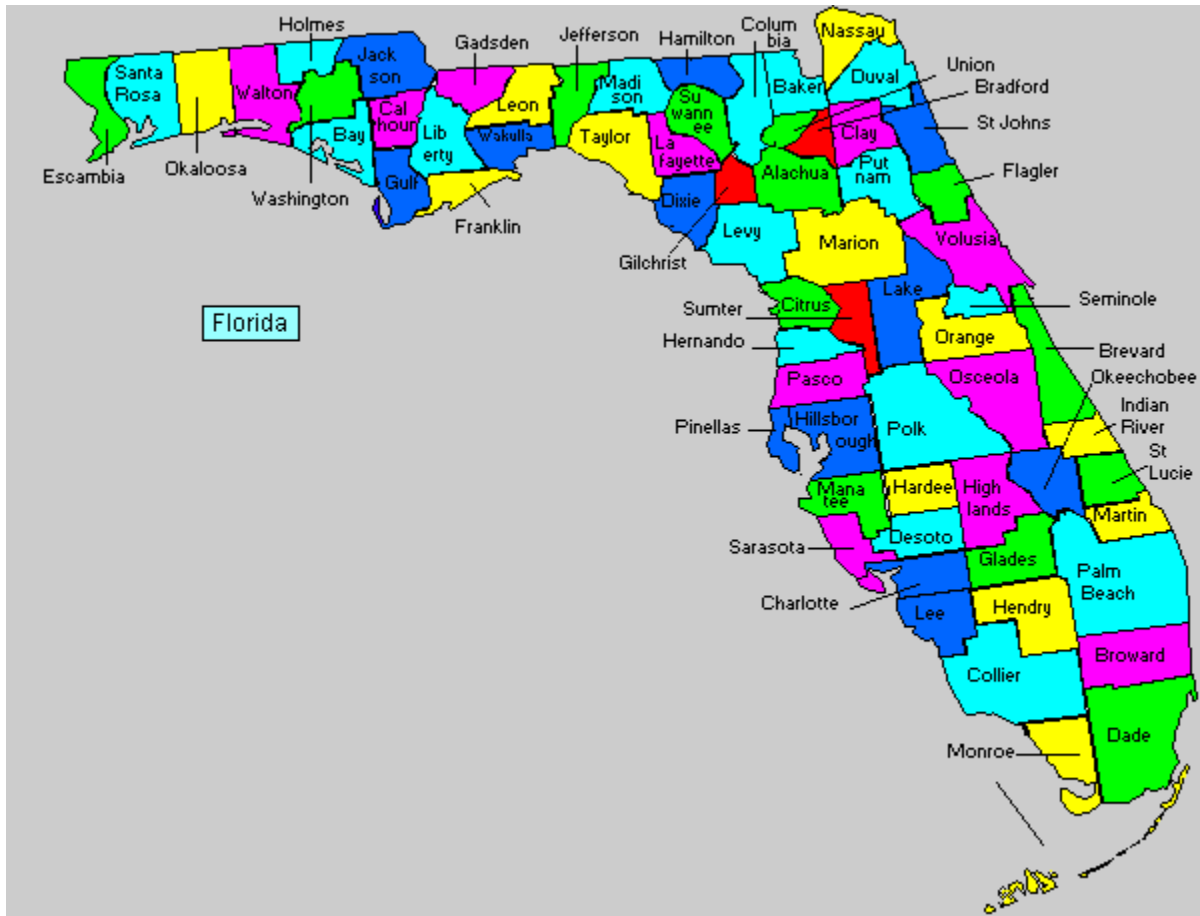


Multimin PUTS MICRO MINERALS ON THE MAP!

FLORIDA – Micro Minerals (Cu, Mn, Zn, Se) for Grazing Cattle:



Sandy, low organic-matter soils have been linked to the production of forages with low trace mineral content. The organic soils in the Okeechobee basin have also been associated with the production of forages high in molybdenum which is an antagonist of copper absorption. Copper is one of the most common trace minerals to be deficient in Florida beef cows.

A potential to develop selenium deficiency has been widely recognized in Florida cattle.

Dietary manganese absorption and retention in cattle is low, but manganese deficiency in grazing cattle is uncommon. However, considering the suspected effect of manganese on fertility and calf development, optimal manganese serum levels prior to and following calving is very important.

Copper and zinc are absorbed through the same pathways, indicating a competition for absorption sites.

In Florida, sulfur is the most recognized trace mineral antagonist. High dietary sulfur can lead to a reduction in copper and selenium absorption. Other commonly recognized antagonists in Florida forages are molybdenum and iron. Both of these trace minerals are highly likely to initiate copper deficiency in cattle.

Cattle with trace mineral deficiencies often show no clinical signs until they are severely deficient, but a chronic deficiency inhibits performance and decrease production.

Clinical signs of copper deficiency include:

- Immune suppression – disease breakouts and failure to respond to vaccination
- Rough, red dull hair coat
- Anemia

Clinical signs of selenium deficiency include:

- Muscle degeneration (white muscle disease)
- Reproductive failure
- Immune suppression

Clinical signs of manganese deficiency include:

- Bone abnormalities
- Reduced growth rate
- Reduced fertility

Clinical signs of zinc deficiency include:

- Compromised hoof integrity
- Bull reproductive failure
- Anorexia and weight loss esp. in calves

Where does Multimin fit in?

- Multimin provides zinc, manganese, copper and selenium in a readily available form as an injection.
- Multimin rapidly increases trace mineral status of animals.
- Multimin rapidly increases liver storage of trace minerals following injection.
- Multimin bypasses antagonists in feed, forage, distillers grain and drinking water that can reduce the absorption of these critical trace minerals.

Reference :

John D. Arthington. (2008) Essential trace minerals for grazing cattle in Florida.Doc.AN086, one of a series of the Animal Science Dept, Florida Cooperative Extension Service. University of Florida

