

Increasing Calories in Your Horse's Diet and Other Tips

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Not all horses are made the same. With hundreds of different breeds and uses, a lot of caring horse owners may become overwhelmed and not fully understand the different demands of each individual horse, resulting in some horses with sub-optimal body condition scoring. If you have a horse that needs to gain weight, here are some practical tips that will help you achieve your goal.

Helping a Thin Horse Gain Weight

Think about calories first. A mature horse will gain weight and condition when the number of calories it consumes is greater than the number of calories it uses. Therefore, to increase body condition, the horse must either increase calorie intake or decrease calorie use (or both). Calories are important to muscle gain as well as fat gain, so the diet's calorie value is important.

Horses consume calories from their pasture, hay, and concentrate feed (such as sweet feed or pellets). Most people underestimate the importance of hay and pasture in the horse's diet. If hay and pasture are good quality and abundant, they can contribute most of the calories a horse needs. The fiber in hay and pasture is also important to keep the digestive tract healthy. If a horse receives too little fiber in its diet, it may be less able to digest its other feeds effectively.

Feed quality hay. Choose hay that was harvested at early maturity for horses that need to gain weight and body condition (Figure 1). Early maturity hay has more leaves, softer stems, and few seed heads. Early maturity hay is high in nutrients, and it is palatable so horses will eat more of it. At this early stage of harvesting, legume (alfalfa, clover), grass (orchardgrass, timothy, bluegrass, etc.) or legume-grass mix hays are desirable for horses that need to gain weight. When you compare more mature hays, mature legume hays provide more calories than mature grass hays. Keep in mind that it is more difficult to get a horse to gain weight with mature hay, as mature hay is less digestible and less palatable (See ID-146: *Choosing Hay for Horses*).

Feed enough hay. Most horses will eat about 2 pounds of hay for each 100 pounds of body weight for maintenance (Figure 2). So, a 1,000-pound Arabian will eat about 20 pounds of hay a day while a 1,250-pound thoroughbred will eat about 25 pounds of hay a day. These are just average numbers; some horses will eat more or less. Some waste is also expected, so if the horse eats 25 pounds per day, you will probably have to offer 30 pounds of hay per day. If a horse has lost weight because it has been on restricted feed intake, the amount of hay offered should be increased gradually. For example, if a horse has been in a poor pasture or in a group feeding situation where other horses ate all the food first, its digestive tract will need time to adjust to a higher level of feeding. If you are offering hay and the horse is not eating it very well, make sure to have its teeth examined. If the dental exam is normal, consider trying a different kinds of hay; the goal is to find something that the horse likes so it



Figure 1. Good quality alfalfa hay. Photo by Bob Coleman



Figure 2. Horses eat from a quality round bale. Photo by Bob Coleman



Figure 3. Bad quality round bale and no pasture. Photo by Fernanda Camargo

will eat more hay. Some horses will benefit from “all-they-can-eat hay,” in which the amount will vary depending on the horse and the hay quality. This may mean offering up to 30-40 lb. of hay a day, in which case it is always better to offer it multiple times a day to decrease waste and entice appetite, as horses prefer new hay than one that has been stepped, urinated, and defecated on (Figure 3).

Feeding hay cubes or pellets. Sometimes you cannot find good local quality hay due to weather affecting local hay production or other reasons. When that happens, you can supplement your horse’s hay intake with hay cubes or pellets (Figure 4). Hay cubes are dried forage, such as alfalfa or timothy, that is chopped and compressed into 2½-inch long cubes. Pellets are similar products, but the forage is ground instead of chopped, providing no long stems to the horse. The process of making cubes or pellets does not change the digestibility of the forage, so when replacing baled hay with cubes or pellets, you would replace one pound of hay with one pound of cubes or pellets. However, because pellets do not provide long-stems, which is beneficial to the horse’s G.I. tract, pellets should probably not be the only source of forage for horses. To swallow and digest cubes or pellets, the horse must properly chew, otherwise the horse can potentially choke. Therefore, it is recommended to soak the cubes or pellets in water prior to feeding them. This is done by adding water to the bucket of cubes or pellets and letting it soak for 30-60 minutes prior to feeding. This will soften the cubes until they dissolve into short pieces of forage fiber. The advantage of this practice is that you encourage the horse to drink water, which can be beneficial.

Make use of available pasture. Horses that have become thin during periods of training or even illness often benefit from turn out into a high-quality pasture (Figure 5). During the growing season a well-managed pasture can provide many nutrients and because grass is palatable, it is a good way to increase calorie intake. However, horses should always be adapted to pasture slowly to minimize the risk of digestive upset, including colic and diarrhea. Pasture can be an excellent source of calories, but only if there is enough nutritious and edible plant material in the paddock. Just because a pasture has green material in it doesn’t mean it has adequate nutrition. If horses kept on pasture are thin it suggests that the pasture is not providing adequate nutrition and supplementation is needed. The first feed that should be offered as a pasture supplement is hay. If hay is put in the pasture and the horses eat it readily it probably means that the pasture quality is low.

Supplementing with a concentrate feed. After adjusting the hay and pasture offered to a thin horse, the concentrate portion of the diet should be evaluated. Concentrates such as sweet feeds, pelleted feeds, or plain cereal grain like oats or corn are used to provide a concentrated form of calories (figures 6 and 7). One of the advantages of a concentrate is that it provides more calories than the same amount of hay. If you gradually replace 5 pounds of hay with 5 pounds of concentrate feed in the daily diet you can increase total calorie intake. There are many good quality commercially available concentrates. Although you can use oats, corn, or barley to provide calories, a commercially manufactured feed usually is more desirable because it is also fortified with other nutrients. Always purchase feeds that are formulated specifically for horses. Feeds formulated for other livestock may contain additives that are toxic to horses.



Figure 4. Alfalfa cubes and pellets. Photo by Bob Coleman



Figure 5. Horses grazing in a pasture. Photo by Fernanda Camargo

It is tempting to feed large amounts of concentrate to thin horses to get fast weight gain. However, large amounts of concentrate increase the risk of colic. So, it is generally safer to feed more high-quality forage and less concentrate to achieve the same effect. If a horse has not been getting any concentrate, the first meals should be very small and then increased gradually. Large meals have a greater risk of digestive upset so if a horse is getting more than 5 pounds of concentrate per day, it should be divided into two meals. If it is getting more than 10 pounds of concentrate per day, it should be divided into three meals per day.

Using oils and other sources of fat. Fat is energy dense and a good source of calories, so fat-supplemented feeds are useful for adding condition to a thin horse. Many feed companies sell concentrates with added fat. Alternatively fat can be top-dressed on a regular concentrate. The most common way to do this is to add vegetable oil (corn, canola, soybean, camelina, flax, rice bran oil, etc.) to each meal of concentrate. The amount of vegetable oil should be small at the beginning, to allow the horse to accept it and to prevent digestive upsets; later the amount can be increased to 3-4 ounces per feeding. While vegetable oil is an inexpensive and easy way to provide extra calories to horses, there are many other sources of fat commercially available, including stabilized



Figure 6. Examples of textured or “sweet feed.” Photos courtesy of Hallway Feeds



Figure 7. Example of pelleted feed. Photo courtesy of Hallway Feeds

rice bran meal, ground flax, black oil sunflower seeds. The key to feeding more fats to horses is to not allow these oils to become rancid, which decreases palatability. So never buy oils in too-large quantities.

Supplementing with beet pulp. Beet pulp is a by-product of the sugar industry. After the sugar has been extracted from sugar beets, the fibrous portion of the sugar beet is dehydrated. Beet pulp is very high in fermentable fiber and is easy for horses to digest. So adding beet pulp to the diet may be a good source of fiber and calories, especially for horses that cannot consume large amounts of hay, due to dental problems, for example. Beet pulp can be found as pellets or shreds, and some have added molasses to increase palatability. Although beet pulp can be fed without the addition of water, choke-prone horses should have its beet pulp soaked prior to consumption. However, it is important to note that beet pulp is lower in protein than most forages, very low in fat, devoid of any vitamins, and has a calcium to phosphorus ratio of 10:1, which is not ideal for horses. Therefore, although beet pulp can be a great source of extra calories and fiber, owners need to understand that it is nutritionally unbalanced, and not a substitute for horse feed or hay, as it lacks many critical nutrients that horses need.

Other Tips to Help Your Horse Gain Weight

Feeding management. Feeding the right feeds in the right amounts is important, but so is feeding management. Horses can become very aggressive during mealtimes, and invariably, lower horses in the pecking order will be chased out of their buckets and hay piles. In many cases the thin horse is the one at the bottom of the pecking order and the fat horses are the ones at the top of the pecking order. In group feeding situations, make sure feeders are spread out enough to allow all horses to eat at once. The best management practice is to feed thin horses separately to make sure that they get the amount of food they need. Horses can be fed in stalls, alternatively concentrate can be given individually using nose bags if horses are together in a paddock. If this is not possible, then consider regrouping horses to put individuals with similar caloric requirements together.

Reduce calorie expenditure. A horse will gain weight if calorie intake is greater than calorie use, so decreasing calorie use may also be necessary for a horse to gain weight. Horses burn calories in a number of ways, including during exercise, to stay warm in the winter, running away from dominant horses, to fight flies in the summer, among many other ways (Figure 8). If you are having difficulty keeping your horse at an optimum BCS, you may want to decrease exercise levels until the horse has reached an adequate BCS (Figure 9). If the weather is cold, provide as much shelter as possible. Heat loss is increased by wind and wet so if the horse can remain dry and out of the wind, it will reduce the calories needed to stay warm. A blanket may also reduce heat loss, but make sure that the blanket is waterproof or your horse will be worse off, carrying around a wet, cold, and heavy blanket. In hot weather a cool, well-ventilated area will also help minimize calorie use. Protection from biting insects will also reduce the horse's activity. Any other management changes that will encourage a horse to spend more time eating and resting than moving about will help to reduce calorie use and increase calorie intake. Change paddocks if the horse is lowest in the pecking order. Most horses will learn to live in peace with each other if they have enough space. However, some horses, especially the ones who were raised alone, will not have learned herd dynamics, and will put themselves in jeopardy all the time. These horses don't understand horse body language, and therefore, will not get the cue and leave more dominant horses alone. The dominant horses will keep chasing these horses, who,



Figure 8. Horses burn a lot of calories fighting off flies in the summer.

in turn, will waste a lot of calories running around. Generally, dominant horses will be fine if left alone, especially if there is enough space. However, there are cases where dominant horses bully younger horses or horses that are low in the pecking order. Regardless of what your case is, you will need to separate a horse that is constantly being picked at by other horses. These horses live under constant stress and will never have a chance to put on weight. Moreover, it is not a safe situation for either you or your horse. There are countless cases where horses were run through fences, or handlers that were caught in the middle of a horse fight, which is an extremely dangerous situation for all involved.

Medical and other issues. If your horse is not gaining weight despite all the changes you have employed in its diet, you need to rule out medical issues with your veterinarian. Some problems that may prevent horses from gaining weight are: dental issues, gastric ulcers, internal parasites, cancer, to name a few. Sometimes it is common for Off the Track Thoroughbreds to lose a lot of weight



Figure 9. Decrease the amount of exercise if the horse is at a lower-than-optimal BCS.

after retiring and moving to a new environment, especially if the new owners don't understand the management of a racehorse. Some OTTB's require a slow transition from being on the track to moving to a non-race facility, where well-intentioned owners want to "allow (or force) them to just be horses." If that's the case, make sure that you understand that these horses need a stricter feeding routine, and may not initially appreciate being out 24/7 with friends. For these horses, being in a stall with good quality hay and several small meals can provide the safety they need, until they get accustomed to their new lifestyle, which should be introduced gradually.

Final Thoughts

When it comes to feeding horses, simple is better: grass, hay, and concentrate feed if needed. This publication provides other tips in feeding and management that can be utilized when horses need to gain weight and "simple" is not being sufficient.

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