

Facilities, Management, & Safety - General Knowledge Study Guide

I. Facilities

A. Barns

i. Ventilation

Ventilation is one of the most important aspects of a good barn design. Without good air quality, horses are more likely to develop respiratory problems and pneumonia. A well ventilated barn will have minimum drafts but enough air exchange to keep a healthy environment.

Air quality is most important when the air moisture is high such things as dust and molds can enter deeply into the respiratory system. It is ideal that the inside of the barn be about five degrees F above the outside temperature.

When warm temperatures arrive, it is best to let the horse cool down by allowing air to move over the horse's body.

A common and cost efficient ventilation system is to leave a space between the roof surface and the top of the barn.

A rule of thumb is that there should be at least one foot of ridge ventilation for each horse (especially if hay is stored above the stalls) and at least four to eight air changes per hour.

ii. Feed storage

Proper feed storage is important for a number of reasons. One reason is being that horses that get into the grain can become very ill. Another important reason is rodent control.

Feed should be stored in a separate room or building. There should be a latch or padlock to prevent horses or other animals from getting into them. If a separate room or building cannot be furnished for the feed, feed bin containers are acceptable; metal is usually best.

Feed should be stored in a dry area below 77 degrees F. This will prevent bacteria and mold from growing.

When storing hay, it is important to make sure that there are not any water leaks in the roof. Otherwise mold will grow. Like grain storage, make the hay storage rodent free.

For fire safety, it is best to store hay in a separate building. Hay should also not be stored near any heating or electrical sources.

iii. Flooring

Stall flooring must be made of durable material which is non slippery but absorbent, easy to clean, and resistant to pawing.

Clay- maintaining clay floors are difficult because when horses urinate and move in the stall holes can result. This contributes to sanitation problems.

Limestone Dust- if installed over good surface that allows for drainage, then limestone makes a good hard surface
Concrete- easy to clean and sanitize. However, more bedding is needed to soak up urine. Can be cold and slippery if not bedded properly. Could also cause leg problems.

Rubber floor mats- should be one piece or as few pieces as possible and fit close to the walls. Can be very expensive.

iv. Watering

Today, many farms now use automatic waterers. They should be placed in the back of the stall so an overflow tube can be attached and run to the outside of the barn. They should be checked daily to ensure proper function and be clean and disinfected like buckets. When using buckets to water, they should be emptied every day and washed every couple of days (every day if there is illness in the stable). Buckets do need to be refilled throughout the day. They typically are placed on the front wall of the stall so refilling with a hose is easily accessible.

v. Lighting

Proper lighting is important for both horses and farm workers. Lighting regulates the schedules of shedding of hair and estrus in the horse, which is controlled by day length. Two types of electrical fixtures are common in the stable: incandescent bulbs and fluorescent tubes. Fluorescent lighting is four times more energy efficient than incandescent. There should be protective coverings over the bulbs anywhere horses could reach them such as stalls and alleys.

B. Run-In Sheds

When out in paddocks or pastures, horses need shelter that is clean, dry, and protected from the weather. A shed consists of three sides, a roof, and an open side for horses to roam freely in and out of. It should be large enough for a few horses to stand or lie in (usually 100 square feet).

C. Pastures

Pastures are large vegetation areas that horses and cattle feed on. Pastures contain horses by a fence system. Some horses may be turned out during the day on pastures and some may live out in one. It is common for mares and their foals to spend much time in the pasture as it grows. Pastures can consist of many acres.

I. Soil characteristics

There are many different types of soils each with a different color, texture, structure, and mineral content. Soil consists of many layers that range from the upper earthy and soft layers to the underlying rocky ones.

D. Paddocks

Fencing encloses paddocks, like pastures, but they are used as exercise, holding, or short term grazing areas. Fencing should be at least 5 feet high (6 feet for tall breeds). Many types of fencing are available such as wood, wire, electric or barb. For each horse there should be 600 square feet for proper space. Paddocks should have soil that resist flooding and take up water easily to prevent messy and unsafe footing. Grass in paddocks should be palatable, digestible, and hardy to winter.

E. Arenas

Arenas are typically close to the main barn and used for training and exercising. An arena should be at least 36 feet wide, which is limited only to riding to small groups (no driving or large lessons for example). For group riding and driving 60 feet at least is acceptable. Ceiling height is a minimum of 14 feet for horses and riders safety. For jumping, 16 feet is recommended.

There are a number of footings available for arenas including: dirt, sand, shredded tires and leather, fiber products, even composted manure and bedding. Each is dependent on a farm's budget, preference and what type of training or riding they choose to do.

F. Round Pens

Round pens are smaller, enclosed training or holding areas. Their small size enable the horse and trainer to establish a relationship by providing closer contact and preventing the horse from fleeing to a distance. Round pens are very popular with the training of wild horses because it helps to build trust. Round pens can be made of wood fencing or metal (enabling it to be portable). They usually have dirt surfaces and are often outside, but small stables may have built in ones.

II. Management

A. Fly control

Manure is excellent for fly breeding, therefore, remove and spread the manure regularly. Composting at proper temperatures will inhibit fly development. Pesticides can be used on manure piles to kill maggots. All horses should be dewormed on a regular schedule using an anthelmintic.

B. Manure Management

Remove all manure from stalls, corrals, and paddocks on a daily basis. Be sure that you have a large enough space to accommodate the amount of manure being produced. Over time manure shrinks from decomposition and moisture loss. Manure should be stored at least 150 feet away from surface water and wells. A perimeter should be constructed around the stockpile to prevent contamination.

B. Rotational Grazing

Rotational grazing is periodically moving livestock to fresh paddocks, to allow pastures to regrow. Feed costs decline and animal health improves when animals harvest their own feed in a well-managed rotational grazing system. The pasture is grazed when it is leafy and nutritious.

C. Maintenance of facilities

Most maintenance upkeep demands many hours of labor work. Labor can get expensive so it is important to maintain simple things such as fences. Small everyday things such as cleaning water buckets and mucking stalls also contribute to keeping a stable in top shape. Without proper maintenance things can break or be disrupted that could cause large problems. Some common things to maintain are: fencing, cleanliness of stalls, electricity and water systems, tack rooms (as well as tack), and grass cutting/snow removal systems.

III. Safety

A. Helmet Safety

- SEI approved helmets should be worn when mounted or driving.
- Be sure that the helmet is the correct size with proper fit.
- Be sure that the helmet has a chinstrap that fits somewhat snug.

B. Tack safety

- Never tie the horse by the reins, they may break and this may injure the horse's mouth.
- Keep all tack in good repair; replace any straps that show wear.
- When bridling, watch your head in case a horse were to throw its head when refusing the bridle.
- After buckling latches, always place loose end of strap through the keeper on the buckle.
- Swing saddle into position easily, not rapidly.
- Adjust saddle carefully and tighten cinch enough so it will not turn when you mount.
- Since horses swell expand their girth area after tacking, be sure to walk the horse around and tighten the girth again.

C. Riding safety

- Never mount a horse in a small barn, near fences, near trees, or near over-hanging projections.
- Keep your horse under control and maintain a secure seat at all times.
- If your horse becomes frightened and attempts to run, turn it in a tight circle until it stops.
- If a horse seems too excitable, work it out on a long line before riding.
- Ride with your weight on the balls of your feet so you can free them in case you should fall.
- When riding in groups keep a horse-length between each horse.
- Avoid riding on paved roads and streets.

D. Barn safety

- Walk in a barn, never run; it could spook a horse.
- When releasing a horse into a box stall, turn the horse so it faces the door.
- Always tie a horse to a secure object.
- Keep horses a respective distance away from each other.

E. Horse safety

- Always approach a horse from the front and left side, no walking or standing behind the horse.

- Pet the horse by first placing your hand on the neck or shoulder.
- Know simple means of restraint such as cross ties.
- Keep a distance between horses, you do not want to risk two horses getting into a fight.
- Always walk beside, not behind or in front of your horse, using both hands (never wrap a lead or reins around your hands).

IV. Hoof Care

Some important points in the care of a horse's feet are to keep them clean. Prevent them from drying out, and trim them so they retain proper shape and length.

Clean feet with a hoof pick working from heel to toe. While cleaning them, check for loose shoes and thrush. Thrush is a disease that can be noticed by a foul smell. Without treatment the horse could go lame. Dry and brittle hooves may also cause lameness.

A healthy hoof grows $\frac{3}{8}$ to $\frac{1}{2}$ inch per month. To prevent problems the hooves should be trimmed about once a month. To do this, use a scissor like tool, called nippers, to trim the horn. Then level the wall of the hoof with a coarse file, called a rasp.

Shoes are used to protect the hoof when wear may exceed the growth. They provide traction, correct defects of stance or gait, help cure disease or defective hooves, and they may also provide relief from pain of injured parts.

An experienced farrier should do the shoeing since it can be difficult. Shoes are made to fit the foot and can be shaped to do so. Horses should be reshod about every four to six weeks; otherwise the hooves may grow out of proportion.

Here are some helpful hints when it comes to hoof care:

- Begin when foal is young
- Keep feet well rounded
- Exercise foals on dry ground to allow natural wear
- If horse is kept in stall, rasp down every 2 to 3 weeks
- Clean soles and clefts of frog frequently
- Do not trim away healthy frog unless there is clearly an excess
- Do not rasp outside wall

There are different shoes for different purposes for horses. Here are a few:

- Half-round shoes: used for horses in training or for trotting harness racing
- Sliding plates: go on the back feet of reining horses to help the horse slide across the ground during a sliding stop
- Square-toed shoes: mostly on the hind feet to stabilize a break over of the foot
- Weighted shoes: used to enhance leg action by changing the timing of and adding momentum to hoof flight patterns

Below are some pictures of different styles shoes:

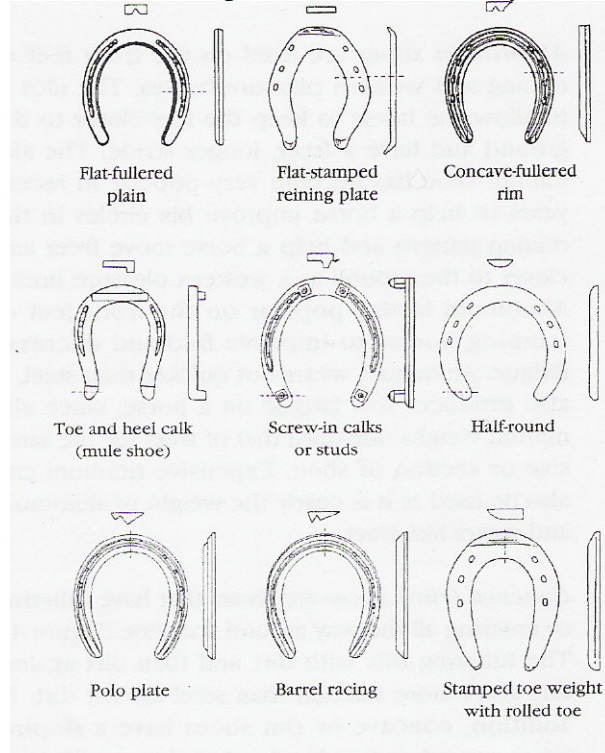







Chart from Horse Industry Handbook

Some common tools necessary for proper hoof care include:

Tool	Purpose	Picture
Hoof Pick	Cleans out the bottom of the hoof.	 <p>Photo courtesy of www.moonrakerqh.com</p>
Clinch Cutter	Enables nails to be removed from a shoe.	 <p>Photo Courtesy of www.stockyardsupply.com</p>

<p>Hoof gauge</p>	<p>Determining the exact hoof angle and toe length so the feet are level.</p>	 <p>Photo courtesy of www.kingstons.net.au</p>
<p>Hoof Nippers</p>	<p>Remove growth of the wall.</p>	 <p>Photo courtesy of www.horse.com</p>
<p>Hoof Knife</p>	<p>Pares away the dead sole from the hoof.</p>	 <p>Photo courtesy of www.centaurforge.com</p>

<p>Rasp</p>	<p>Makes a level bearing surface after the hoof has been trimmed with nippers.</p>	 <p>Photo courtesy of www.artlex.com</p>
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