

## Advanced Horse Nutrition: Understanding the Micro Ingredients Utilized in Triple Crown's Horse Feeds.

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In an earlier blog, we discussed the macro (or bulk) ingredients in horse feed formulations. This installment will explain what common smaller addition items can be found in a formula and the reason they are added. Often, these ingredients will be added in quantities as small as 1 pound per ton. In all Triple Crown<sup>®</sup> products we include a package of nutrients called EquiMix<sup>®</sup>. All ingredients found in EquiMix<sup>®</sup> will be designated with an \*.

**\*Anethole** – This is the technical name for anise. This gives Triple Crown feeds the slight licorice smell.

**Ethylenediamine Dihydriodide** – Commonly known as EDDI and is a supplemental source of iodine in the diet.

**\* Extracts like Dried Trichoderma Longibrachiatum Fermentation Extract** – These are extracts from probiotics that produce digestive enzymes such as protease that help with the digestion of proteins and fats in the small intestine.

**Flaxseed** – Like Rice Bran, it is part of the fat component which also helps with Omega-3 fatty acid levels.

**\*Fenugreek Seed** – Another herb to act as an appetite stimulant for horses that tend not to eat as well as we would often like them to.

**Ground Limestone and Calcium Carbonate** - These provide additional calcium in the diet to balance the amounts naturally found in other ingredients. Lexington, KY, is a major horse breeding area because of the large limestone deposits in the area.

**\*Hydrated Sodium Calcium Aluminosilicate, Hydrolyzed Yeast, and Brewers Dried Yeast** – These are all fractions of the process of utilizing the cell wall of yeast. These ingredients are used to bind with and pass along harmful pathogenic bacteria and mycotoxins your horse may become exposed to. These will be passed out of the GI tract and into the manure.

**\*Kelp Meal** – This is a seaweed source that helps provide natural organic minerals and other micro nutrients like Chromium.

**\*Lecithin** – This acts as an emulsifier to help breakdown the fat in the horse's diets for better absorption.

**Lignin Sulfonate** – This natural ingredient is used as a pellet binder to make them more durable.

**L-Lysine and DL-Methionine** – Both are sources of essential amino acids in the diet related to quality protein.

**\*Magnesium, Copper, Zinc, Manganese, Iron and Cobalt** – These ingredients are all added for proper mineral balance. Minerals are found on feed tags in 3 different forms; Oxides, Sulfates and Organic. Oxides cost the least and digestibility is limited. Sulfates are more digestible but also cost more than oxides. Organic minerals are the most digestible, and as you can imagine, also cost even more. Organic minerals come from different sources that have their own unique way of making them organic.

**Monocalcium, Dicalcium or Deflourinated Phosphate** – Like limestone, phosphate is used to balance the Phosphorus found in the other ingredients. The different names represent the various types of phosphate found in feed mills based on regional differences.

**\*Products like Dried Lactobacillus Acidophilus Fermentation Product** – These are probiotics added to help support good microbe health in the colon.

**Propionic Acid, Sodium Benzoate and Potassium Sorbate** – These are either naturally occurring fatty acids in the horse's hindgut or citric based preservatives to help the feed from getting moldy.

**Salt (Sodium/Chloride)** - Salt used in feed is no different than the salt used on your kitchen table. Horses do have a natural requirement for sodium and we cannot add enough to meet the requirements of all horses. That is why it is always recommended that additional salt is provided by the owner.

**\*Selenium Yeast** – This is how organic selenium is listed on feed tags. Organic selenium is significantly less toxic than inorganic forms that would be listed as Sodium Selenite or Sodium Selenate. Organic Selenium is more digestible than inorganic sources and can be stored safely in the horse as an amino acid.

**Sodium Bicarbonate and Sodium Sesquicarbonate** – Additional sources of sodium in the diet specifically for cation-anion balance. **Stabilized Rice Bran** – This ingredient is part of the fat component in the feed which also helps to raise Omega-3 fatty acid levels.

**Vitamin E, Ascorbic Acid, Niacin, Biotin, Vitamin A, Thiamin, Beta Carotene, Calcium Pantothenate, Riboflavin, Pyridoxine Hydrochloride, Vitamin B12, Vitamin D3, Choline Chloride, Menadione Sodium Bisulfate, and Folic Acid** – These are all natural and synthetic vitamin sources to balance the diet to sources found in other ingredients.

**\*Yeast Culture** – There is an abundance of independent research proving the effectiveness of yeast cultures in the health of the colon of the horse. To simplify all the information, yeast cultures help to support healthy bacteria in the hindgut which helps improve fiber digestion and maintain a normal pH level.

In all Triple Crown® products we include a package of nutrients called EquiMix®. This technology is unique to Triple Crown. All ingredients found in EquiMix® are designated with an \*. If you have any questions about ingredients listed on your feed labels, call the feed company and ask for more information. Triple Crown is always happy to answer any questions you may have, reach us at 800-451-9916, or email us at [info@triplecrownfeed.com](mailto:info@triplecrownfeed.com).