Seedling Debarking Weevil

Hylobius congener Dalla Torre, Shenkling, & Marshall
Coleoptera: Curculionidae

Pendrel, B. A. 1990. Hazard from the seedling debarking weevil: a revised key to predicting damage on sites to be planted. Tech. Note 236. Forestry Canada, Maritimes Region; 4 p.

Objective: To revise a hazard key, originally published in 1987 (Pendrel 1987), for predicting damage by *H. congener* on 1-yr-old cuts to be planted.

Abstract: The seedling debarking weevil, *H. congener* Dalla Torre, Shenkling and Marshall, is a serious regeneration pest of newly planted seedlings on 1-yr-old clear cuts in the Maritime Provinces of Canada. Adult weevils girdle the main stem of planted seedlings, killing them quickly. A dichotomous key was devised that integrates variables such as percentage of ground cover and mineral soil, basal area of regenerating tree stems, and density of trapped adults. The key determines weevil hazard and aids management decision-making on one-year-old cuts as well as sites where the pre-harvest softwood content was ≥25% or in areas with a history of *H. congener* activity.

Sampling Procedure: Standardized pitfall traps, baits for *H. congener*, and instructions for their use are available from Research and Productivity Council (Fredericton, NB, Canada). Planting sites should be assessed 3–4 times in late May or early June. The first visit is necessary to evaluate the percent ground cover with feather moss, which provides hiding places for weevils, and exposed mineral soil, which discourages weevil activity. Using a meter stick, calculate the density of regenerating stems in m^2 plots as averaged from several plots in the site. Install at least three pitfall traps per site. Check traps daily for three days and average the number of trapped weevils for the site. Trapping can be discontinued after the first day if an average of two weevils is found in each trap. Trapping can be discontinued after the second day if the cumulative average number of weevils per trap is two. In both instances the minimum number of weevils needed to follow the key has been trapped. Otherwise, reference Table 1 to determine weevil hazard.

Note: The author did not provide details regarding the type of pitfall trap and bait used in this study. This key was developed for sites in the Maritimes and so it should be, at least, used with caution in other geographic areas where this insect is a problem. The key should be used in the first spring following a harvest, which may not be operationally compatible with a spring planting. The key may be more suitable for use in conjunction with fall plantings.

Table

Table 1. Key to predicted damage from *Hylobius congener* in one-year-old cuts.

1	a	GROUND COVER <10% FEATHER MOSS	2
	b	GROUND COVER >10% FEATHER MOSS	4
2	a	EXPOSED MINERAL SOIL <10%	3
	b	EXPOSED MINERAL SOIL >10%	5
3	a	REGENERATING STEMS <5/M^2	4
	b	REGENERATING STEMS >5/M^2	5
4	a	WEEVILS TRAPPED <0.3/NIGHT	6
	b	WEEVILS TRAPPED >0.3/NIGHT	7
5	a	WEEVILS TRAPPED <0.5/NIGHT	6
	b	WEEVILS TRAPPED >0.5/NIGHT	7
6		**LOW HAZARD**. MORTALITY 0–5%	
7		**MODERATE TO HIGH HAZARD**. MORTALITY >5%	