SOME USEFUL SUPPLEMENTS FOR HORSES IN WORK

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Horses that are exercising and competing regularly require optimal diets to ensure that all the essential nutrients are supplied. Similarly young, growing horses require optimal nutrition to ensure that their growth is maximal. Frequently these horses require supplementation as the drain on specific nutrients can outstrip the dietary supply.

VITAMIN, MINERAL and AMINO ACID Supplementation

Growing and working horses should be given a range of vitamins, minerals and amino acids in their diet to maintain optimal health. Regular exercise has been shown to reduce B vitamin levels and suppress the blood count. A low blood count means that these animals are slightly anaemic. Anaemic animals do not feel or look well, have a dull coat and cannot perform at their peak level. The B complex vitamins and trace minerals iron, copper and cobalt are required for the production of normal red blood cells.
Vitamins required at high concentration by horses under stress:
B COMPLEX VITAMINS:
B2 (Riboflavine); Helps the mitochondria (furnaces) of muscle cells produce energy.
B3 (Nicotinamide); Works in the glycogen energy cycle and assists the oxidation of fatty acids for energy.
B5 (Panthenol); This vitamin has many roles in energy metabolism; it is essential for the production of glucose and fatty acids, which are the main energy sources of the body.
B6 (Pyridoxine); Is present in coenzymes which function at all levels of protein and amino acid metabolism, thus it is essential for muscle building and in making red blood cells. It is also an essential component of the enzyme which breaks down glycogen for fuel.
B8 (Folate); Is a vital transport coenzyme which controls amino acid metabolism, it is vital for the production of all cells, particularly red blood cells.
B12 (Cyanocobalamin); Forms part of coenzymes which are essential for the production of all cells, particularly rapidly turning over cells, such as red blood cells.

OTHER VITAMINS;

BIOTIN; An essential part of enzymes which are involved in formation of glucose and fatty acids, the major energy sources of the body, and in an enzyme which builds new proteins.
CHOLINE; An essential component of all cell membranes.
INOSITOL; Part of cell membranes, essential for functioning of calcium and insulin metabolism.
ESSENTIAL MINERALS;
IRON; An integral part of hemoglobin, the red pigment in red blood cells which carries oxygen.
COPPER; Forms part of many enzymes, essential part of the enzyme which produces nor-adrenaline, the body's own stimulant which is released during exercise performance
COBALT; An essential part of Vitamin B12.

Supplementing these essential vitamins and minerals will assist in maximizing the health and well-being of your horse.

L-CARNITINE

Another very useful supplement for horses under stress is L-carnitine.
L-carnitine plays a vital role in muscle metabolism during exercise. L-carnitine forms the transport system that moves fatty acid molecules into the mitochondria (furnaces) of the cell where they are burned for fuel. L-carnitine also inhibits the build-up of lactic acid in muscles, which helps delay the onset of fatigue. L-carnitine is also essential for normal heart function and L-carnitine supplementation is recommended for patients with heart failure
L-carnitine within the body comes both from the diet and from biosynthesis (synthesis within the body). The horse relies heavily on biosynthesis because herbages and cereals are low in L-carnitine compared to dairy products and meat. Horses being exercised daily and competing regularly have increased utilisation of L-carnitine and the supply from the diet and from biosynthesis may not be sufficient to replace this use. This can result in low muscle L-carnitine levels, which results in an inability to utilise fat for energy. L-carnitine deficiency causes muscle weakness and a tendency to accumulate fat.
L-carnitine supplementation is recommended for all horses with increased L-carnitine requirements. This will occur in horses in exercise training, foals and youngsters up to 3 years old due to a reduced biosynthetic capacity in young horses, metabolic stress such as pregnancy, lactation, surgery, infection and breeding stallions. L-carnitine may also help improve the muscle metabolism of horses prone to "tying-up". L-carnitine is a very safe supplement, the chemical is found in nature and is considered to be non-toxic.