

## Cutting Versus Herbicides: Tenth-Year Cost-Benefit Analysis of Sub-Boreal Conifer Plantation Release

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Although conifer release treatments must provide high economic returns on investment because treatments can be costly, few cost-benefit studies of vegetation management in conifer plantations have been reported. This study provides follow up cost-benefit analysis from research conducted at the Fallingsnow Ecosystem Project in northwestern Ontario, Canada with the objective of determining the relationship between planted white spruce (*Picea glauca* [Moench] Voss) stem volume and release treatment cost (\$ m<sup>-3</sup>) ten years after alternative

release treatments. Individual treatment costs were inflated over the ten-year period to develop cost estimates for 2003. The most cost effective treatment was the herbicide Vision (\$12.16 m<sup>-3</sup>), followed by the herbicide Release (\$12.18 m<sup>-3</sup>), cutting with brushsaw (\$38.38 m<sup>-3</sup>) and cutting with Silvana Selective (\$42.65 m<sup>-3</sup>). No cost-benefit differences were found between the herbicide ( $p = 0.998$ ) or cutting treatments ( $p = 0.559$ ). The herbicide treatments were three-fold more cost effective than the cutting treatments ( $p = 0.001$ ).