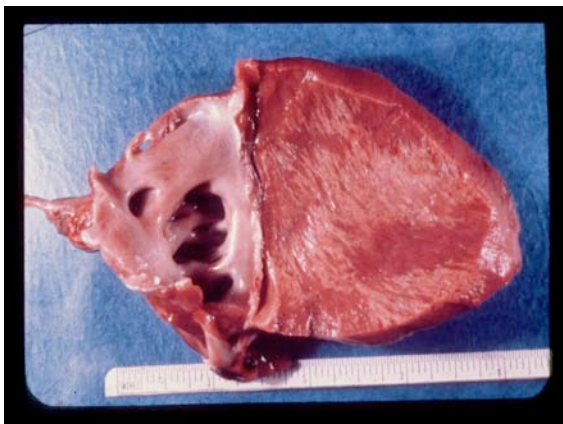


Selenium Deficiency in Beef Cattle

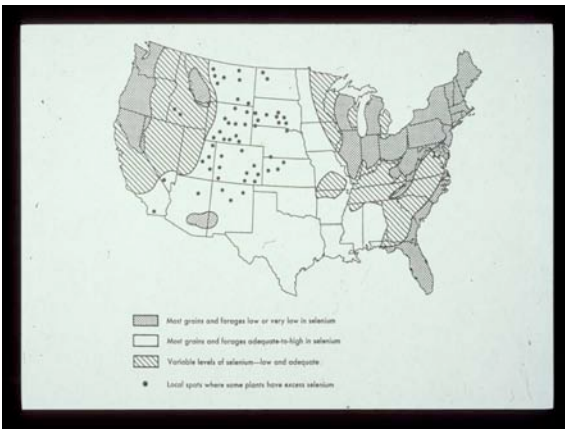
*John Maas, DVM, MS, DACVN, DACVIM
Extension Veterinarian
School of Veterinary Medicine
University of California, Davis*

Selenium Deficiency Syndromes

- *White Muscle Disease*
- *Nutritional Myodegeneration*
- *Diarrhea*
- *Illthrift, reduced weight gains*
- *Retained placenta*
- *Abortions*
- *Infertility—cows & bulls*
- *Decreased immune function*









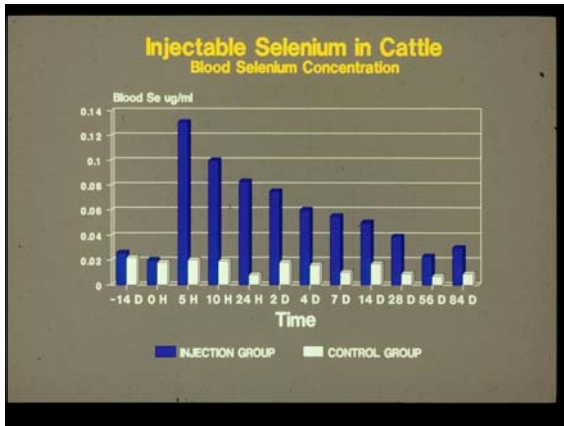
Selenium Diagnostics—Cattle Blood Se Concentration ppb

- Deficient <50 ng/ml
- Marginal 50-80 ng/ml
- Adequate 100-350 ng/ml
- Toxic 5,000 ng/ml



Selenium Injections—Cattle

- Bo-Se®, Mu-Se®, Multimin®—sodium selenite is active ingredient
- IM or Sub-Q
- Rapid response, short-term partial supplementation
- Maas, Peauroi, Tonjes, et al, *J Vet Internal Med* 7:342-348, 1993

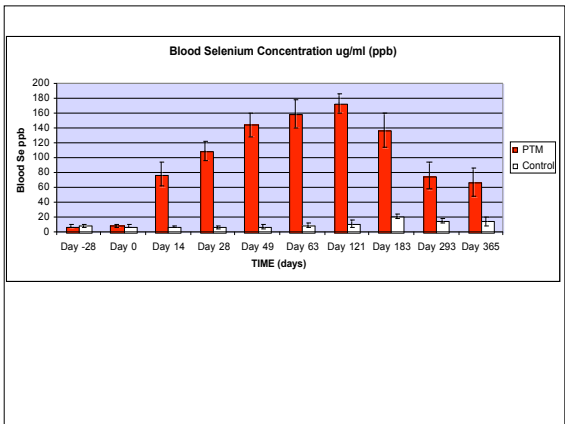












Selenium Bottom Line

- Most common trace mineral deficiency
- WMD, Ill-thrift, Reproductive losses, decreased immune function
- Easy to diagnose Se status
- Supplements: none perfect—TMR for dairies, feedlots, feeds, salt mixes, molasses supplements, injections, CA rumen boluses, fertilizers in advanced nations
- Toxicity—local, 50-100X safety margin

