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Blue green algae (left) is powdery in comparison to the granular kelp (right). Both are high in nutrients.

TITLE: From Water to Wellness: The Use of Blue Green Algae and Kelp Supplements in Equine Diets
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For the past several years, we have been feeding our horses supplements from plants found in our gardens and forests, but what about the ones from our waters? Blue green algae (*Aphanizomenon flos-aquae*), which flourishes in ponds and lakes, is an excellent source of enzymes, amino acids, Vitamin B-12, beta-carotene and chlorophyll. These nutrients are naturally found in large amounts in fresh grass, but often lost when dried into hay.

According to Dr. Madalyn Ward, DVM of Bear Creek Clinic in Austin, TX, “Feeding algae is as close as you can come to having your horse on pasture year round.” Algae supplements provide high quantities of essential vitamins that are beneficial to the skin, eyes, bones, and central nervous system of your horse. It can also help in preventing disorders specifically linked to Vitamin A deficiencies due to the algae’s high content of beta-carotene, a precursor of Vitamin A. The dense content of amino acids, the building blocks of protein, are essential to the formation of necessary proteins and peptides - one of the most important being the neuropeptides, which produce chemicals that contribute to your horse’s cognitive and emotional well being. By including blue green algae in your horse’s diet, you may reduce any depression, nervousness, and stress he may be experiencing. The abundance of chlorophyll in algae is comparative to that found in fresh grass. It is the high levels of chlorophyll in blue green algae that can detoxify blood and successfully boost your horse’s immune system. Horses that have limited or no access to fresh grass will get the same benefits with a daily dose of blue green algae. The concentrated nutrients found in blue green algae can enhance and improve the overall health of your horse.

Manufacturers of blue green algae supplements claim that blue green algae helps several conditions including fungal infections, white line disease, hoof problems, laminitis, coat quality and some behavior problems. They are constantly following up on their clients for case studies and feedback. A lot of horse owners question the safety of using blue green algae, as there is a lot of misinformation being spread about the use and effectiveness of the supplement. “I can say without a doubt that it is safe. I have given it to 1-day-old foals and my own 38-year-old mare,” says Dr. Ward. All the blue green algae used in the supplements have been carefully harvested from a controlled lake or pond. The algae are also put into a freeze-dried form for easy digestibility and to preserve potency.

Another beneficial algae supplement is kelp (*Ascophyllum nodosum*), or seaweed. This brownish seaweed is found off the North Atlantic cold water coasts of Northern Europe. The best quality kelp is often found off the shores of Iceland. Kelp is rich in vitamins, minerals, and amino acids, and is composed of 60

elements, 21 amino acids, and 13 vitamins. For thousands of years, the Chinese have used kelp in their food and medicines, and for agricultural purposes. Many kelp manufacturers state that kelp is very beneficial in treating skin ailments, reducing stress, and boosting the immune system in horses. One of the main benefits of using kelp is as a source of iodine. In proper amounts, iodine can improve glandular and metabolic performance. This in turn will assure the proper secretion of key hormones that can positively affect reproductive, cardiovascular and nervous systems. Kelp can also be easily absorbed and converted by the horse's digestive system due to its organic form. Unlike blue green algae, which are freeze-dried, kelp is processed using controlled geothermal heat. This allows the seaweed to keep its enzyme potency intact, and keep it a biologically active product with high levels of nutrients. When used on a regular basis, kelp can improve the nutritional well being of your horse.

Both kelp and blue green algae are sold in small flake form, and easily mixed into grain or over chopped hay or alfalfa. It is processed into a granular form for easy digestibility. As with any supplement, both need to be introduced slowly, and your horse should be observed for the first few days on it. It is recommended that with blue green algae you start the horse on 1/4 tsp. - 1 tsp. daily for about a week. Then once the horse has accepted the supplement, increase the dose to 1/2 tsp. - 1 tsp. daily. Ultimately, you want your horse to take 1 tsp. a day. This isn't a requirement, just a recommendation. Many horses do fantastically on just 1/2 tsp. or 1/3 tsp. a day. With kelp, you will need to use slightly more product. You want to start your horse on 1/4 tbsp. to 1/2 tbsp. a day, then slowly increase it to 1 tbsp. daily. Both of these supplements are very high in nutrients so you don't need to use a lot to get the positive results. Give your horse at least 2 weeks to try the supplement; if he refuses it, then stop. Some distributors of blue green algae and kelp supplements will give you a sample for you to try before buying a large amount.

The question then is which one do you use? Both are high in vitamins, minerals, amino acids, and chlorophyll. If you are looking to supplement your lack of fresh grass or improve your horse's hoof quality; you may want to use blue green algae. Some owners replace feeding alfalfa with a daily tablespoon of blue green algae to avoid the risk of weight gain or straining kidney function. Kelp is an excellent overall supplement for all horses, especially breeding stock. The large amount of minerals in kelp can enhance the reproductive health and fertility of your stallions and broodmares, and both supplements are safe to use with pregnant mares. Many herbal supplement producers are including kelp in their products. You may want to consider using a supplement that contains kelp along with other herbs and nutrients.

So, if both of these are excellent supplements for all horses, what is the deciding factor? It comes down to palatability, cost, and results. Overall, both supplements are well liked and very appetizing to horses. If your horse just won't take to the supplement, he may be telling you it's not the right one for him. As for price, you'll need to check with each distributor. On average, blue green algae will be higher in price, but you are using less of it on a daily basis. Currently, an 11 oz. tub of blue green algae costs around \$50, where kelp may run about \$35-50 for a 50lb bag. Some distributors will reduce the price for large orders. Both supplements can be purchased over the Internet and at large feed stores. Obviously, not all horses are the same, and there is no guarantee when using supplements. Odds are when using an algae supplement consistently, you should see dramatic improvement in your horse's overall health and appearance within the first few months of using it.

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