

SPOTLIGHT

by Catherine Girard

Animal Power Source

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Power Horse® Chelated Trace Minerals is an organic trace mineral supplement used to treat laminitis and to reduce the dietary intake in horses. The subject of a two-year study, with an additional year of follow-up observations, the supplement holds a U.S. Patent, divided in two general areas: the first as a method to treat laminitis and founder; the second, for reducing dietary intake, namely of grain, within the first three months, due to better absorption within the digestive tract.

The author of the study, Carlos Cortelezzi, VMD, was born and educated in Argentina, where he received his veterinary license. In 1982, at the age of 25, he came to the United States and served his residency at the University of California-Davis, studying and teaching podology thereafter in several Universities in South America.

As early as 1983, he began hearing about some positive effects in various parts of the equine body through the use of some natural trace minerals. In an effort to learn more about the product, he became involved with the company that was producing it. In 1994, he began a two-year study to see what effects, if any, the trace minerals in question would have on laminitic and foundered horses.

Power Horse® Chelated Trace Minerals is an organic powder supplement composed of 76 trace elements, along with diluted gases and chelated heavy metals.

These elements are in a group of minerals that comprise montmorillonite clay, named after Montmorillon, France, where it was first recognized.

Found in ancient sea beds, it is made from rocks formed by compounds of fossilized animals, plankton, algae and plants. It is high in the element silicon, an essential skeletal component in certain species of plants and sponges. Of its many uses, the clay has two properties suggesting it for dietary use: high absorption capacity and high silicon content.

¹The clay's structure allows it to expand in order to absorb humidity, water and organic liquids. It is the only clay that can also absorb toxins, making it a popular choice for human diets, and has strong scientific research behind it.

Silicon within the clay composes 25 percent of the Trace Mineral supplement. ²Louis Pasteur (1822-95) first suggested the use of silicon as a medicinal element, and its applications have since been used in both human and veterinary medicine. Currently used in a gel form applied to skin to regenerate cell membranes and accelerate healing in burn patients, it has long been used to relieve colic and gas in humans, and bloat in animals.

Equine studies have also revealed a wide array of benefits, including anti-inflammatory action, anti-oxidant and anti-toxic effects. Coupled with the clay's absorption capabilities, the possibilities of its use in helping laminitic and foundered horses to recover made it an attractive subject for further equine research.

The Study

In conjunction with a large company, Dr. Cortelezzi began the study on May 23, 1994, at the Criadero La J, a Paso Fino ranch in Cali, Colombia. The study was continued until May 23, 1996, after which ensued a one-year, follow-up observation period (see www.laminitisprevention.com for the



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complete study). The terrain in Cali has been eroded and washed of many of the trace minerals, which are replaced by the ones contained in the Trace Mineral supplement. Additionally, the grain being fed in this area was high in fungus toxins, large molecules that are difficult for the horse's digestive system to break down. These then travel to the blood vessels surrounding the laminae of the hooves, causing laminitis and founder.

Of the 550 Paso-Fino-type horses residing on the ranch, 150 were stalled. Of those, 18 were laminitic or foundered. In some, the soles were deformed and perforated abscesses were common. Some required surgery on the deep flexor tendon to alleviate the pain; others showed demineralization or thinning of the coffin bone, and were in unbearable pain.

The Trace Minerals supplement was sectioned off into four different dosage levels, and fed out daily to each targeted section of the herd. No other supplements were given during the study. Within several days, the laminitic condition in most of the affected horses improved dramatically. Most began exhibiting signs of reduced pain and better movement. In 20 days, the hair began to change, dropping out and regrowing into a new, stronger coat.

Improvements in walking, with some trotting, continued. The soles began to grow a harder, more elastic tissue. No new cases of coffin bone rotation occurred. Within 30 days, most horses were walking and trotting well, with some running sprints. Mobility continued to improve as the study progressed.

Within a year, no more cases of feed-related laminitis occurred within the herd, showing that the diet with the addition of the Trace Minerals supplement had an anti-toxic effect as well, clearly suggesting its use as a laminitis and founder-preventive.

"As a treatment, it does not guarantee a cure," cautions Dr. Cortelezzi, "but it provides excellent results within days. It would be used in last-ditch cases, where standard, veterinary drug treatments have not been very helpful. You would use it without the drugs, as the Trace Mineral supplement would probably absorb them and eliminate them from the horse."

The powerful absorption benefits of the product



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became clear within the first three months of the study. At that point, the horses throughout the herd began leaving more grain behind in their feed bowls, while maintaining their weight and condition. This continued throughout the course of the study, resulting in a feed-consumption drop of 20 percent, and a feed-purchase saving of tens of thousands of dollars for the farm over the course of the year.

Preventive

The main usage of this product is as a preventive. Its natural formulation allows the body to better absorb toxins, break them down into smaller, more easily digestible particles, and eliminate them from the body before they can damage the sensitive hoof laminae. The anti-inflammatory properties also act as an anti-arthritis, either alone or in tandem with other anti-arthritis supplements. The ability to regenerate cell membranes has shown that it speeds the healing of wounds and inflammations, accelerating the growth of skin, hair and coat. It has the ability to oxygenate cells, improving stamina and endurance in the exercised horse. By increasing energy and reducing stress, the horse recovers better from exertion.

Power Horse® Chelated Trace Minerals is compatible with other supplements that owners may already be feeding their horses, but should be fed separately. "I would feed this at a separate time," says Dr. Cortelezzi, "so that it won't absorb the other supplements and then eliminate them through the horse's feces." For horses living in areas with high levels of selenium, "it shouldn't be a problem. The product has a very low level of selenium in it. It would probably be beneficial to these horses, by absorbing the excess selenium and eliminating it from their bodies."

Information about Trace Minerals, or any of the Power Horse products can be accessed at www.animalpowersource.com. Questions or requests for further information may be directed to sales@animalpowersource.com or 305-634-7258; fax: 305-634-7011. ■

Reference Information

¹California Earth Minerals Corporation, "Clay Types/Smectite Group/Montmorillonites" c. 2001-2003 www.CalEarthMinerals.com

²Emsley, John, Department of Chemistry, Cambridge University, UK

Nature's Building Blocks, An A-Z Guide to the Elements, Oxford University Press, UK: Oxford c. 2001, paperback c. 2003, p. 385-391