

Integrated Pest Management of the Pine Weevil



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The Large Pine Weevil

- Scientific name: *Hylobius abietis*
- Adults feed on the bark of conifer seedlings and can **severely damage and kill unprotected seedlings**.
- **Important reforestation pest** causing high economic losses.
- Today the only successful protection against damage in Ireland is pesticides.



PW-IPM Project

A **new project evaluates alternative methods** of seedling protection based on scientific and grey literature and stakeholder experience. The **aim of the project** is to get a comprehensive picture of the options available against pine weevil damage in Ireland.

Integrated Pest Management (IPM)

IPM takes advantage of all possible plant protection methods: **cultural, chemical, physical and biological**. Applicable methods are carefully considered based on information about the pest-plant-system and specific local conditions. Selected methods should cause

minimal **ecological disturbance** and pose minimal risks for **human health** while being **economically** justifiable. The use of IPM leads to more **sustainable pest management** in the face of chemical-resistant pests and a reduced use of chemical pesticides.

Silvicultural practices

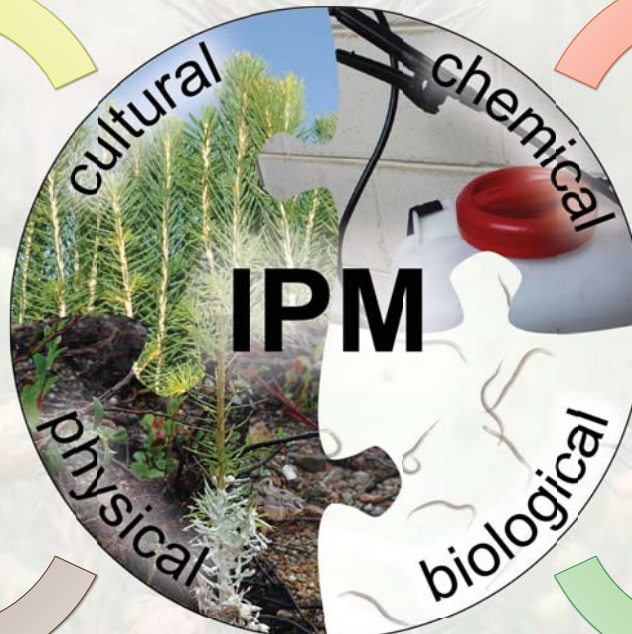
Make conditions unsuitable for pine weevil, for example:

- Plant larger stock
- Soil preparation (exposing mineral soil)
- Brush bundling (remove alternative food source, breeding material)

Physical protection

Prevent access to seedlings

- Stem coats (sand and glue, wax, etc.)
- Barrier guards (tubes around the stem)



Chemical protection

Lethal and non-lethal effects

- Insecticides (acetamiprid, cypermethrin, etc.)
- Feeding deterrence
- Artificially induced defences

Biological protection

Reduce pine weevil population

- Nematodes (infest larvae)
- Fungi
- Parasitoids, ants, predators etc.



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Pictures by F. Fedderwitz,
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