

EFFECTS OF DIFFERENT MANAGEMENT METHODS ON *SORBUS AUCUPARIA* SPROUTING IN MESIC FORESTS IN FINLAND

Hamberg, L.¹, Löfström, I.¹, Malmivaara-Lämsä, M.¹, Vartiamäki, H.¹ & Hantula, J.¹

¹Finnish Forest Research Institute, P.O. Box 18, FI-01301, Vantaa, Finland. E-mails: leena.hamberg@metla.fi, irja.lofstrom@metla.fi, minna.malmivaara@metla.fi, henna.vartiamaki@metla.fi, jarkko.hantula@metla.fi

Abstract

The number of rowan saplings (*Sorbus aucuparia*) has increased considerably in urban forests (Lehvävirta & Rita 2002), yet the reasons for this are unknown. However, it seems to be a species which benefits from urbanization. It is not sensitive to recreational use of urban forests, and it does not suffer from forest fragmentation caused by urban construction (Hamberg et al. 2008). Rowan thickets have caused considerable costs for municipalities. Rowans have suppressed the growth of spruce (*Picea abies*) and pine (*Pinus sylvestris*) saplings, and have hampered recreational use of urban forests. They can sprout quickly through root suckers after removal of shrub layer. Thus same sites have to be managed again after couple of years. Therefore we studied different management methods to find out best way to restrict the excessive growth of rowan saplings.

Ten mesic sites were chosen for the study in Helsinki, Sipoo and Lapinjärvi, South Finland. All sites included spruce saplings suppressed by rowan-aspen (*Populus tremula*) thickets. We compared three different management methods for rowan saplings: 1) removal of rowans as usually by cutting saplings 10-15 cm above the ground level, 2) removal of rowans by cutting saplings 1 m above the ground level (the height where moose browse rowans) and 3) removal of rowans as usually by cutting saplings 10-15 cm above the ground level and by adding new biological mycoherbicide (*Chondrostereum purpureum*), which is under development. Our preliminary results revealed that the growth of new rowan sprouts may be slower when using the new methods (especially number 2) than after the traditional method (number 1). The new methods may be useful in municipalities in the future, because use of chemical herbicides is not allowed near urban residences. These methods may also decrease the management costs if rowan saplings grow slower after the treatments.

Key Words

Rowan, saplings, recreation, urban woodlands

Key References

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