



HEALTHY PASTURES mean healthy horses

By Kellie Chichester

The health of horses – one of the most celebrated symbols of life in Wyoming and other Western states – is intricately connected to the health of the lands they inhabit.

Poor quality pastures can lead to poor health in horses. This arrangement is reciprocal in that grasses and many other Western plants have evolved with grazing so that properly managed grazing can remove older growth, allowing new growth to occur and leading to healthier plant communities. Poor grazing management will lead to poor plant health.

Let's first consider how horses eat and plants grow to see how these two are interconnected and ultimately affect each other. Horses evolved as grazing animals eating many small meals during the day rather than one or two large meals. Horses tend to select grasses over broad-leaf plants, brush, and trees, although they will eat these. Horses also prefer shorter, more palatable, grass over taller, tougher grass. With teeth on both the upper and lower jaws and grasping lips, horses can clip the grass at the soil surface.

Grasses grow by absorbing sunlight, manufacturing sugars and carbohydrates in their leaves through photosynthesis and utilizing this energy to extend their blades,

put out new grass shoots and roots, and flower and form seeds. They deposit excess sugars and carbohydrates in their roots for storage.

If horses are kept in a confined area and grazing is not managed, they will choose certain plants over and over again. Subjected to this continuous grazing, the grasses use the carbohydrates stored in their roots for leaf production. This frequent removal of the leaf does not allow the root to rebuild energy reserves. Without giving the grass time to recover, growth can slow, and damage to the root system can occur leading to poor plant health, and, ultimately, the death of the plant.

Horses are heavy, active animals and can exert 23 pounds per square inch per hoof. They like to run and play, and, with their iron-shod hooves, can seriously damage a pasture, especially in wet conditions. Too much of this activity can destroy a pasture over time. If the ground is bare and has been compacted, rain infiltration will be lessened allowing for more water runoff. Healthy grass causes the soil to capture rainfall better, leading to less erosion, better water quality, and a healthier pasture.

A number of health issues can arise with horses living on poor quality pastures caused by overgrazing, compaction, and poor manure management practices.



Nutrition

The first issue is nutrition – a horse whose only source of nutrition is from a small pasture may suffer from nutrient and energy deficiencies. When given access to average or good, irrigated quality pasture, horses can consume about 4.4 to 6.6 pounds of forage per hour. Intake may be higher when animals are first let into new pastures. Along with deficiencies caused by a lack of ad-

equated forage production, pastures with poor-quality grass (either overgrown from a lack of grazing or depleted from overgrazing), may not meet the protein and energy requirements of your horse, and supplemental hay or grain will be needed. Proper grazing (not allowing horses to graze all the time, changing the times of year they graze a particular spot, using rotational grazing if possible, feeding them on hay and grain during part of the year, having a sacrifice area, etc.) will allow your pasture to be a quality part of their diet.

The appropriate grazing intensity depends on the growing conditions, intensity of pasture management, and plant species in the pasture. Establish a sacrifice area used to keep horses off pastures for extended periods of time to benefit the rest of the pasture. Generally, horses need supplemental hay in Wyoming as there is not enough grass to meet their needs.

Dust

Overgrazing and wear and tear by hooves can cause plants to die and expose more of the topsoil to Wyoming's often wicked winds. Whether it's windy or not, issues with dust can develop.

Horses living in dusty conditions are prone to airway diseases. "This is most commonly referred to as chronic obstructive pulmonary disease (COPD), "heaves," or "broken wind," says veterinarian Dr. Kris Kaspar of Alpine Animal Hospital in Laramie. "A more correct name is recurrent airway obstruction (RAO), as the condition can be resolved with proper treatment and management. Inhalation of dust also predisposes horses to summer-associated pasture disease, inhaled fungal infections, bacterial infections, as well as ocular irritation."

So, although you may feel bad about limiting your horse to the sacrifice area for the majority of the time, its health will benefit through healthier pastures.

Weeds

Horses tend to be selective grazers. They will often choose to eat grass plants over plants we would consider to be weeds, creating more pressure on the desired plant communities and leaving the weeds to grow and reproduce.

Some weeds may be toxic, some may be noxious, and some may be harmless. If unsure of what you are dealing with, a plant sample can be taken to a local University of Wyoming Cooperative Extension Service office for identification.

Horses are susceptible to poisoning from a variety of trees, weeds, and ornamental shrubs. Some plants, such as thistles, nettles, and burrs, are physically injurious to horses and may cause damage to the nose and mouth.

St. John's wort and buckwheat may produce photosensitization, a clinical condition in which skin is hyperreactive to sunlight due to the presence of photodynamic agents, and dermatitis – an inflammation of the skin.

Field bindweed and a number of other plants may cause colic or diarrhea. The term "colic" means abdominal pain. There are multiple clinical signs that may indicate colic. The most common include pawing repeatedly with a front foot, looking back at the flank region, curling the upper lip and arching the neck, repeatedly raising a rear leg or kicking at the abdomen, lying down, rolling from side to side, sweating, stretching out as if to urinate, straining to defecate, distention of the abdomen, loss of appetite, depression, and decreased number of bowel movements. Horses with colic may need either medicinal or surgical treatments.

Manure and Mud

Manure can be a liability or asset depending on how managed. Improperly managed manure can be a health issue for not only your horse but also for your family and neighbors. If pastures are grazed too heavily, mud and manure runoff may affect underground or surface water sources. Proper management of animal waste and knowing the soil type and runoff direction can lessen chances of contaminating drinking water. Mud and manure harbor undesirable bacterial and fungal organisms that can cause health problems.

When horses are directly exposed to manure, they are more susceptible to internal parasites. Another potential problem – insects – occurs with a buildup of mud and manure. Flies not only breed in the mud and manure but annoy horses. Insects can also carry diseases and may cause allergic reactions in some horses due to biting.

Proper manure management can help control insects. A 1,200-pound horse produces about one cubic foot of fresh manure every day. Manure should be hauled off or put into an area to be composted if the horse is kept in a small corral or pasture. Properly composted manure can then be

Irrigated/Subirrigated Pasture	
Excellent with rotation grazing	5.0 AUM/acre/ 6 to 7 months growing season
Excellent without rotation grazing	4.0 AUM/acre/ 6 to 7 months growing season
Fair without rotation grazing	2.0 AUM/acre/ 6 to 7 months growing season
Poor without rotation grazing	1.0 AUM/acre/ 6 to 7 months growing season



applied to pastures. For more information on composting, see the Texas Agriculture Extension Service publication *Composting Horse Manure* available at <http://tammi.tamu.edu/pdf%20pubs/compostinghorsemanure.pdf> (also see the *Barnyards&Backyards* article, "The "Scoop on Manure Management," Summer 2007).

In summary, if you only have a corral or small pasture for your horse, be sure to keep it clean and sanitary. If time is limited and you cannot ride your horse, you may want to check

into renting a larger pasture to allow your horse room to exercise. If renting or leasing pasture, check often that your horse has a constant, clean water supply. Also, take note of pasture and horse health. Just because it is someone else's land doesn't mean it needs less consideration or management.

Be sure to monitor and recognize when to move horses to the sacrifice area or to another pasture. By doing this, you will better utilize available grass and keep a horse healthy and happy.

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