

## MISSOURI : SPRING BORN FEEDER CALF TRACE MINERAL STATUS



REGION	# CALVES AT RISK	MINERAL*	% CALVES DEFICIENT
1 Northwest	223,000	Copper	15.3%
		Selenium	4.7%
		Zinc	34.7%
2 North Central	222,000	Copper	18.5%
		Selenium	8.3%
		Zinc	45.8%
3 Northeast	121,000	Copper	26.7%
		Selenium	11.8%
		Zinc	30.4%
4 West Central	240,000	Copper	20.1%
		Selenium	16.6%
		Zinc	33.3%
5 Central	460,000	Copper	26.7%
		Selenium	18.8%
		Zinc	23.8%

<b>6 East Central</b>	<b>136,000</b>	<b>Copper</b>	<b>43.1%</b>
		<b>Selenium</b>	<b>25.5%</b>
		<b>Zinc</b>	<b>25.5%</b>
<b>7 Southwest</b>	<b>312,000</b>	<b>Copper</b>	<b>0%</b>
		<b>Selenium</b>	<b>14%</b>
		<b>Zinc</b>	<b>24%</b>
<b>8 South Central</b>	<b>320,000</b>	<b>Copper</b>	<b>0%</b>
		<b>Selenium</b>	<b>24.1%</b>
		<b>Zinc</b>	<b>13.8%</b>
<b>9 Southeast</b>	<b>39,000</b>	<b>Copper</b>	<b>53.1%</b>
		<b>Selenium</b>	<b>40.0%</b>
		<b>Zinc</b>	<b>33.3%</b>
<b>Summary estimates</b>	<b>2,073,000</b>	<b>Copper</b>	<b>17.1%</b>
		<b>Selenium</b>	<b>16.5%</b>
		<b>Zinc</b>	<b>26.5%</b>

**\*Reference ranges:**

Copper deficiency ( $\leq 0.45 \mu\text{g/g}$ )- serum copper

Low blood selenium concentrations ( $< 70 \text{ ppb wet weight}$ )

Cattle with serum concentrations of zinc  $\geq 0.8 \text{ ppm wet weight}$  are zinc replete, cattle with serum zinc concentrations  $\geq 0.4 \text{ ppm}$  and  $< 0.8 \text{ ppm}$  have marginal zinc status, and cattle with serum zinc concentrations  $< 0.4 \text{ ppm}$  are deficient.

**REFERENCES:**

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