Natural Selection of *Pinus banksiana* Regeneration Through Increase Inoculum of *G. abietina*, North American Race

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Abstract – Scleroderris canker caused by the North American race of *Gremmeniella abietina* induces damage to pine shoots covered with snow. Jack pine (*Pinus banksiana*) is a native species affected by this disease. Most reports of damage concern plantations. Our observations have been on-going since 1989, in an area where Jack pine was seeded over an area of 552 ha in 1979. This stand is located near lac Nippon, 100 km west of Saint-Felicien, Lac-Saint-Jean region. Even if 96% of the Jack pines were infected in 1989, the rate of mortality only increased from 64 to 72% between 1990 and 1994. The maximum height of infected shoots in trees rose from 0.9 to 1.5 m during the same period. In 1994, the mean height of dead saplings was 0.9 m, while the height of surviving Jack pines was 1.9 m. Since 1995, the disease has been at an endemic level, because of the lack of healthy shoots to be infected under the snow cover. Fast growing or older pines survived the disease. Very few residual trees have shown cankers on the main stem in 2004. There were enough stems left in the stand and a thinning operation was conducted in 2000. The disease was an element of the natural selection of Jack pine regeneration.

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