

USDA Mineral Study Aims at Fighting Selenium Poisoning

How to combat selenium poisoning, which causes death of cattle and sheep in certain areas of the country, is being studied by U.S. Department of Agriculture scientists as part of an over-all study of trace minerals as they relate to human nutrition. Previous research indicates

that selenium toxicity can be decreased in several ways and that each protective agent acts by its own peculiar mechanism

(0.01 to 0.05 per cent), while certain antioxidants were substituted for vitamin E in the diets of other rat groups

soluble antioxidants, methylene blue and ascorbic acid (vitamin C), were ineffective

Selenium is one of the essential trace minerals. When the diet does not contain enough of this element, animals may develop certain degenerative conditions of the liver, pancreas, or heart, depending on the animal species. Rats and monkeys lose hair and chickens lose their feathers.

Sheep and cattle must also have a certain amount of the mineral to protect their offspring from "white muscle disease" found in most sheep-raising countries and in many cattle-producing areas where soil and pasture do not contain adequate selenium.

One method involves the amino acid, methionine, which when used with vitamin E decreases selenium residues in the organs

To verify the methionine — vitamin E action and learn more about the way these two compounds work together, a team of scientists in the human nutrition laboratories of USDA's Agricultural Research Service made a series of studies based on the response of female weanling albino rats to a diet high in selenium supplemented with methionine, vitamin E, and/or certain antioxidants.

All rats were fed a basic peanut meal diet devoid of vitamin E and with 10 parts per million selenium added. Some received a methionine supplement while vitamin E was added to the diet of others.

Additional rats were given a supplement containing both methionine (0.5 per cent) and vitamin E at different levels

Jaycees Garden Show

The Lancaster Jaycees has announced its 17th annual Home and Garden Show April 20-24 at the Pennsylvania Guernsey Breeders Association Barn on Route 30 East

Ken Miller was named chairman of the Home and Garden Show committee

Rats that received the selenium-peanut meal diet without a supplement of methionine or vitamin E showed moderate to severe liver damage. Addition of either one alone had only a slight beneficial effect

All combinations of methionine and vitamin E protected against selenium poisoning with the best protection seen at the higher vitamin E levels

When certain fat soluble antioxidants were substituted for vitamin E in the combination methionine/vitamin E supplement, animals were protected in varying degrees. The water

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