



THE LOW DOWN ON PROCESSED HORSE FEEDS

The "Whole Food" movement is alive and well with human nutritionists promoting the benefits of un-processed food. So, is this the case with horse feed? Well, the short answer is with a lot of feeds, is no! We aim to feed the best quality feed, but for horses, many of the ingredients are safer and more available if they have undergone some level of processing.

When forages cannot meet all nutritional requirements, diets are supplemented with a concentrated source of energy and essential nutrients, of which are textured, pelleted, and extruded feeds.

Textured feeds, also known as sweet feeds or muesli, are characterised by their loose nature. Cereal grains such as oats, barley, and corn can be easily distinguished from other ingredients, such as beet pulp, lupins, or molasses. Palatability of textured grains is high among horses, and often the ingredients have been cooked or cracked prior to mixing to ensure optimal digestion and prevent undigested grain entering the hind gut. One of the most common forms of cooking the grain for textured feeds is steam flaking, which is a process that Barastoc uses.

Steam flaking cooks the starch within the grain to improve digestibility. During the process, grain is conditioned at atmospheric pressure for 15 to 30 minutes, reaching temperatures of 93 to 99° C with moisture around 17-18%, and then rolled to create a flake. The amount of starch gelatinisation depends on heat, moisture, and roll pressure. Steam-flaked grain is often used in textured horse feeds after it has been properly dried to improve longevity. With the exception of oats, which can be safely fed whole, Barastoc steam flakes all its grains before mixing into textured feeds.

Another processing technique is pelleting. Pelleting grinds the feed ingredients into small particles, mixed together, steam-heated, and then pressed to form the pellet. These can vary in size from pencil thin to a large cube. The heat causes the natural starch in cereal grains to gelatinize, which means the complex carbohydrate bonds inherent to starch collapse, making starch more accessible to digestive enzymes and consequently more available as an energy source for horses.

The number-one advantage of pelleting is feed uniformity, so one mouthful is the same as the next, and fine material can't be sifted out or left in the bottom of the feed bin. Pelleted feeds also have advantages for storage as they contain very little moisture and are essentially dust-free. Because of the steam treatment of the ingredients, the fresh end product will be relatively free of bacterial and fungal contaminants. Additionally, pellets are relatively dense and uniform, so they can easily be stored in bulk bins or silos.

Feeding horses depends on the horse's willingness to eat the meal placed in front of it. So what processing technique is best? Some horse owners consider pelleting to be old technology and therefore not as appealing as newer processing techniques, like extrusion. However, when judged against extruded feeds, pellets are more palatable, especially when first introduced.

Pelleted feeds can also easily be made into a mash, as might be necessary for senior horses with poor teeth or when horses have an aversion to nutritional supplements or oral medications.

Ultimately, the best feed for any horse is the one that provides optimal nutrition in a form the horse finds palatable. Horse owners need to choose the most appropriate feed for their horses and ensure the quality of the processing is the best it can be. Whether the grains have been steam-flaked, pelleted, or extruded, it is important that the starch has had some level of gelatinisation to ensure enhanced digestion. So for optimal digestive health, don't shy away from processed feeds.

