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In the wild, grain is a rarity for horses. In fact, many researchers are attributing the high incidence of new equine diabetes and general insulin resistance to high carb/starch intake. However unless you have one or many mature “pasture potatoes” who will do fine with only water, grass, minerals and some love, performance horses do need a higher caloric intake generally provided by grains. However, not all grains are created equal nor can all horses be fed similar quantities.

## Types and Amounts

In Equus #264 article “5 Strategies for Safely Feeding Starch” by Christine Barakat, Joe Pagan, PhD, equine nutritionist and head of Kentucky Equine Research, Inc. in Versailles, Kentucky suggests that, since horses are deficient in *amylase*, the starch-digesting enzyme, feeding a limited, digestible amount of starch at each feeding is best. He says that *“It takes about 48 hours for a horse to completely digest a meal...The food is in the small intestine for only 2 of those hours.”* A large helping of starch, particularly in a form that is difficult to break down such as cracked corn, will produce leftovers that proceed to the hindgut to ferment causing gases, etc. which can lead to various forms of colic. His recommendation is to feed *“horses at a rate of about .3% of their body weight per meal.”* For a 1,000# horse, that equals 3# of grain (about 2 qts) per feeding. He also advises that *“A hard working or difficult-keeping horse may need to be fed his grain in 4 daily meals to get enough energy into him without pushing him past his starch-digesting capabilities ...this also means you need to weigh your feed to find out just how much of each type of feed that coffee can or grain scoop holds.”*

Pagan goes on to suggest feeding horses only **steam-rolled corn** and/or **barley**. He also says that *“Processing oats is a wasted effort because it does little to increase the already high level of digestibility of oat starch. People say that they can’t feed whole oats because the grains just come out in the manure, [but] what they are actually seeing are the oat hulls, which are just undigested fiber. All the starch has been digested.”* Processing simply makes the oat hulls less visible in the manure. With whole oats, you can take advantage of increased nutritive value and the natural oils inherent in them rather than losing nutrition as in rolled or crimped oats.

## Bagged Grains & Sweet Feeds

While bagged mixes are very popular, they can in fact, contain inferior grains, dust, chemicals to inhibit both mold and pests and other additives which we prefer to avoid:

- **Wheat kernals** occasionally make their way into mixes for various reasons but they contain a peptide that is very toxic to horses.

- **Molasses** used in sweet feeds can hide moldy grains or dust; the high sugar content is counterproductive for equine energy needs causing blood sugar spikes and overloading the pancreas which can lead to insulin resistance and even diabetes; the molasses itself is “feed grade” being derived chemically rather

than like organic, blackstrap molasses found on your health-food store shelf

- **Corn or Linseed Oil** is frequently added for caloric value and glossy coats but since horses have no bile ducts, they cannot digest it

- **Minerals** found in typical sweet feed mixes are the inexpensive mineral oxides/sulfates/carbonates which are strictly inorganic causing possible imbalance and toxicity
- **Beet Pulp** has recently been a big fad claiming that it offers fiber (feed grass hay and you’ll have fiber a-plenty), energy (the sugar left from chemically-grown and chemically-derived beets which no natural horse would touch), and encourages water consumption (it better since it requires 4 molecules of water to digest a single molecule of beet pulp—not drinking enough water can cause impaction). Do not confuse water retention for hydration; water weighs 8#/gal and when horses are taken off beet pulp they can lose 50# which is about 6 gal. of dead weight.

- **Brans** under the mistaken impression the fiber aids digestion (grass hay provides all that is needed) ; actually, they are high in *phytates* which inhibit proper calcium absorption and rice bran is milled from one of the most highly chemicalized grains grown today

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## Self-Mix

After we received a shipment of bagged, dry, three-way grain and found it inedible, we purchased each grain separately, mixing them ourselves equally by weight (not volume). We always taste what we feed our horses: plain grain should be sweet with no

chemical odor or aftertaste. There are a few horses who are allergic to a protein in oats, so for them, just leave it out. Try to find the cleanest grains you can, preferably organically grown. Of course some horses (Cushing’s, founder, EPM/ EPSM, ponies, etc.) should have no grain at all. All grain should be fed ground level or at least with the head lower than the withers; avoid ethoxyquin-laden black rubber tubs.

## An Alternative

**DYNAMITE®** grows corn, oats and barley on chemical-free fields with **HumiZyme** fertilizer then processes it into their **PGR** (Pelleted Grain Ration) with **HES** (High Energy Supplement) for extra calories, bio-available minerals & balanced vitamins, and **Miracle Clay** plus a touch of organic blackstrap molasses as binders. We have found it the perfect feed for everything from weanlings to geriatrics and from pasture potatoes to high-end performance horses. It has proven so cost-effective for us that we now feed nothing else. Quantities can range from ½ cup per day for “easy-keepers” to 2 quarts per feeding for an active, breeding stallion. To safely increase calories if needed, as for lactating broodmares, more **HES** can be added. For those horses who cannot have grain at all, **DYNAMITE®** offers the **HES** alone or their all-in-one supplement pellet, **TNT**. The “bloom” resulting from such natural feeding has to be seen to be believed! ■