

Preparing Horses for Winter Weather

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There are many considerations that should be accounted for as winter weather approaches. In South Carolina, we enjoy relatively mild winters. However, precipitation, wind and freezing weather can still create problems for our horses.

Forage intake and winter pastures

A horse's diet should consist primarily of roughage, specifically fresh grass from pastures and cured hay, and should be fed at 1 to 2 percent of a horse's body weight on a dry matter basis. This intake could even be increased in the winter to allow for increased fermentation, which generates body heat for the horse. Winter's harsh weather greatly reduces fresh forage availability and special concessions must be made to supplement a horse's diet with hay. Horse hay must be high quality and free from molds, weeds and other debris. High quality grass hay is normally sufficient for most types of horses, but in underweight or older horses, legumes may be an added benefit. Typical horse hays in South Carolina include warm season Coastal Bermuda and cool season Fescue. However, high quality cool season hays such as Timothy and Orchardgrass can be found from hay brokers in our area. Round bales can be an effective way of providing a constant source of hay to horses, but must be consumed quickly enough to prevent rot, or they can be placed under a loafing shed or other shelter. Place round bales on the round end, not the flat end, to further prevent water penetration and rotting. There are risks of feeding round bales, which include overconsumption (gluttony) leading to impaction colic, mold and noxious materials (animal carcasses, etc.), which can lead to botulism or salmonella.

A secondary means of improving forage availability for your horses is to overseed pastures with an annual winter small grain, such as wheat, barley, oats, rye or ryegrass. This should represent an economically viable option to reduce your reliance on hay and increase water intake from fresh forage. These pastures should be established around November or early December at the latest. Finally, because of winter's wet weather, pastures can become soggy and easily compacted by



Photo credit: <http://www.listentoyourhorse.com/which-paddock-surface-is-best-for-a-rainy-climate/>

horse hooves. Consider adding a sacrifice area to your pastures, where you are not concerned with pasture growth and you can amend with rock dust or mulch. This will prevent destruction of your grass in the pastures.

Additional nutrients through supplemental grains and ration balancers

Despite efforts to meet nutrient needs with forages, either fresh or hay, some horses still require supplemental energy and other nutrients. Based on individual horse needs, some may require the addition of concentrated feed such as grain (either textured or pelleted) or ration balancers. There are many commercially available ration balancers available on the market. These products are designed to augment the nutrients that might be missing in the forages, such as protein, vitamins and minerals. Energy is most commonly increased in the diet, above and beyond that which is provided in the forage, by adding cereal grains, fats (such as oils) or soluble fiber (such as beet pulp). Because we typically feed grain for energy or weight management, we may not feed according to the directions on the feed label, which typically results in underfeeding the recommended pounds to prevent horses from becoming obese. As such, we may not be meeting all protein, vitamin and mineral requirements; that is where ration balancers might be helpful. These are fortified pellets higher in protein, vitamins and minerals without the added energy found in typical grain products. Though they are high in crude protein percentage, we feed very little of the balancer pellets

at one time, thus the protein availability is balanced and appropriate in combination with the forage intake. These ration balancer pellets can be used alone or in addition to a commercially available concentrated feed when fed below recommended amounts. They are also appropriate for horses who suffer from metabolic disorders, where high non-structural carbohydrate-based feeds would be inappropriate. If horses need an increased caloric intake above and beyond forages, another option to do this without increasing non-structural carbohydrates is to feed fat. Examples are vegetable oil, flax or a fat supplement such as rice bran or a commercial fat product. However, you should avoid extra calorie intake for horses who are already obese.

Water intake during the winter

As horses increase their dry matter intake with forages, their demand for water increases. This combined with a reduction in the desire to drink due to cold water temperature often leads to dehydration in the winter. It is common for horses to suffer from colic in the winter due to dehydration, so there are several steps that can be taken to prevent this problem in your horses.

- Add electrolytes or salt to concentrated feeds
- Add a salt/mineral block in the pasture
- Use heated water buckets or provide warm water at least twice daily
- With automatic waterers it is difficult to monitor water intake
- Break out ice twice daily
- Can add a ball to float in the water to prevent it from freezing over solid



Photo credit: <http://www.saltoftheearth.net/product/salt-lick-block/>

Hoof care, parasite control and vaccinations

Hoof growth slows down in winter months, but it is still important to regularly maintain hoof care. Horse's hooves will likely need to be trimmed every 6 to 10 weeks, and shod horses need extra attention. Wet, muddy weather can easily pull off shoes, which can make a horse's feet feel sore, so you should check the clenches of shoes and the presence of shoes daily. Find a reputable farrier that has knowledge of equine lower limb anatomy and ample experience working with horses.

South Carolina winters are often not harsh enough to reduce parasites, so it is important to continue to perform fecal exams to determine egg counts and parasite type. In this way, you can deworm more appropriately per need. Additionally, you should maintain vaccinations in the fall, especially for Influenza and Rhinopneumonitis. Older horses are particularly susceptible to parasites and disease, and extra care should be taken to ensure they are adequately protected.

Geriatric horses need special attention in winter

Winter is particularly hard on older horses and care should be taken to monitor their weight and teeth health. Older horses may have dentition issues, such as wave mouth, overshot jaw, hooks, or sharp points. An equine dentist or your veterinarian should monitor your horse's teeth at least twice per year. Older horses may already have issues maintaining weight, especially if they suffer from any type of metabolic disorder. They typically have little muscle tone over their topline and will be particularly lean over the ribs and hook and pin bones of the pelvis.

One strategy to improve weight in your older horses is to add beet pulp, which is a soluble fiber source, to your horse's diet. This beet pulp can be soaked, which will increase water intake as an added bonus for your horse. However, it is important to note that some senior horses do not find beet pulp to be palatable and will reduce feed consumption as a result. An equine senior concentrate feed may also be considered; senior feeds tend to be higher in protein, fiber, vitamins and minerals. Finally, a fat source may be added to increase BCS in a safe manner. However, obese horses should not be fed additional fat as this will exacerbate metabolic



Older horse with worn out teeth
<http://extension.umn.edu>

problems associated with obesity. Many people believe that bran mashes are helpful to the horse to “flush” out the intestines and increase water intake. However, horses’ diets are already fiber filled so additional bran is of no value for that purpose, unlike a human’s diet that is often low in fiber intake. Bran is also high in phosphorus, which can lead to a calcium:phosphorus imbalance and skeletal disorders as a result. Beet pulp represents a more appropriate feed additive to increase useful fiber for energy and increase water intake.

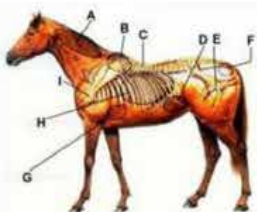
Assessing body condition in the horse

An important component of preparing your horse for winter is to effectively assess its body condition. The Henneke body condition scoring system (BCS) includes a 1 (poor) to 9 (extremely fat) scoring scale for the amount of fat covering critical body parts (Henneke et al., 1983). The ideal range for healthy horses is 4-6, with 5 being most preferred. It does take practice to correctly and consistently assess BCS, so rely on educated horsemen to assist you initially as you use this method on your horses. The scoring scale is assessed based on visual appraisal and physical palpation. There are even applications for your computers and portable devices that help you determine the horse’s BCS. This, in association with knowing an accurate weight

for your horse, can help you determine how much to feed and what type of feed to give to your horse. Going into the winter your horse could carry a bit more weight, especially in older horses, so a 5.5 to 6 BCS may be ideal. This will provide the extra body fat and energy reserves needed to fuel the body through a long cold winter.

Other winter health care tips


Winter weather brings three elements that can bring havoc on your horse’s health. Wind, precipitation and cold temperatures, in combination, present a problem for the horse. Owners should provide protection in some form to eliminate one of these elements. Alone, these winter elements are no match for a horse’s natural protection: the hair coat standing up provides air pockets to trap body heat, fat layer, and shivering for heat production, to name a few. When winter elements strike, especially in combination, it is tempting to bring the horse right away into the barn. While providing a shelter, such as a barn, is a viable option, it can lead to respiratory health issues. A three-sided run-in shelter in the pasture is typically adequate. A minimum of a 10’ x 10’ per horse is suggested for pasture run-in shelters. When housing a horse in an enclosed barn, be certain that it is well ventilated. Heaves, also known as recurrent airway obstruction or COPD, is a common problem associated with stabled horses.



Areas of Emphasis for Body Condition Scoring


A: Thickening of the neck
 B: Fat covering the withers
 C: Fat deposits along backbone
 D: Fat deposit on flanks
 E: Fat deposits on inner thigh
 F: Fat deposits around tailhead
 G: Fat deposit behind shoulder
 H: Fat covering ribs
 I: Shoulder blends into neck

5 Moderate
 Back is flat (no crease or ridge); ribs not visually distinguishable but easily felt; fat around tailhead beginning to feel spongy; withers appear rounded over spinous processes; shoulders and neck blend smoothly into body.




1 Poor
 Animal extremely emaciated; spinous processes, ribs, tailhead, tuber coxae, and tuber ischii projecting prominently; bone structure of withers, shoulders, and neck easily noticeable; no fatty tissue can be felt.


6 Moderately Fleshy
 May have slight crease down back; fat over ribs fleshy/spongy; fat around tailhead soft; fat beginning to be deposited along sides of withers, behind shoulders, and along sides of neck.



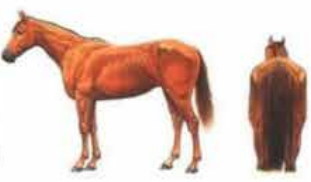
2 Very Thin
 Animal emaciated; slight fat covering over base of spinous processes; transverse processes of lumbar vertebrae feel rounded; spinous processes, ribs, tailhead, tuber coxae, and tuber ischii prominent; withers, shoulders, and neck structure faintly discernable.




7 Fleshy
 May have crease down back; individual ribs can be felt, but noticeable filling between ribs with fat; fat around tailhead soft; fat deposited along withers, behind shoulders, and along neck.



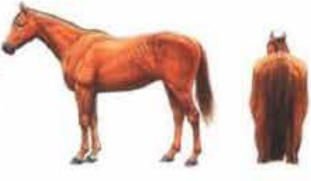
3 Thin
 Fat buildup about halfway on spinous processes; transverse processes cannot be felt; slight fat cover over ribs; spinous processes and ribs easily discernable; tailhead prominent, but individual vertebrae cannot be identified visually; tuber coxae appear rounded but easily discernable; tuber ischii not distinguishable; withers, shoulders, and neck accentuated.




8 Fat
 Crease down back; difficult to feel ribs; fat around tailhead very soft; area along withers filled with fat; area behind shoulder filled with fat; noticeable thickening of neck; fat deposited along inner thighs.




4 Moderately Thin
 Slight ridge along back; faint outline of ribs discernable; tailhead prominence depends on conformation, fat can be felt around it; tuber coxae not discernable; withers, shoulders, and neck not obviously thin.



9 Extremely Fat
 Obvious crease down back; patchy fat appearing.





Henneke et al., 1983
 Illustrations by Japan Racing Association



Scratches

<https://equinesafetyzone.com/scratches>



Thrush

<http://thenaturallyhealthyhorse.com>



Rain Rot

<http://ecoequine.wordpress.com>

Precipitation can turn the pastures into mud, which can increase a horse's risk for skin and hoof conditions, such as scratches, thrush and rain rot. Scratches has several names, including pastern dermatitis. In short, it is a dermal disorder of the lower limb caused by microorganisms from the soil. These microorganisms invade wet or chapped skin and cause sores, which can lead to swollen legs and eventually lameness if not corrected. Thrush is caused by a necrotizing bacterium that lives in wet soils and invades the sulci, or creases in and along side of the frog. Thrush is characterized by a foul odor, peeling frog and black discharge. You should pick your horse's feet routinely and consider using a drying agent as necessary. Rain rot, which is also a dermal disorder, is caused by bacterium invading small openings in the skin caused by as little as a bug bite, scratch, etc. It causes the sloughing of hair and sore skin and can be very invasive in extreme cases. Treatment for these skin conditions can typically be made using an antifungal/antibacterial medicated shampoo, such as Betadine. You may need to clip the hair in the affected areas and gently scrub the skin daily with the medicated shampoo, being careful not to pick off the scabs. Your veterinarian may also recommend applying an antimicrobial wound salve and bug repellent. After about 7 to 10 days you can reduce cleaning treatments to about 2-3 times a week until it clears. Keep the horse's body and legs as dry as possible and avoid early morning turnout where the dew is heavy or leaving them out in the rain. A 2% iodine treatment is also appropriate for thrush. In severe cases, the foot may need to be bandaged, using a breathable bandage such as a diaper. Keeping the horse's feet picked and dry will go a long way towards prevention. Further, to reduce the risk of thrush development, remove organic material

from stalls and paddocks and amend paddocks with rock dust or mulch if they become too wet or heavy with organic material.

Winter can flare other health problems such as arthritis in horses. Horses are less likely to move around in their pasture as forage sources deplete and they stand at the round bale to consume their roughage. This will increase arthritis symptoms in most instances, so some type of low intensity exercise to keep joints moving and lubricated can be helpful. Also watch for signs of gastric ulcers in your stabled horses, especially if they are not used to being inside a barn. Ulcers increase as a result of stress by things such as stabling or changing routine. Signs of ulcers include a dull hair coat, which can be hard to determine due to a winter coat, altered eating habits, increased irritability, and increased incidence of colic, among others. Remember that older horses can be pretty "strong of mind" and not show their pain from arthritis, ulcers or even colic very readily. Make sure you know what your horse's normal behavior is so that you can quickly tell when something is wrong!

References

American Association of Equine Practitioners - <https://aaep.org>

Henneke et al., 1983. Relationship between condition score, physical measurements and body fat percentage in mares. *Equine Vet J.* <https://doi.org/10.1111/j.2042-3306.1983.tb01826.x>

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