

HORSE WELFARE



Minimum Standards for Water, Feed, Care and Shelter in Tennessee

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Introduction

In Tennessee, horses are commonly owned throughout the state. Tennessee law requires that all animals have necessary water, feed, shelter and care. This publication defines what are considered the minimum requirements for horses in these areas. It is important to remember that these represent only the minimums, and horse owners should strive to provide care above these levels.





Water

Water is the most critical and essential nutrient for horses. Horses must have a source of water to maintain normal body functions. They need water intake daily as water is lost in sweat, urine and feces. The amount of water a horse will drink in a day depends on body weight, stage of production (i.e., growth, work, lactation), environmental effects and individual variations. Typically, most horses will drink 3–10 gallons of water per day. However, water intake during lactation increases 50 to 70 percent, while working horses will require a substantial increase (20–300 percent) in their need for water. Horses are best given water free-choice, though this may not be possible in all situations.

Horses given inadequate water will become dehydrated, and are more susceptible to a variety of health problems such as loss of appetite, weight loss, colic, kidney disease and skin problems. Dehydration can be measured by pulling the skin away from the body below the point of the shoulder and letting go. In normal horses, the skin will regain its normal position within two seconds. The skin of dehydrated horses is less elastic and will return to normal more slowly. A simple blood test called packed cell volume is useful in determining dehydration.

Horse Care Guidelines

Horses should have access to clean, palatable, safe water and be able to drink their fill at least twice a day.

Feed

Horses should be fed according to their nutritional needs. Horses' nutritional requirements are based on stage of production (growth and lactation) and activity. The categories that determine nutrient requirements are maintenance, gestation, lactation, growth and work. The horse is then fed to meet those nutrient needs. Maintenance requirements are those requirements needed for a horse to simply maintain its present body status, neither gaining nor losing weight. Pregnant mares during late gestation require additional nutrients above maintenance to sustain body weight and provide for the growing fetus. Lactation, growth and work may require additional feed for nutritional needs above maintenance requirements.

Depending on stage of production, forages (hay or pasture), grains, vitamins and minerals may need to be supplied in the correct amount to maintain the nutritional wellbeing of the horse.

Forage

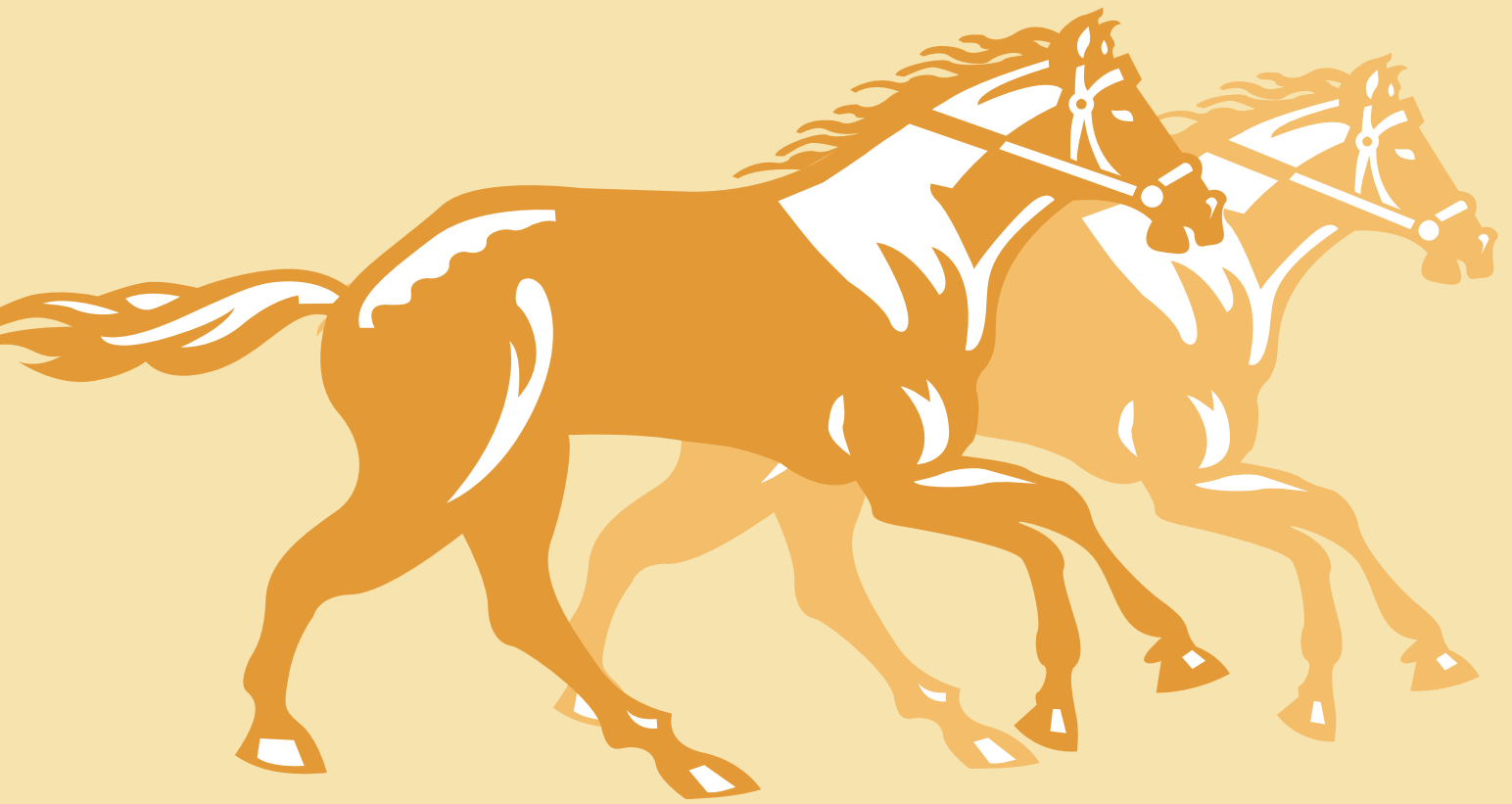
Since the horse is a grazing animal, the basis for all horse diets should be hay or pasture. Good-quality forage alone can meet the maintenance requirements for most horses, particularly if a vitamin–mineral supplement is provided free-choice. In many cases, horses will not only maintain weight, but can make slow body weight gains when fed an all-forage diet. Horses should be fed free-choice hay or pasture. However, if free-choice is not possible, they should receive at least 1 to 1½ percent of their body weight in forage each day. For a 1,000-pound horse, it would take 10 to 15 pounds of hay or pasture per day to meet the forage requirements. Hay should be palatable, and stored and used so that it does not rot or mold.

Forages for horses include pastures and hay. Pastures and hays are generally divided into two categories, legumes and grasses. Examples of legumes are alfalfa, clover and lespedeza. Bermuda, timothy, orchard, fescue and bluegrass are examples of grasses. Pastures and hay can be either grasses or legumes, or combinations of the two. The majority of Tennessee pastures are fescue or fescue-and-clover mix.

Grains

Grains are used to supply energy. The most common grains used to formulate horse feeds are oats, corn and barley.





Sometimes, young growing horses, lactating mares and hard-working horses cannot be maintained on a forage diet alone. The grain is used to supplement forage to provide the energy and other nutrients needed for faster weight gains, increased milk production and superior performances. Generally, the grains are blended with protein sources such as soybean meal, and additional vitamins and minerals are supplied to produce a mixed feed.

The mixed grain diets are readily available from feed and farm supply stores and should be fed at the rate of 0 to 1.50 pounds per 100 pounds of body weight. If the mixed grain diets exceed 5 total pounds daily, it is recommended that the grain mixture be divided into two feedings, morning and night. Grain should be stored so that it does not mold, as molded feed should not be fed to horses. Feeder space should be adequate for the number of horses. Moreover, horses should not be fed on the ground due to waste, contamination and increased possibility of colic and parasite and disease transmission. Geriatric horses (those more than 20 years of age) may require a special grain mix to maintain their body condition.

Complete horse feeds have been successfully used to replace some or all of a horse's pasture or hay needs. It is important that these feeds be fed in adequate amounts as several feedings a day.

Body Condition Scoring

Body Condition Scoring (BCS) is an objective way of determining the amount of body fat a horse has. Body fat is stored when the horse's energy intake is more than its immediate daily needs. Body fat is lost when the horse's energy intake is less than immediate daily needs. While some body fat is stored inside the body, much is stored under the skin. The amount of fat there can be relatively determined by looking and, more importantly, feeling those parts of the horse's body. Body condition scores are a useful measure of the adequacy of nutrition for that animal's needs and also a useful measure of general wellbeing. The most frequently used system of body condition scoring was developed by Dr. Don Henneke while he was at Texas A & M University in the early 1980s.

The ideal body condition score for most horses is 5, but highly conditioned horses, such as those used for competitive endurance rides, will have little body fat (similar to a human marathon runner).

Body condition scoring is best done by looking at and feeling of **both** sides of the horse. Several specific areas should be evaluated, including the neck, withers, shoulders, ribs, loin and tailhead. It has been recommended that these six sites be scored

on both sides and then the results be divided by six. Another way to make a more accurate body condition score estimate is to look at and feel the horse and then decide if the horse is thin, fat or in between. Thin horses are in body condition score 1, 2, 3 or 4. Fat horses are in body condition score of 7, 8 or 9. Horses in between are body condition score of 5 or 6.

Several situations can make accurate body condition scoring more difficult, including horses with long hair coats, angular horses with high withers, horses with hay bellies and very pregnant mares. Changing body condition scores is a gradual process, with one to three months being required to change one body score unit in most horses.

Horse Care Guidelines

Horses should be maintained in a body condition score of three or more in most cases. However, horses gaining weight and being fed adequately, highly conditioned performance horses and horses with certain chronic health conditions may be in lower body condition scores and still be acceptably nourished. Horses more than 20 years of age may not maintain their body condition well even with special feeds.

Table 1. *BCS* Body Condition Scoring System for Horses



BCS 1

**Emaciated.
All Bones Prominent,
No Fat Found**

1. Poor.

Animal is extremely emaciated. Spinous processes (portion of the vertebra of the backbone that projects upward), ribs, tailhead and bony protrusions of the pelvic girdle (hooks and pins) are prominent. Bone structure of the withers, shoulders and neck are easily noticeable. No fatty tissues can be felt.

BCS 2

**Emaciated.
Little Body Fat,
Bones Feel Slightly
Rounded**



2. Very Thin.

Animal is emaciated.

Slight fat covering over base of the spinous processes.

Transverse processes (portion of vertebrae that projects outward) of lumbar (loin area) vertebrae feel rounded. Spinous processes, ribs, shoulders and neck structures are faintly discernible.

BCS 3

**Fat Halfway up Spinous Processes.
All Ribs Can Be Seen**



3. Thin.

Fat is built up about halfway on spinous processes. Transverse processes cannot be felt. Slight fat cover over ribs. Spinous processes and ribs are easily discernible. Tailhead is prominent, but individual vertebrae cannot be visually identified. Hook bones (protrusion of pelvis girdle appearing in upper, forward part of the hip) appear rounded, but are easily discernible. Pin bones (bony projections of pelvis girdle located toward rear, mid-section of the hip) are not distinguishable. Withers, shoulders and neck are accentuated.

BCS 4

**Backbone
Slightly above
Back.
Faint Outline of
Posterior Ribs
Seen.**

4. Moderately Thin.

Negative crease along back (spinous processes of vertebrae protrude slightly above surrounding tissue). Faint outline of ribs is discernible. Fat can be felt around tailhead (prominence depends on conformation). Hook bones are not discernible. Withers, shoulders and neck are not obviously thin.



BCS 5

**Back Is Level,
Ribs Cannot Be
Seen**

5. Moderate.

Back is level. Ribs cannot be visually distinguished, but can be easily felt. Fat around tailhead begins to feel spongy. Withers appear rounded over spinous processes. Shoulders and neck blend smoothly into body.





Slight Crease down Back. Soft Fat over Ribs and Tailhead.

6. Moderate to Fleshy.
May have slight crease down back. Fat over ribs feels spongy. Fat around tailhead feels soft. Fat begins to be deposited along the sides of the withers, behind shoulders and along neck.

BCS 6

Crease down Back. Ribs Can Be Felt with Pressure.

BCS 7

7. Fleshy.

May have crease down back. Individual ribs can be felt, but with noticeable filling of fat between ribs. Fat around tailhead is soft. Fat is deposited along withers, behind shoulders and along neck.



BCS 8

Crease down Back. Crested Neck, Fat along Inner Buttocks

8. Fat.

Crease down back. Difficult to feel ribs. Fat around tailhead is very soft. Area along withers is filled with fat. Area behind shoulder is filled in flush with rest of the body. Noticeable thickening of neck. Fat is deposited along inner buttocks.



BCS 9

Deep Crease down Back.



Bulging Fat over Tailhead. Flank Flush with Ribs

9. Extremely Fat.

Obvious crease down back. Patchy fat appears over ribs. Bulging fat around tailhead, along withers, behind shoulders and along neck. Fat along inner buttocks may rub together. Flank is filled in flush with rest of the body.

Shelter

Horses can adapt to a wide variety of environmental extremes if they are acclimated and have adequate feed and water. Horses with free access to shelter will often choose not to use it when it seems logical they would do so. Acceptable shelter may be natural, such as trees, or constructed, such as barns. In some circumstances, natural shelter offers advantages over constructed shelter.

Horses do benefit from shelter, particularly as it acts as a sunshade and wind screen. The shelter should be of adequate size for the number of horses using it to avoid fighting among the animals. Individual stalls should be big enough for the horse to turn around. A 12-foot x 12-foot stall is adequate

Horse Care Guidelines

Horses should have free access to natural or constructed shelter that is well-ventilated with adequate space and free of hazards. Stabled horses should be allowed exercise daily.

for all but the largest horse. The shelter should be tall enough so the horse's ears do not touch the ceiling with the horse standing in normal posture with the head held higher than the withers. The shelter should be adequately ventilated to help prevent respiratory infection and should be free of hazards that might cause injury. Finally, it should have good footing and be well-drained.

Care

Horses, like all animals, need regular, preventative health care as well as veterinary care for problems as they arise. Horses should be observed for wellbeing at least once every 24 hours.

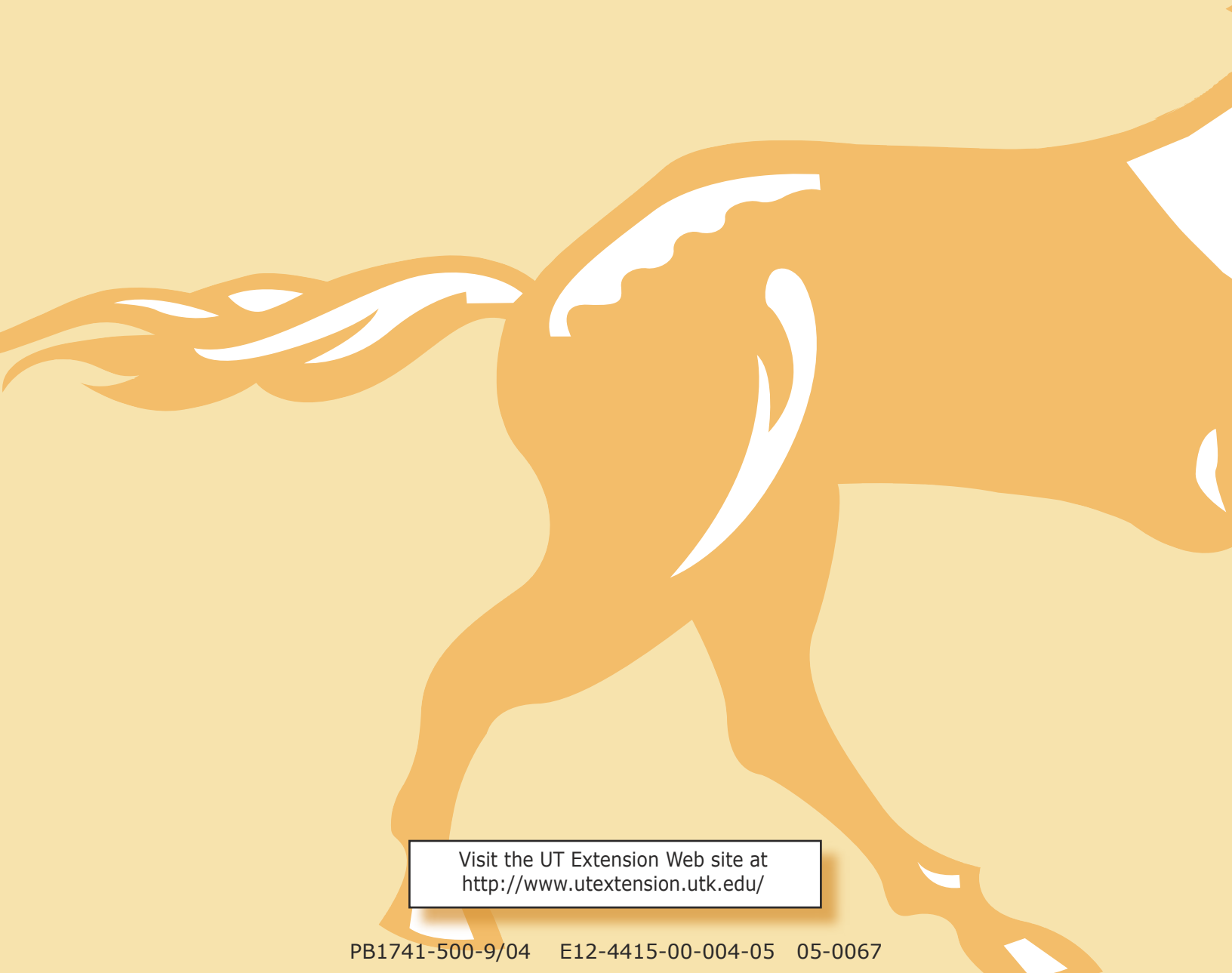
Vaccines are often indicated to prevent infectious disease. Also, deworming and various environmental management practices are necessary to prevent health problems due to internal parasites. The recommended basic vaccines for horses are Eastern, Western and West Nile Virus Encephalitis and Tetanus. Other vaccines may be useful in certain situations. Most horses will benefit from being dewormed two to four times a year; young horses need to be dewormed more often. Tennessee law requires that horses have a negative Coggins test (for Equine Infectious Anemia) no more than six months before change of ownership and no more than 12 months before being taken to a congregation point such as shows, boarding stables and trail rides. Regular hoof care is important to a horse's wellbeing to prevent hoof problems and to allow normal movement.

Horse Care Guidelines

Horses should be free of significant health problems or should be receiving appropriate health care to prevent unnecessary discomfort and promote prompt return to wellbeing. The horse should receive adequate hoof care to allow the horse to stand in a normal posture and move at all gaits without discomfort. Some health and hoof problems (such as heaves or founder) in horses, particularly those that are longstanding, may not be resolvable, but this should be determined by veterinary exam.

Summary

Horses are extremely hardy and are strong survivors. Typically, if horses have access to clean water and free-choice forage, they can survive extreme weather conditions. Obviously, a disease-and-parasite-control program and a constructed or natural shelter would help provide for the horses' wellbeing.



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