Response of Uneven-aged Interior Douglas-fir to Different Thinning Regimes: 11-year Results

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Introduction

Interior Douglas-fir (Pseudotsuga menziesii var. glauca) is an important tree species in the central interior of British Columbia, Canada because of its predominance in lower lying, easily accessible areas.

The purpose of this study was to ascertain the long-term effect of three different pre-commercial thinning (spacings) methods on the growth and development of interior Douglas-fir uneven-aged stands that were formerly diameter-limit logged. This experiment was set up in the early 1990s and measured three times (1993, 1998, and 2004) subsequent to the thinning.

Methods

Study Area

Change in the Number of Stems per Ha

Thinning Treatments

Results 1

Average Yearly Net Growth Rates by Treatment and Growth Period

Discussion

• The mortality rates of the control were significantly higher than that of thinned areas.
• The volume growth of the 3m clumped spacing was higher than that of the other two thinning treatments.
• The annual volume growth rates in the second growth period (1997-2003) were slightly higher than that in the first growth period (1993-1996) for all treatments.
• Individual tree height and dbh growth rates for the 5m clumped spacing were higher than that of the other treatments.
• The clumped spacings had better growth rates in most variables than the control and standard spacing.

Selected References