

EFFICACY OF A SELF-FED SMALL SUPPLEMENT FOR PREPARTUM COWS GRAZING DORMANT PINON-JUNIPER RANGELAND

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ABSTRACT: A 3-yr study was conducted at the Corona Range and Livestock Research Center, NM to evaluate efficacy of small amounts of a self-fed protein-mineral supplement for BW and body condition score (BCS) maintenance in prepartum Angus and Angus-cross cows grazing dormant pinon-juniper/blue grama range. Cows were supplemented with 1) a 36% CP supplement (CON) composed mostly of oilseed meals fed 3 times/wk; 2) a supplement comprised of 25% feather meal, 25% blood meal, 27% minerals, 19% salt and 4% distillers dried grains (40% CP, SMP), or 3) manager fed cows CON at discretion (VAR) based on perceived environmental stress. This treatment (VAR) functioned as a negative control. Supplementation periods were 27 d (yr 1), 62 d (yr 2) or 93 d (yr 3). Across years, mean supplement consumption was 0.63, 0.23, and 0.04 kg/d for CON, SMP, and VAR. Supplementation occurred in November, December, and/or January and terminated two weeks prior to initiation of calving. Year impacted BW and BCS measures ($P < 0.01$), but no treatment X year interactions were noted ($P > 0.33$). Feeding CON or SMP had minimal impact on BW change (0.5 kg and 2.1 kg respectively), while cows fed VAR lost (-12.3kg) BW ($SE \pm 3.9$, $P = .06$). Initial BCS of cows was similar among treatments (5.0, 4.9, and 5.0 ± 0.1 for CON, SMP, and VAR). Feeding CON or SMP resulted in minimal changes in BCS (-0.1 score) while VAR treated cows lost 0.4 BCS score ($P = 0.10$). Mean feed costs (\$/cow) were 10.08, 4.70, and 0.60 for CON, SMP and VAR. In this study, cows required supplemental nutrients to maintain BW and BCS, and SMP was utilized most efficiently for this purpose. Relative to VAR, SMP efficiency was 1.1 (weight difference:consumption) while CON efficiency was 0.3. Improved efficiency resulted in substantial reductions in the cost of cow maintenance.

Key Words: beef cows, prepartum, supplementation