**Choosing Feeders: Rack 'Em Up**

You know how important it is to provide your horse with good nutrition, so you and your veterinarian have carefully selected your horse's diet. However, good feeding management requires that you consider not only *what* your horse is fed, but *how*. Because a horse with an inadequate feeder runs the risk of wasting precious nutrients or even ingesting unwanted sand or fecal material, choosing appropriate feeders for hay and grain is of utmost importance. The decision, however, can be overwhelming. There are so many types of hay racks, mangers, and feed bins available, how do you know the best one to choose? What factors should you consider?

Read on for tips on picking the right feeder for your horse's needs.

**Feeding Hay in Stalls**

One of the most difficult decisions is how to feed hay to horses in stalls. Because horses often make quite a mess of their stalls, whatever feeding method you choose should keep them from mixing their hay with their bedding and should minimize the ingestion of dirt, sand, and fecal material. Moreover, because the leaves are the most nutritious part of the hay, you want to make sure that they are not being wasted.

***Feeding on the ground--***Although it is generally considered to be wasteful, many people feel that feeding horses on the ground is the best option because it allows the animals to adopt a natural grazing position. "Feeding hay on the ground in stalls is fine as long as the stalls are cleaned regularly," says Sarah Ralston, VMD, PhD, Dipl. ACVN, associate professor of animal science at Rutgers University in New Jersey.

If stalls are not kept clean, however, there is a good chance that your horse's hay will become contaminated with dirty bedding. According to Lon D. Lewis, DVM, PhD, author of *Feeding and Care of the Horse*, eating hay contaminated with fecal material increases a horse's risk of intestinal parasite egg intake. Depending on the type of stall floor, some horses fed on the ground are also in danger of ingesting sand. According to Gary Potter, PhD, professor of equine science at Texas A&M University, "If you feed a horse on a dirt floor, and you're feeding a limited amount of hay, you're forcing the horse to scrap around and pick up every piece of hay. In this case, they may pick up sand, and you don't want that."

***Hay racks--***For these reasons, many people choose to feed hay from racks. "Some advantages to feeding hay in hay racks is that the horses don't waste as much and don't stomp it into the ground," says Potter. In addition to keeping the hay in place so it is not mixed with bedding or feces, racks let people easily check which horses have hay. Made of galvanized steel rods or a lighter weight steel mesh, hay racks should be mounted where they are safe and easy to fill. "You put the hay rack at a height that makes it convenient to feed the horse and also makes it convenient for the horse to get access to the hay," says Potter. "Feeders in stalls I like to see at wither height," recommends Ralston, "so that the horses, if they're rolling, don't get their feet tangled in them." According to Paul Siciliano, PhD, associate professor of equine nutrition at Colorado State University, because of the height at which hay racks need to be installed to ensure a horse won't injure themselves on the rack, they are often positioned in a way that makes eating hay awkward for the horse. Because the horses are forced to reach up for the hay, they risk getting dust and hay particles in their noses and eyes. Siciliano also believes that horses using hay racks will end up eating off the ground anyway. "If you watch horses eat out of some of those feeders," he says, "they really will first pull it down onto the ground, then eat it."

***Fixed mangers and ground level corner feeders--***According to Siciliano, many people who want to feed their horses at a lower height will use either a ground-level corner feeder or a fixed manger with a mat underneath. This allows horses to eat at a more natural angle and still prevents them from picking up sand. "The best case situation is a feeder that the horse can eat out of on the ground that doesn't allow the horse to trample the hay," Siciliano says. Fixed mangers for hay are usually installed at chest height. To prevent a horse from catching his foot or knocking his head, they can either be boxed in down to and flush with the floor, or they can be fixed across a corner by sloping boards. Ground-level corner feeders, on the other hand, consist of short boards across one corner of the stall, going up about two feet. Although both types of feeders are difficult to clean, they provide a good balance between keeping the hay together and allowing the horse to eat with his head down.

***Hay nets and bags--***Because hay nets are easy to weigh and make it easy to dampen or soak hay, many horse owners use them, particularly when they are on the road. Unfortunately, nets can be dangerous if they are not tied correctly. According to Ralston, "If people use hay nets in stalls, they have to hang them high enough so that when the hay nets are empty, they hang above the horse's withers so the horse can't get his feet tangled in it." While the net might appear to be hanging at an appropriate level when it's full, it will probably hang too low when empty. Therefore, the best practice is to remove it when the horse has finished eating his hay. "I've also seen hay nets used where they hang them outside the horse's door, like they do at the racetracks," says Ralston. "That's the safest way to do it. The horse has to reach around the corner to get the hay, but at least he's not going to get tangled." Nonetheless, Ralston says she much prefers to see horses fed out of hay bags instead of hay nets. In addition to being harder for a horse to get a foot caught in, hay bags minimize leaf loss and are easier to fill than hay nets.

**Combination Hay and Concentrate Feeders**

Yet another option is to feed hay out of a combination feeder. These types of feeders have a grill design on the upper part that holds several flakes of hay, and a tray for feeding grain and supplements underneath. In addition to being convenient and easy to use, Potter says they help keep horses from wasting the nutritional part of the hay. "The hay rack goes up over the trough," he says, "so if you're feeding some leafy kind of hay and the leaves fall down, they will go into the trough with the concentrate. That's good because they don't just fall on the ground." The only potential drawback to combination feeders is again the height at which they must be mounted. "When using any type of hay rack where the horse has to reach up to eat, I think the horse will end up wearing his hay, so to speak," says Siciliano. When choosing a combination feeder, Potter recommends the slats on the hay rack part of it be close enough together that the horse can't get a foot caught in them. "I also like the bottom part of them, at least the concentrate part, to be made out of some kind of galvanized metal so that it doesn't rust. They can also be made out of wood, but generally, if you have wood, you'll have to line the edges to keep the horses from chewing them."

**Feeding Hay Outside**

When feeding hay outside to a group of horses, you must consider the same factors as when feeding inside. "If you're feeding grass hay in a grassy area," says Potter, "you can feed on the ground. In this part of the world, a lot of people feed Bermuda grass hay, and if you've got a nice clean place to do it, you can feed Bermuda grass hay on the ground." On the other hand, Siciliano is concerned that feeding hay on the ground will lead to the ingestion of dirt. "If you feed in the same place every day, you're going to eventually lose your vegetation and have a dirt area in the pasture," he says. Feeding hay on the ground can also be quite wasteful. According to the Ontario Ministry of Agriculture and Food, the practice can account for about a 25% loss from leaf loss, spoilage due to contamination from urine and manure, and trampling by horses.

"So probably, from the standpoint of not wasting, it's a little more efficient to put hay into a feeder," says Siciliano. "I recommend racks as a rule," states Ralston, "recognizing that feeding on the ground is more natural, but it's much more wasteful." "The ideal way to feed hay outside," says Potter, "is in a rack that has a trough in the bottom, especially if you're feeding alfalfa or another legume hay that is prone to shatter. It'll catch the leaves, and that's where most of the nutrition is." Siciliano suggests using a feeder that is low to the ground with solid sides that are at least knee high. "It's more efficient to have them eat with their heads down and not be pulling it all over," he says. "For example, hay in tall feeders has the potential to blow away in high wind areas."

Feeding hay from round bales is yet another option. Simple and cost-efficient, it is particularly useful when feeding hay to a group of horses. Potter especially recommends feeding round bales to horses that don't have sufficient grass for selective grazing. He stresses, however, that the bales need to be fed in a dry place, be good-quality hay, and be consumed in a week or less. If a round bale is not consumed quickly, it will be exposed to the elements and could become moldy. According to Siciliano, there are several styles of round bale feeders that work well for horses. Although he admits that wastage is still an issue, he says that when feeding a large number of horses, the cost of the small amount of wastage might be less than the labor cost associated with feeding small, square bales.

**Feeding Grain Outside**

Feeding grain outside to a group of horses is even more complicated because social hierarchies come into play. When dominant horses chase more submissive horses away from the food, the dominant horses will often overeat and the submissive horses will likely lose condition. Such competition might also lead to injuries from kicking and biting. Using feed bags can help you avoid some of these problems. Feed bags will ensure that each horse gets the correct amount and mix of grain, but they are more labor-intensive because they must be removed as soon as the horse has finished eating. "The main problem with feed bags," says Ralston, "is that they are dangerous for the people who are feeding because they get in a situation where the horses are all gathering around." According to Potter, the best thing to do is to give each horse its own feed tub. "Particularly older horses, they need at least one feeder per horse, scattered out on the ground in random order so that every horse has a place to go and eat. What you don't want to do is use long troughs because they make horses compete with each other for feeder space." Siciliano agrees. "Keep the feeders far enough apart so that once a horse starts to eat, he's less likely to leave his feed and chase another horse off. Putting the feeders in a semi-circle sometimes works out pretty well, too, because it allows the horses to see one another. Another strategy is to put an extra feeder out there. Some horses will get more than their share, but it's not that much extra."

**Feeding Grain Inside**

It is also important to minimize the competition between horses when feeding grain inside. Placing feeders in the corners of adjacent stalls is a labor-efficient design, but it often leads to horses kicking or biting at each other during feeding time. Therefore, mounting feeders at the center front of stalls is a better option. If you do have adjacent feeders, placing either full or partial partitions between stalls can help eliminate competition. An important safety precaution is to mount feeders on the same wall as the door. This will prevent the person feeding the horses from getting kicked while leaving the stall. Another trick is to make small openings or doors that swing out into the aisleway above the grain tubs. This increases safety, but makes it harder for the person feeding to observe the horse. The most popular way of feeding grain to horses in stalls is in removable mangers. These are usually made of metal or plastic and have hooks that fit either over a door or into metal fixtures. Both types are easy to take out of the stall and wash. While the metal ones are sturdier, they are heavy to carry and can more easily bruise a horse's leg if he paws at it. Plastic feeders, on the other hand, are light and quite simple to clean and handle, but are more easily broken. Another concern is that J-style bucket handle attachments are very common contributors to eye injury in horses.

**General Feeder Design**

No matter what feeder you choose, make sure that it is solid and non-rusting. Being able to adequately clean feeders is of utmost importance; uneaten grain can ferment because it has come into contact with saliva, and consuming fermented grain can make horses colic. Also, "In general, feeders should have smooth corners and a really wide base so they don't tip over easily," says Ralston.

**Take-Home Message**

When deciding what feeders are best to use for either hay or grain at your farm, remember that the best ones are safe, easy to clean, and minimize waste. Determine first how you want to feed your horse--off the ground, ground feeder, buckets, racks, etc.--then find the one that suits your barn, run-in shed, field, or fenceline as well as your horses. Some horses will tip over ground feeders and waste feed, so keep an eye on your horses during feeding time.

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