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# Diet Quality and Performance of Cattle on Forest and Grassland Range

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*Journal of Animal Science*, Volume 53, Issue 2, 1 August 1981, Pages 291–298,  
<https://doi.org/10.2527/jas1981.532291x>

**Published:** 01 August 1981

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## Summary

Cattle performance and diet quality on forest and grassland range in the Blue Mountains of eastern Oregon were evaluated over a 3-year period. Esophageally fistulated cows were used for the evaluation of diet quality. Pregnant yearling heifers were used for the evaluation of livestock performance. Data indicated that forest and grasslands offer diverse environments in terms of forage quality and beef cattle production. Forest diets contained more crude protein in early and late summer. *In vitro* organic matter digestibility of cattle diets was lower on the grasslands than on the forest pasture in early and late summer but was superior on the grasslands in the fall, provided that summer precipitation and fall regrowth occurred. Cattle gains were similar for both types in late spring, but greater for forest cattle in early and late summer. Cattle on grasslands gained more in the fall if precipitation occurred in late summer. Crude protein and digestible energy intake analyses revealed that digestible energy was the first-limiting nutrient. Grasslands may be most efficiently utilized in the spring, while use of forests between mid-July and mid-September should be advantageous because of higher quality forage. In years with late summer precipitation, cattle gains might be improved by returning cattle to the grasslands in mid-September. This type of grazing strategy has the potential to improve beef production over that obtained from the grazing of each type separately throughout the grazing season.

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Online ISSN 1525-3163

Print ISSN 0021-8812

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