

Effects of Iodine on Livestock

Iodine is an essential trace mineral for livestock. Once ingested, 95% of the iodine is stored in the thyroid gland. The main function of iodine to incorporate itself into thyroid hormones, thyroxine, (T4), and triiodothyroxine. These hormones are involved in many bodily functions such as:

- Energy metabolism of cells

- Growth of the animal

- Transmitters of nervous stimuli

- Plays an important role in thermoregulation-keeping the body temperature steady and even

- Involved in normal blood and lymph circulation

- Involved in the seasonality of reproduction

- Aids in the prevention of reproductive failure

The following are common sources of iodine which are feed to livestock:

- Potassium Iodate or iodide

- Calcium Iodate

- Sodium Iodate

- EDDI (Highly available source of Iodine)

If sulfates are present in an animal feed, they will react with EDDI and release free iodine. If a deficiency develops, the following conditions may occur:

- Development of thyroid goiter

- Birth defects

- Poor reproduction

- Poor growth Performance

Most of the areas of North America have adequate iodine in the soil. The use of iodized salt is also very common and helps prevent a deficiency.