting saddle can lead to performance problems and back soreness. Saddle choice should reflect the preferred discipline as well as horse and rider comfort. A saddle should have adequate withers and spine clearance, even distribution of weight and contact along the panels, and front to back balance. Saddle fit may change as the horse's body condition changes, particularly if the horse develops more muscling along the top line. Periodic reflocking and keeping the leather in good condition will promote saddle longevity. Saddle fitting is not simple. Consult an expert before purchasing a saddle.

Manure Management. Manure management and removal can be a significant cost for some horse owners. Manure is a valuable resource that is useful for gardeners and farmers (13). Contact local farmers and gardening organizations and promote your manure as a valuable resource.

Breeding. Unless a mare or stallion has exceptional conformation and an outstanding performance record, planning a foal that realistically may be difficult to market is unwise and expensive. Consider purchasing or adopting a weaned foal to experience raising and training a foal.

Insurance and Liability. Make sure your home owner's insurance covers liability associated with your horse operation. Consider having an equine attorney assist with pertinent legal agreements (1). Major medical and/or other insurance types may make economic sense for some horses, particularly those that represent a sizeable emotional or financial investment. Being properly prepared and covered prior to an emergency or accident is usually more cost effective.

Tow-Vehicles and Trailers. Making sure tow-vehicles and trailers are in good working condition can reduce the chance of accidents. Make sure all lights and brakes are working, tires are properly inflated, and ensure the trailer floor is solid and covered in rubber mats. Purchase a road-side assistance plan if you travel frequently with your horse. Have flares, a tire changing ramp, road-side emergency kit, and a human and horse first aid kit (4) located in the trailer. Do not travel with opened, un-screened windows as debris can strike an eye, or a horse may try to escape. The Department of Transportation has additional information on hauling requirements and safety.

VETERINARY CARE

Have a good working relationship with a veterinarian. It is important to determine the extent and financial commitment a horse owner can absorb. These decisions should be made prior to an emergency involving a horse. During an emergency, it is common for a horse owner to approve procedures one cannot really afford. Communicating the emergency and financial plans to a veterinarian and other who care for your horse will help keep care and after-care affordable.

There are many benefits of a yearly veterinary examination. This visit should be planned with forethought on health issues and vaccine choices (15). A thorough physical examination will often find early signs of cancer, lameness, or any other disease that is readily treatable if identified early.

In older horses, routine blood screening may be warranted to detect subtle signs of diminishing organ function (14). Core vaccines (Tetanus, Eastern Equine Encephalomyelitis (EEE), Western Equine Encephalomyelitis (WEE), West Nile (WNV) and Rabies), Coggins test, dental work, and sheath cleaning (if necessary) should also occur at this time.

Taking a manure sample for a fecal egg count is a method to monitor the effectiveness of a deworming program (15). Egg counts can identify horses with higher populations of parasite. These horses should be dewormed more often. Horses with lower parasite populations can be dewormed less frequently, resulting in financial savings. Horses with no detectable parasite eggs may not need to be dewormed, but testing these horses should continue on a regular basis. Good manure management will reduce ingestion of parasites, result in better health, and longer intervals between deworming.

If you own or have access to a trailer, consider trailering a horse to the veterinarian to save on farm calls.

Education. Research has shown that taking an active interest, and being involved with the daily care of a horse results in a healthier horse and reduced veterinary care costs. Become familiar with horse vitals (temperature, heart rate, etc...) and normal behavior (4). Changes in baseline vitals and behavior are usually early indicators of illness. Learn to give intramuscular shots, oral medications, and how to perform basic leg wraps.

HOOF CARE

An important aspect of horse ownership is hoof care (2). Work with a farrier to set a hoof care schedule based on how much hoof the horse typically grows. For most horses, routine hoof trimmings range from five weeks to three months. Consider leaving the horse barefoot if it has a good quality hoof, and stays comfortable when ridden. This may not be an option if the horse will be working on rough surfaces, requires extra traction, or is ridden so frequently that there is extraordinary hoof wear.

For seasonal riders, removing shoes in the off-season will result in financial savings as well. Working with a veterinarian and farrier to correct hoof problems early will lead to less stress on joints, ligaments, and tendons.

NUTRITION

With feed costs rising, it is important to utilize feed efficiently. Nutrient requirements for horses depend on their physiological status (age, metabolism, weight) and their level of production (maintenance, growth, exercise, reproduction, and lactation) (6). Most horse owners over feed their horses, leading to wasted money and unhealthy, overweight horses. The greatest financial savings can be achieved when horses are fed as individuals and are fed the appropriate amount and type of feed.

Adult, idle (non-working and non-reproducing) horses can have their energy and nutritional requirement met with good quality hay alone with the addition of a ration balancer; these horses do not usually require grain. Removing unnecessary grain from diets can lead to substantial savings. To determine whether grain or other supplements are needed, hay should be analyzed for quality (energy, protein, calcium and phosphorus). Having hay analyzed by a laboratory costs very little compared to purchasing grains that are not needed (10). Working, growing, and reproducing horses do have greater energy requirements and may need grain to help meet those requirements (7). All classes of horses should have access to clean water, salt, and receive the appropriate amounts of vitamins and minerals. Providing each horse individually with the recommended amount of both vitamins and minerals daily would be ideal (8). Alternatively, vitamins and minerals can be provided as either loose mineral or in block form, but intake should be monitored. Feeding vitamins and minerals as free choice may result in under or over consumption, and can lead to waste and increased costs. A horse can balance its salt requirements, but not its mineral requirements.

Regardless of the horse, forage should be the backbone of a horse's nutrition program and should comprise at least 50% of their diet. Invest in good quality hay. Low quality hay is usually less expensive, but can be more mature, have fewer nutrients, and be less digestible. Feeding low quality hay usually requires feeding more hay to maintain body condition. Keeping your hay type (i.e. grass or alfalfa) consistent has been shown to reduce some horse health problems, especially colic.

The average, adult horse requires approximately 2% of their body weight in feed (hay and grain combined) each day. It can be difficult to know how much a horse actually weighs without access to a scale. However, there are equations available using heart girths and length measurements that closely estimate a horse's weight (7). To ensure horses receive the recommended amount of feed each day (2% body weight of a 1,000 pound horse is 20 pounds a day), a scale can be used to weigh the amount of total feed. Weighing feed can lead to significant savings, and can bring excessive feeding (or underfeeding) under control.

Substantial savings can also be achieved with reducing forage losses during storage and feeding (10). Store hay inside, or under cover (i.e. tarp) if stored outside. If storing hay inside, make sure the roof is water tight as dripping water can lead to moldy hay. Animal proof hay (and grain) storage areas. Animals (especially wild animals) can carry harmful disease and can make messes out of feed storage areas. Store hay on pallets and in well drained areas. Hay bales stored on wet ground can take on moisture, leading to early deterioration and as much as 50% spoilage. Use older hay first. If moisture is completely void from all directions, and the hay was adequately dry when put into storage, hay can keep indefinitely. However, high humidity and storage conditions might increase moisture content and reduce storage life.

When feeding hay and grain, use feeders. Research conducted at Texas Tech found that alfalfa round bales fed with a feeder had a 9.1% loss, compared to a 31.5% loss without a feeder. Grass round bales fed with a feeder had a 1.8% loss, compared to a 38.1% loss without a feeder. This research may not

be surprising, but draws attention to the importance of using a feeder when feeding round bales.

During summer months, utilize pasture as an affordable way to meet a horse's nutritional requirements. To maximize your pasture productivity, consider implementing a rotational grazing system, avoiding overgrazing, soil test every three years, fertilize if needed, rest pastures for 30 days after grazing, mow, drag, and control weeds (11).

It is very difficult to define "good quality hay" as this definition changes depending on the horse's nutritional needs. Good quality hay should always be weed, dust, and mold free (10).

WHEN IT'S NOT APPROPRIATE TO REDUCE COSTS

As horse owners explore options to reduce costs, there are times when it is not appropriate to cut costs:

1. Buy quality hay. Hay (forage) should be the backbone of your horse's nutrition and should be at least 50% of the horse's daily feed intake
2. Emergency care. If a veterinarian is needed, do not hesitate to contact them. Waiting to contact a veterinarian during an emergency can result in additional procedures and after care expenses.
3. Recognize when a professional (veterinarian, farrier, nutritionist, etc...) is needed and utilize them.
4. Core vaccinations and dental exams. Preventing a disease is much more cost effective than treating a sick horse.

CONCLUSION

Reducing costs associated with horse ownership takes hard work and some creativity.

Most cost reducing opportunities fall in the area of preventative medicine, education, and taking on the responsibilities of horse ownership. It is usually more cost efficient to keep a horse on the owners property/farm compared to boarding.

Additional costs can be reduced through management, including improved housing, cleanliness, safety, bio-security, and proper tack fitting. Having a good working relationship with your veterinarian and farrier can improve horse health and lead to significant savings.

Improving feed efficiency and reducing storage and feeding waste will lead to additional savings. Finally, remember that research has shown that taking an active interest, and being involved with the daily care of a horse results in a healthier horse and reduced costs of ownership.

ADDITIONAL INFORMATION AND RESOURCES

1. Bloomquist, K. 2009. Equine Law. 4 pages. University of Minnesota Extension Publication 08639.
2. Boyce, M. 2007. Hoof Care. 2 pages. University of Minnesota Extension Publication 08465.
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7. Hathaway, M. Nutrition of the Weanling and Yearling Horse. 2007. 2 pages. University of Minnesota Extension Publication 08456.
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10. Martinson, K., and Peterson, P. 2007. Buying and Storing Horse Hay. 4 pages. University of Minnesota Extension Service Fact Sheet M08463.
11. Martinson, K., and Peterson, P. 2007. Managing Established Horse Pastures. 4 pages. University of Minnesota Extension Service Fact Sheet M08460
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13. Wieland, B. 2009. Horse Manure Management and Composting. 4 pages. University of Minnesota Extension Publication 08638.
14. Wilson, J. 2008. Equine Vaccinations and Deworming. 4 pages. University of Minnesota Extension Publication 08540.
15. Wilson, J. 2007. Care of Elderly Horses. 2 pages. University of Minnesota Extension Publication 08461.

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