# A comparison of management techniques for invasive *Mahonia aquifolium* in coastal dunes (Belgium)

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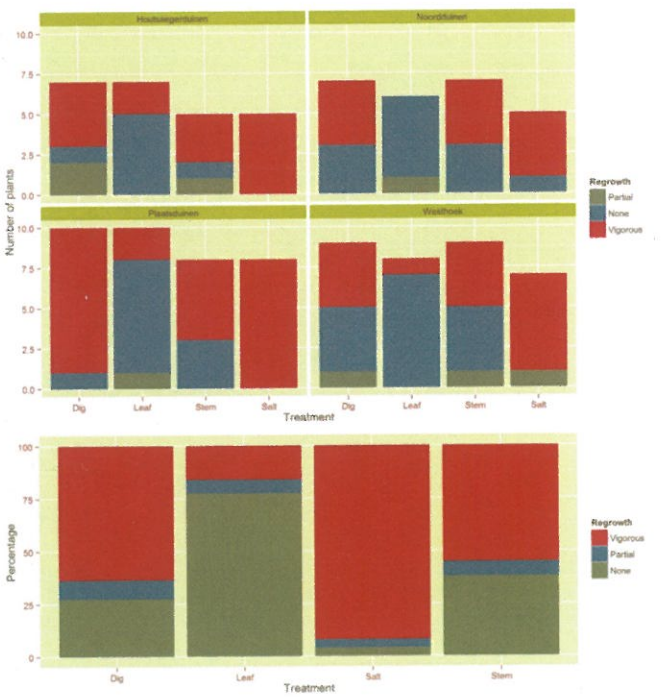
Non-native *Mahonia aquifolium* (Pursh) Nutt. is a notoriously invasive plant species in Belgian coastal dune systems. With its strong clonal growth, this evergreen shrub outcompetes native species and its root suckers heavily affect dune dynamics through sand fixation. To mitigate its impact and prevent further secondary spread, there was an urgent need for knowledge on the effectiveness of control measures, both at the level of individual plants as well as at the landscape scale. We here report on two removal experiments of M. *aquifolium*. Firstly, M. *aquifolium* clones were subjected to one of four treatments (manual uprooting, foliar herbicide application, stem herbicide, and salt application), with regrowth being monitored up to one year after treatment. Plants proved most susceptible to foliar herbicide application (5 % glyphosate solution), resulting in 77 % of the clones apparently killed. Secondly, mechanical removal using a heavy excavator was applied in a highly infested area (350 m², with 100 % M. *aquifolium* cover) and accompanied by manual removal of smaller rhizome fragments. The effort was documented and the outcome monitored in terms of regrowth from different depths. The rooting system appeared to be relatively shallow (30-40 cm). Limited regrowth was observed from superficially buried rhizome fragments that could easily be pulled out. We derive some guidelines that may serve as a starting basis for future control, and may become further refined as experience builds up.





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