
Rijst vezel is een ideaal voedingssupplement voor

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Rice Bran

Discover the many benefits of this fat-filled feed.

By Tracy Williams

Most horse-owners have grasped the concept of basic horse nutrition; horses the world over all need plenty of fresh water and good quality forage to maintain quality of life. However, not all our horses possess the "easy-keeper" gene constitution that allows a horse to merely gaze across the fence at a lush pasture and start to swell. In our modern world, where horses compete as athletes in all levels of work and competition, the diet often needs a little tweaking to ensure that calorie requirements are met. Historically, owners have responded to these challenges by supplementing with carbohydrate sources, but as our knowledge of the equine digestive system expands, owners are looking outside tradition to other feeds, hoping to sidestep some of the carbohydrate drawbacks. Whether your horse's energy requirements have increased because of age, pregnancy, lactation or performance, fat sources may be beneficial and even preferable, depending on your horse's individual needs. Rice bran is one of the more recent feed additives that can help provide valuable calories via its high fat content plus additional nutrition, but one must be able to navigate the drawbacks to reap the benefits.

Rice Bran Basics

Before its introduction into equine feedstuffs, rice bran was simply a byproduct of the rice industry. Rice is harvested in hulls, which are removed after the rice is dried. The next outer brown layer, called rice bran, is removed to create white rice. Historically, rice bran was discarded because its high fat composition (14-22%) caused it to oxidize rapidly and become rancid. New technology stabilizes the fats in rice bran to decrease oxidation and increase shelf life to one year. However, depending on the type of processing used, rice bran can have widely varying fat content and nutrient levels, which can become problematic.

Advantages of Rice Bran

Fat vs. Carbs

Carbohydrates provide a significant chunk of calories in the equine industry; they are essential for anaerobic exercise such as sprinting or barrel racing. However, in large doses, they carry some risk. Carbohydrates fed in bulk can partially escape digestion in the stomach and small intestine and

filter into the large intestine where they rapidly change the composition of gut microbes. The drop in pH causes many of the "good" microbes to die off and endotoxins are produced, possibly resulting in laminitis or colic. A main advantage of feeding rice bran is its high fat content; fat is an excellent, concentrated calorie source and very safe to feed because horses digest it easily. Fat calories are a slow-release, stored energy source and are released as energy during sustained aerobic exercise such as endurance riding. Even so, the anaerobic athlete can still benefit from dietary fat although the sprint itself requires quick-release carbohydrate calories. On a day-to-day basis, most horses can simply use fat calories, saving their glycogen stores for when they are most needed. Glycogen is a carbohydrate source stored in the muscles and liver and can be converted to glucose energy for anaerobic activity. In other words, the racehorse could live off his fat calories during the week and conserve that glycogen store for the last furlong of the race, possibly preventing early fatigue.

Vitamin E

Rice bran is also an excellent source of Vitamin E, which is a proven antioxidant. Antioxidants deactivate free radicals in the body before they damage cells and genetic material within cells. Vitamin E also boosts the immune system and has been shown to help prevent performance-related syndromes such as exertional rhabdomyolysis or "tying up".

Gamma Oryzanol

Rice bran is also an excellent source of gamma oryzanol. This valuable component has received much good press not only for being an antioxidant but for having positive effects on weight gain and performance analogous to anabolic steroids. It affects the endocrine system to increase the metabolism of fat and to promote protein synthesis, which results in overall leaner body mass. Gamma oryzanol has not only been shown to build muscle tissue but also to decrease cholesterol build-up and possibly lower incidence of gastric ulcers.

Omega Essential Fatty Acids (Omega 3,6,9)

Rice bran, being an excellent fat source, helps provide horses with essential fatty acids, which improve the health and integrity of cell membranes. In addition, they may also decrease inflammation, laminitis and stomach ulcer incidence and improve hair coat.

Rice Bran Drawbacks

Phosphorus Content

The main drawback of raw rice bran is that it contains high levels of phosphorus. Calcium and phosphorus are two of the many minerals that interact, and horses require a specific ratio of this pair to prevent imbalance and disease. The recommended calcium-phosphorus ratio is 1.2-2 of calcium to 1 of phosphorus. Anything outside these parameters creates an imbalance. Rice bran has approximately .02% calcium to 1.5-1.7% phosphorus, creating an inverted ratio. Phosphorus binds to calcium, preventing its absorption and utilization, which is why the ratio must be tipped in calcium's favor. Excess phosphorus results in the body perceiving a calcium deficiency. It compensates for this calcium deficiency by mobilizing bone stores of calcium, which decreases bone density. In young horses this can result in several types of developmental orthopedic disease, while in older horses it can result in a condition known as "big head disease" because it first affects facial bones, causing them to enlarge and become weaker and more porous. To avoid this phenomenon, avoid feeding raw rice bran. Instead, choose a rice bran supplement with added calcium, or a feed containing rice bran that has been formulated by an equine nutritionist.

Inconsistent Nutrition

Depending on how rice bran is processed, fat levels and nutrient content can vary from batch to batch. When feeding any horse, but especially the high-performer, it is important to keep nutrition consistent. Again, by feeding a formulated feed that contains rice bran, or a rice bran supplement with a guaranteed analysis, you can glean all the benefits while feeling secure that the nutrient and fat content will remain consistent.

As the caliber of this generation's horse increases, the horse-owner is inundated with nutritional possibilities " feed additives that often boast "secure-all" status. Many of them, including rice bran, have benefits, but feeding them blindly can result in metabolic disorders. To avoid mishaps, never add a new feed to your horse's diet without consulting a qualified veterinarian or equine nutritionist for advice. Thus informed, you can confidently supply the diet that will spur your treasured performer to greatness.

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