

Stress-Mix[®] Liquid Feed Supplement: The Antidote for Stressed Cattle



Stress is defined as any physical or emotional factor to which an animal fails to make a satisfactory adaptation. Stress may be caused by excitement, temperament, fatigue, shipping, disease, heat or cold, nervous strain, number of animals together, previous nutrition, breed, age, or management.

Separating a calf from its mother on the range, followed in rapid succession by being transported many miles, going through an auction ring, and ending up in a feedlot without either milk or grass to eat, where it is vaccinated, and sometimes even castrated and dehorned, is a traumatic experience and stress of the highest order. Such animals suffer from a lack of feed and water, resulting in a gradual loss of body fluids and various electrolytes, particularly potassium. In addition, diarrhea may develop which further increases such losses. As a result of dehydration, diarrhea and exposure to infections, cattle may not feel like eating or drinking.

The weaning calf is a ruminant and is dependent upon fermentation in the rumen for a major portion of its nutrients. Going without feed, whether voluntary or imposed, for 24 to 48 hours will reduce fermentation by as much as 70 percent. This is caused by a change in the ratio of rumen microorganisms which digest crude fiber, metabolize protein and produce water-soluble vitamins. Thus, the ruminant loses its major source of energy, its ability to produce a balance of amino acids and its primary source of B vitamins. Since these vitamins are not stored in the body and are required on a daily basis, a vitamin deficiency develops very rapidly.

Get Stressed Cattle Back on Feed

The greater the stress, the more exacting the nutritive requirements. Rations for animals under stress should be formulated to provide the best chance for the return of the digestive system to normality. To achieve this, the ration should provide a balance of nutrients ideally suited to promote normal rumen fermentation. The sooner you can get them started eating, the better.

Stress-Mix Liquid Feed Supplement helps get stressed cattle to eat. The supplement was specifically developed to stimulate feed consumption and provide some of the electrolytes and vitamins (including B vitamins) which are depleted in a stressed animal. Electrolytes are very important in helping to recover shrink that stressed cattle have experienced.

Stressed cattle are extremely deficient in three key nutrients: energy, protein and potassium. These are only three of the benefits that we have built in Stress-Mix. One key ingredient is cane molasses. Cane molasses is high in appetite appeal and available energy. When you can get the appetite working, the animal is going to consume more feed.

Stress-Mix Liquid Supplement also contains 12% protein, phosphorus, vitamin A, vitamin D, vitamin E, calcium, magnesium, potassium, cobalt, copper, iron, manganese, zinc, choline, niacin, thiamine, riboflavin, pantothenic acid and biotin.

Recovering Vital Minerals and Vitamins

Mineral supplementation is well accepted in animal nutrition. The following are various systems in the body which utilize trace minerals.

Immune System: Copper, zinc, iron and selenium.

Energy System: Magnesium, phosphorus, manganese.

Hormone System: Iron, manganese, zinc, copper, magnesium, and potassium.

Vitamin Production: Cobalt.

Enzyme Systems: Zinc, copper, manganese, magnesium, and iron.

The effects of trace minerals on immunity have been established, but specific levels and action have not been completely documented. However, based on the literature and research at the Texas Agricultural Experiment Station, Amarillo, the following levels of trace minerals would be recommended for receiving stressed feeder calves: copper 15.7 ppm; iron 210.7 ppm; manganese 26.3 ppm; zinc 81.7 ppm; cobalt 0.15 ppm; and selenium 0.15 ppm.

The requirements for specific trace minerals are also well documented:

Manganese: Necessary for proper bone development and increased fertility.

Copper: Works in conjunction with iron in hemoglobin formation, is an integral part of several enzymes in the body.

Iron: Necessary to prevent anemia. Iron in conjunction with copper and cobalt will help improve hair coat and stimulate appetite.

Zinc: Involved in several enzyme systems including the respiratory enzymes. Has some beneficial effects upon the skin and hair condition.

Potassium: The third most abundant mineral element in the animal body and the principal element of intracellular fluid where it is helpful in regaining shrink; it also is a constituent of extracellular fluid, where it influences muscle activity.

Cobalt: Required by rumen microorganisms which incorporate cobalt into vitamin B12, which is utilized by both microorganisms and animal tissues. Vitamin B12 is of key importance in the utilization of propionic acid. The main physiological manifestation of cobalt or B12 deficiency is impaired propionate metabolism.

Selenium: Similar to sulfur in its chemical properties, it has been shown that selenium cannot be completely replaced by vitamin E, but their functions intertwine to account for their mutual effect.

Sulfur: A component of protein, some vitamins, and several important hormones.

Vitamins also are deficient in stressed cattle. Nutritionists and veterinarians commonly recommend high levels of vitamin supplementation or injection for cattle upon arrival at the feedlot.

Vitamin A: Essential in normal functioning of respiratory and digestive systems, is often depleted during shipment and stress.

Vitamin D: Required for calcium and phosphorus absorption, normal mineralization of bone and mobilization of calcium from bone.

Vitamin B₁₂: Of special interest because of its role in propionate metabolism and the practical incidence of B12 deficiency as a secondary result of cobalt deficiency. Rumen dysfunction can reduce the ability of the rumen microbes to synthesize B vitamins.

Feeding for Results

Stress-Mix Liquid Supplement is designed for starting all calves, lightweight cattle and yearlings in the feedlot. Cattle can be fed Stress-Mix Liquid Supplement immediately upon arrival at the feedlot. The palatable nature of this product will encourage its consumption and the consumption of any grain or roughage on which it is applied.

Stress-Mix Liquid Supplement can be fed in free-choice lick feeders, open tubs, or sprayed on roughage or grains at levels from 5 to 15 percent. It will also help reestablish intake in cattle off feed due to other stress situations such as inclement weather, ration changes, disease, etc.

Stress-Mix Liquid Supplement is the most beneficial to newly arrived cattle from the first day of arrival up to one month after arrival. No harm will result, however, if Stress-Mix Liquid Supplement is fed for longer periods. Another place for Stress-Mix Liquid Supplement is in the sick pens. Stress-Mix Liquid Supplement can also be marketed as a creep feed or a weaning feed.

At some time, every cattle feeder will have stressed cattle that won't eat. A product that will stimulate the appetite and get those cattle back on feed is what he'll need. That's exactly what **Stress-Mix Liquid Feed Supplement** from Mol-Mix is designed to do.