

Summer Grass Mineral Considerations
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Free-choice mineral supplementation is a foundational management practice for both stocker cattle and cow-calf pairs grazing Flint Hills native range in Greenwood county and beyond. The effectiveness of these programs is more influenced by variation in voluntary intake over time than by formulation.

Across multiple grazing studies, mineral intake deviates substantially from targeted levels (typically 3–4 oz/hd/day), with fluctuations driven by environmental conditions, palatability, feeder management, and animal adaptation.

In grazing studies conducted at the KSU Beef Stocker Unit, mineral intake in stocker cattle has ranged from approximately 2 to over 7 oz/hd/day, often requiring management interventions such as salt inclusion, feeder relocation, or palatability adjustments to regulate intake. Intake patterns typically follow a progression of early variability, mid-season stabilization, and late-season modification driven by management practices. While more research data evaluating mineral consumption in growing cattle is available, it is logical to assume the same variability exists with grazing beef cows.

Seasonal forage mineral dynamics provide the biological basis for a supplementation strategy (Table 1). Phosphorus (P), copper (Cu), and zinc (Zn) decline progressively with advancing plant maturity. In Flint Hills pasture, forage P decreases from approximately 0.12–0.13% in May to 0.08–0.09% by late July, while Cu declines from ~8–10 ppm to ~4–6 ppm and Zn from ~26–27 ppm to ~15–25 ppm. The reduction in trace mineral content in mid- to late-season grasses underscores the importance of ensuring adequate intake of a mineral supplement, or potential deficiencies in animal requirements may occur.

Variation in mineral intake directly translates into variation in nutrient delivery. A range of 2 to 7 oz/hd/day represents more than a threefold difference in supplement consumption, resulting in proportional changes in nutrient supply. The cost of mineral supplementation programs fluctuates as well in response to variability in intake, with significant chronic overconsumption having the greatest impact.

This time of year is so busy for area producers, between yearlings and cows, but in both cases don't forget about the importance of mineral supplementation! Give me a call at 620-583-7455 if I can be of help to you on developing a mineral supplementation strategy. Let's celebrate that May is national beef month!

Period	CP	NDF	ADF	P	Cu	Zn
Mid-May	8.8–13.6	55–60	35–36	0.12–0.13	8–10	26–27
Late May	~8	~62	~37	~0.12	10–11	~27
Mid-June	~7.8	~63	~37	~0.11	~10	20–25
Late July	5.4–6.1	61–65	40–44	0.08–0.09	4–6	15–25