ABSTRACTS
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53 The influence of cow age on grazing distribution and utilization of mountain riparian areas and adjacent uplands. J. A. Morrison*[1], T. DelCurto[1], C. T. Parsons[1], G. D. Pulsipher[1], and E. S. Vanzant[2], [1]*Oregon State University, Union,* [2]*University of Kentucky, Lexington*.

The objective of this study was to evaluate the influence of cow age on grazing distribution relative to mountain riparian areas. In each of two years, sixty cow-calf pairs were stratified by age into the following treatments: 1) thirty first-calf heifers (442 kg, BCS=4.43), and 2) thirty mature cows, (5, 6, and 7 years of age; 569 kg, BCS=4.86). Treatments were randomly assigned to four pastures (15 hd/pasture, average of 21.5 ha) with treatments reversed in year two. The research was conducted in the Milk Creek drainage at Oregon State University's Hall Ranch in northeast Oregon from late July to early September. The analysis of 13,000 cattle location observations taken early (d15 to d18) or late (d36 to d39 in year one; d29 to d32 in year two) during the grazing bout revealed a three-way interaction between cow age, time of day, and grazing bout ($P < 0.01$). During the early grazing bout, mature cows distributed farther from the stream during the morning than first-calf heifers ($P < 0.01$). In contrast, there were no significant differences between the distances of first-calf heifers and cows from the stream or in the percentage occupying the riparian vegetation type from noon until dark. During the later portion of the grazing bout no significant differences were observed ($P > 0.10$) between the distribution of the age classes from the stream or in the percentage of each age class in the riparian vegetation type. In addition, forage utilization and utilization pattern were not different ($P > 0.10$) when comparing pastures grazed by the different age classes. Fecal deposits within one meter of the stream did not differ between mature cows and first calf heifer treatments ($P > 0.10$) during the entire grazing bout. Though mature cows had higher average BW and BCS at the beginning of the trial ($P < 0.01$), there were no differences ($P > 0.10$) between age classes in weight change, BCS change, or calf average daily gain during the trial. In summary, mature cows distributed farther from water and spent more time outside the riparian vegetation zones early in the grazing period and during the morning hours as compared to first calf heifers.
Key Words: Beef cattle, Riparian areas, Distribution