

# Prime Cuts:

## Don't Skip Brood Cow Minerals

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Extensive work has been conducted showing the importance of energy and protein intake for late-gestation beef cows; however, mineral supplementation is often overlooked. Adequate mineral supplementation is necessary throughout the year, but is especially critical in the 60 days prior to calving through the end of breeding season. Not only does supplementation of minerals support the health and reproductive efficiency of the cow, but new research has suggested that resulting calves also experience a beneficial carryover effect.

Research from Oregon State University utilized 84 pregnant Angus X Hereford cows to assess the effects of mineral supplementation on cow and subsequent calf health. Cows were divided amongst 21 drylot pens and assigned to 1 of 3 treatments:

1. CON – no trace mineral supplement
2. INORG – zinc, manganese, copper and cobalt from sulfate sources
3. Availa®4 (7 g/h/d) – zinc, manganese, copper, cobalt from Zinpro Performance Minerals®

Diets were identical other than mineral supplementation. The INORG and Availa®4 diets were formulated to provide the same amount of copper, cobalt, manganese, and zinc. After calving, cow/calf pairs were managed as a single group and were provided inorganic trace mineral supplements. Calves were weaned at 6 months of age.

Results indicated that:

- Cows on the CON treatment did not gain as much condition during the last trimester of pregnancy as the other treatments; however, all cows were in adequate condition at calving.
- Weaning weight of calves and calf value was greatest for those born to cows supplemented with trace minerals.
- Liver biopsies showed that cows and calves retained more cobalt and copper when supplemented with Availa®4 compared to inorganic trace minerals
- Overall, these results indicate a beneficial effect not only for the cows, but a favorable carryover effect for the resulting calves, as well.

	CON	INORG	Availa®4
<b>Calf Weaning Weight, lb</b>	466	491	519
<b>Calf Value*, \$</b>	660	692	730
*calculated based on the 2013-14 U.S. average of \$1.41/lb for weaned cattle across all genders			

	CON	INORG	Availa®4
<b>Cows</b>			
<b>Cobalt, ppm</b>	0.21	0.40	0.44
<b>Copper, ppm</b>	69	155	129
<b>Calves</b>			
<b>Cobalt, ppm</b>	0.09	.012	.013
<b>Copper, ppm</b>	362	428	450

Maintaining the condition and mineral status of the cow herd is important for health and reproductive efficiency of the cows, and is beneficial for growth in the resulting calves. Though supplementing with Availa®4 or other organic/chelated minerals is preferred, provision of any type of trace mineral proves to be essential for success. You may want to consider use of organic trace minerals in situations where:

1. The herd has had no trace mineral supplementation for a period of time.
2. Reproductive efficiency and calf health were poor in the previous year.
3. Located in an area with high amounts of trace mineral antagonists (molybdenum, sulfate, iron).
4. A high value is put on reproductive efficiency and calf health.

Information adapted from R.F. Cooke, 2015 Feedstuffs Vol. 87, No.40