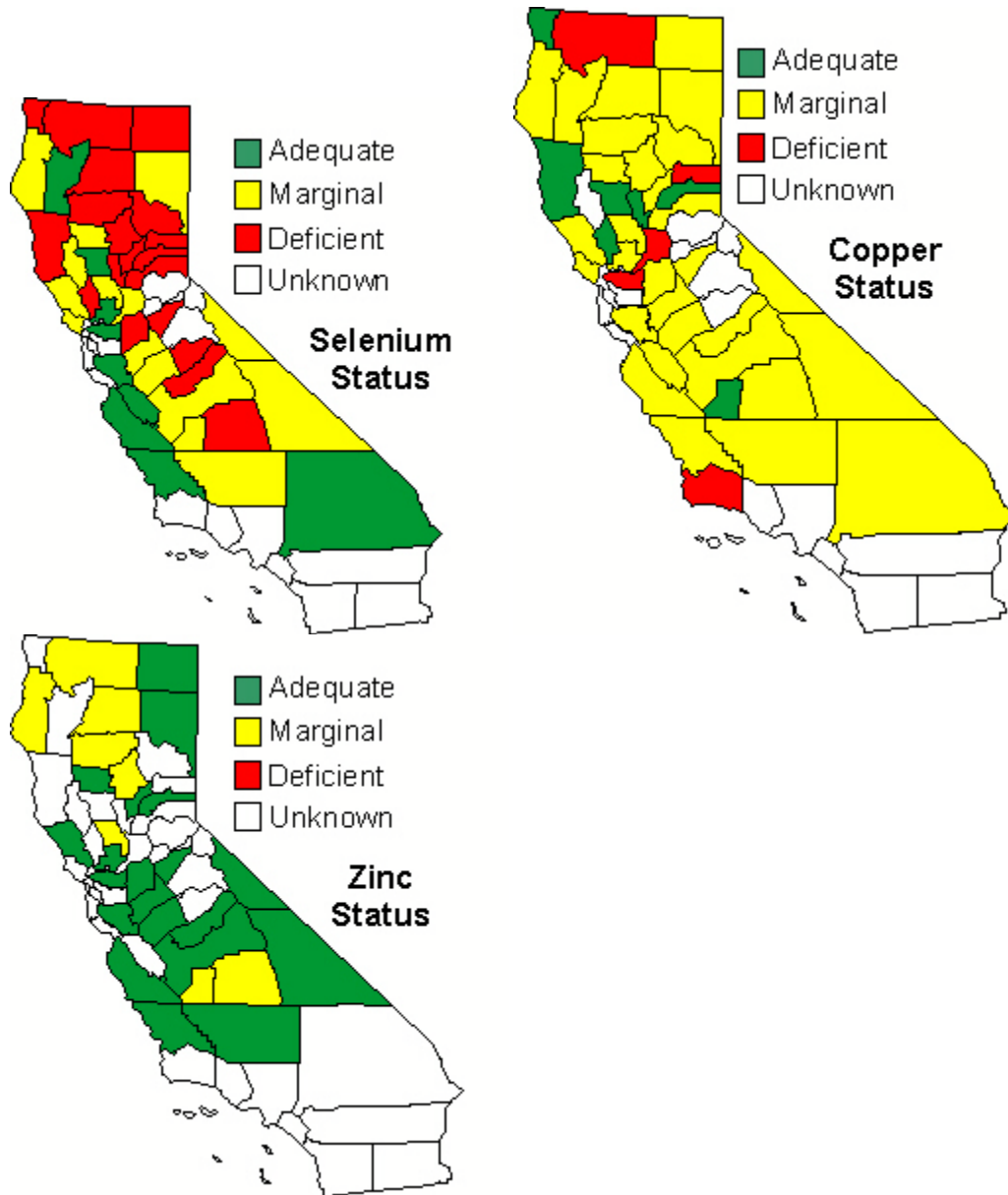


Multimin PUTS MICRO MINERALS ON THE MAP!

CALIFORNIA – Micro Minerals (Cu, Mn, Zn, Se) in Cattle:



Parts of California have increased levels of Molybdenum, an antagonist for copper absorption, in the soils and increased sulfur in the water which can potentially be detrimental to the absorption of copper and selenium. Ivancic and Weiss (2001) studied the dietary effect of sulfur and selenium concentrations in lactating dairy cows, and concluded that increasing sulfur in the diet (for example, by 0.21%, 0.41% and 0.70%) significantly reduced dry matter intake, as well as yields of milk, milk protein and milk fat.

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 :

www.animalscience.ucdavis.edu/mineralproject/

Alejandro R. Castillo, Jose E.P. Santos, Tom J. Tabone. Mineral balances incl. in drinking water, estimated for Merced County dairy herds.