

Hot Weather Care of Horses

As the summer warms up and the potential for heat stress in horses increases, horse owners need to consider four management factors. They are ventilation, water consumption, rations, and conditioning.

Since sweating is the primary cooling mechanism in the horse, relative humidity is significant, because it impairs the evaporation of sweat.

Any increase in the environmental heat stress index--the sum of the temperature and humidity--above 140 should be an indication for caution, especially for working horses.

One way to help horses get through hot weather is to ensure that the barns they live in are adequately ventilated. If it can be done safely, barn doors and windows should be left open. If necessary, fans should also be used to increase air flow. If horses are kept in the barn, each stall may require a fan on the stall to move air over the horse.

There are fans with mist attachments available that add water vapor to the air. They can cool an area by as much as 10°F. This method is less effective when the relative humidity is high.

Assuring horses consume enough water is important anytime but is critical during potential heat stress conditions. A 1,000-pound, idle horse needs a minimum of 10 to 12 gallons of fresh, potable water each day.

As the air temperature rises, even idle horses sweat and consume more water. If they are working hard and the temperature is above 70°F., adult horses can easily consume 20 to 25 gallons of water per day.

The horse owner should offer water frequently during hot weather and work, even if the animal does not appear thirsty. When sweating profusely, a horse's thirst mechanism does not always keep up with bodily needs.

Rations should contain salt. The sodium and chloride from salt are important ions that should be provided in the ration on a daily basis.

Rations for an idle mature horse should contain 0.5 percent salt. Working horses should have 1.0 percent salt in the diet.

As extra insurance, salt blocks or loose salt in a feeder can be provided, as individual horses vary in their salt requirements. As long as free choice water is available, extra salt consumption is rarely a problem. Also, if the horse is not drinking well or its feces appear smaller and drier than normal, additional salt may be force fed with the grain or as a salt slurry.

All working horses lose some electrolytes through perspiration, regardless of environmental temperatures.

As muscles function, heat is given off as a by-product. This energy metabolism increases body temperature, often to a range of 102 to 106°F., at least temporarily. Normal body temperature for adult resting horses is 99 to 100°F.

Sweat glands are triggered by this metabolic process, and resulting perspiration moderates the body temperature to a safe zone.

The harder the horse works, and the higher the ambient temperature, the greater the fluid and electrolyte loss through sweating.

However, certain horses lack the ability to sweat. These horses do not have adequate means of eliminating the body heat they produce and must be worked carefully during hot weather and cooled out well. If horse owners suspect that they own a horse that lacks the ability to sweat, they should contact their veterinarian for management guidelines.

Most horses that eat a balanced ration that includes trace mineralized salt and are drinking adequate water will replenish the electrolyte system on a daily basis.

In hot weather, harder working animals should be given supplemental electrolytes. Serious electrolyte and fluid loss can result in a variety of health problems, such as premature fatigue, muscle cramps, and colic.

In extreme cases, because of a decrease in water consumption or electrolyte loss, sweat gland function can be disrupted and the horse can develop heat stroke. At this time, if the horse refuses to eat or drink, a veterinarian needs to give electrolytes and fluids by intravenous administration.

There are commercial products available that can be added to feed or drinking water. But horse owners should be aware that some animals will drink less water because of a product's taste. If electrolytes are added to the drinking water, it is essential that two buckets be hung, one with the electrolytes added, and one with fresh, potable water.

Crude protein should not exceed 12 to 14 percent of the total ration in the adult athletic horse. The protein content of the ration for the idle, mature horse should be about 10 percent.

Excessive protein can generate extra body heat in the digestion process. The dissipation of this extra body heat places more demands on the horse's "cooling system."

Good management requires owners and trainers to acclimate horses to the environment with proper fitness programs before working a horse when the temperature and relative humidity are high.

Even a well-conditioned horse that is apparently adjusted to the working environment can become overly

stressed if temperature and relative humidity are above normal.

Pleasure horses used infrequently should not be ridden hard, even for short periods, when weather conditions are stressful.

Horses with heat exhaustion will show signs of weakness, stumbling, increased respiration, even after resting, and an increased temperature in the range of 102 to 106° F.

Their temperatures might remain elevated, even after being rested or cooled out. In this phase, the horse usually continues to sweat somewhat.

With heat stroke, symptoms are more severe and dangerous. The horse's body temperature will remain above 106°F, and typically, they stop sweating.

In cases of either heat stroke or heat exhaustion, a veterinarian needs to be called.

While waiting for the veterinarian to arrive, the horse owner should provide small amounts (several swallows) of water frequently, wet the horse's body with water, and stand the horse in the shade where there is a breeze. Air movement is essential to assist with the cooling process. If there is no breeze, the horse owner should provide some sort of air movement, such as with a fan.

If lukewarm water is available, it should first be applied to the feet and legs for a few minutes and then gradually sprayed over the entire body. If only cold water is available, it should be applied only to the feet and legs for 30 minutes and then gradually sprayed over the rest of the horse.

During the cooling process, it is essential that the horse's temperature be taken frequently, such as every 15 minutes, to assess the effectiveness of the owner's efforts to cool the horse.

When the horse's rectal temperature reaches about 102° F., the horse owner should stop hosing the horse. The owner should continue to monitor the horse's temperature, as the temperature should continue to drop after the active cooling process is stopped.

Contact: Dr. Judy Marteniuk
Equine Extension Veterinarian
Michigan State University
517-353-9710