Vitamin E? . . . Naturally!

Research has shown the benefits of natural versus synthetic products in the nutrition industry for several years now. Organic Trace Minerals and Organic Selenium are more actively absorbed and transferred to the areas where they are most needed in the body. More recently, plant-derived Vitamin E (***d***-alpha-tocopheryl) has proven its effectiveness over the synthetic version (***dl***-alpha-tocopheryl) not only in humans, dogs and swine but even more prominently in cattle and horses.

Bioavailability of plant-derived (***d***-alpha-tocopheryl) is two times greater in humans, dogs and swine, three times greater in cattle and ***four times*** greater in horses than the synthetic counterpart (***dl***-alpha-tocopheryl)*. This is due to a transport protein in the liver that recognizes and gives priority to the plant-derived vitamin E over the synthetic version, which is more readily excreted. For this reason, plant-derived vitamin E (***d***-alpha-tocopheryl) is a better alternative for increasing the vitamin E levels in bodily tissues. Plant-derived vitamin E concentration in brain tissue is over five times the concentration of synthetic E and is retained over 3 times longer**. Similar results are seen in the plasma and red blood cells with the concentration over the synthetic E as much as 4 times greater**. Also, heart and muscle tissue retention is nearly twice as high with plant-derived vitamin E**. As you can see, the plant-derived vitamin E is far more active in the body than the synthetic.

Why does the body better utilize the plant-derived vitamin E? The plant-derived vitamin E consists of one stereoisomer. This is the RRR stereoisomer. It is given preference by the transport protein in the liver. This RRR stereoisomer has a biopotency of 100%. The synthetic vitamin E consists of 8 stereoisomers, only one of these 8 stereoisomers is the RRR stereoisomer. Therefore only 12.5% of the synthetic E's biopotency is 100%. The remaining 7 stereoisomers vary in biopotency from 90%-21%.

Now, you may ask, why is Vitamin E so important? At a cellular level, vitamin E is an antioxidant, prevents free radical formation and cellular membrane deterioration that damage muscles reducing their ability to function. It is important for energy metabolism, hormone production, immune function and tissue repair. Proper supplementation can reduce episodes of tying-up and increase tolerance to exercise. Since Vitamin E is involved in immune response and tissue repair it aids the healing of all typical diseases and injuries. In fact, supplementation is generally recommended as the vitamin E content in most feedstuffs for horses is relatively low and there have been no reports of vitamin E toxicity in horses.

Here's the best part. CFIA has recently approved plant-derived vitamin E for use in horse feed. Since this approval Minor Bros. *Equine Signature* line contains plant-derived vitamin E along with the benefits of organic trace minerals and organic selenium. This means horses fed *Equine Signature* are benefiting from increased biopotency, better health and performance capability.

*Natural vs. Synthetic Vitamin E from Archer Daniels Midland Company
**Natural and Synthetic Vitamin E Sources and Their Biopotency by Jerry Faber, Ph.D, ADM Animal Health & Nutrition Division