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Abstract

Lodgepole pine nutrition and growth on grazed forest cutblocks in southern British Columbia

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Forest grazing occurs on replanted or naturally regenerated cutblocks, giving temporary grazing opportunities for British Columbia担 beef industry. However, grazing on forest cutblocks sometimes results in conflicts between the different interests of the timber and ranching industries. The forester担 primary concern about cattle grazing and forage seeding on cutblocks is tree damage by trampling and browsing, followed by soil compaction and altered tree nutrition. This study evaluated the effect of long-term cattle grazing and forage seeding on growth and nutrition of lodgepole pine on three grazed forest cutblocks near Kamloops and Merritt, B.C.

Grazing regimes consisted of ungrazed exclosures and pastures grazed at 50% forage utilization during 1989? ndash;1998. Forage seeding treatments were 0 and 12 kg/ha. Tree measurements and foliage samples were obtained in September 1999. Tree height, current-year growth (length of leader internode), and foliar nutrient levels of regenerating lodgepole pine have not been significantly affected by forage seeding rate and 9 years of cattle grazing. The absence of significant effects on tree growth and nutrition is particularly noteworthy because of the marginal or somewhat deficient status of several nutrients (N, P, B, Fe, and Cu) on these study sites.

The management implications of this study relate to the benign effects of 9 years of cattle grazing on lodgepole pine nutrition and growth. The study provides evidence that cattle grazing is compatible with forestry. These results support the integrated use of forested rangelands in southern British Columbia. Attempting to extrapolate these findings to other site conditions should be done with caution.

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