

SILVICULTURE OF NORTHERN WHITE-CEDAR IN MIXEDWOOD FORESTS

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Concerns have been expressed regarding a decrease in the abundance of northern white cedar over a large part of its range. Possible reasons for a decrease include poorly controlled harvesting and an increase in deer browsing. Cedar can be the main species on some sites but it is also a companion species in mixedwood stands. In these stands, productivity and stem quality can be very good, making it an important resource for the forest industry. However, cedar response to silviculture in such stands remains poorly documented so that the selection of silvicultural treatments is largely based on the silvics of other associated species.

In order to assess cedar response in these stands, a study was initiated in western Quebec, Canada. The study addresses two aspects of cedar response: regeneration establishment and residual tree growth response. It comprises three sub-projects. The first one consists in an experiment where short-term seedling establishment and development will be put in relation with level of cutting, seed rain, seedbed type, browsing pressure as well as light, nutrient and water availability. The second sub-project consists in a retrospective study in which regeneration and residual tree response will be examined in relation with the type of cutting, the local skid trail network and the local growth environment. The last sub-project will use long-term data from the Penobscot Experimental Forest (Maine) to look at the combined effect of site type and silviculture on the growth and regeneration of cedar. Together, the information gathered will make it possible to provide management recommendations for cedar management in mixedwood stands.