

Title Disinfestation of Hessian fly puparia in timothy hay for export through mechanical compression
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Abstract

Canadian hay exporters have the potential to increase their market share of double compressed baled hay exports to Japan. However, the Japanese quarantine authorities have a strict phytosanitary and quarantine policy against the importation of Hessian fly (*Mayetiola destructor* (Say)) infested double-compressed baled hay from Canada. A viable quarantine protocol based on mechanical compression alone will help Canadian hay exporters to increase their market share and reduce shipping cost. Laboratory and field trials were conducted to evaluate the efficacy of using mechanical compression alone for the disinfestation of Hessian fly in double-compressed baled hay for export to Japan. Total Hessian fly mortality was achieved in the laboratory compression tests. The mortality of the Hessian fly was independent of the infested seedlings moisture contents or the hold time. The mechanical forage compression unit at Green Prairie International was effective in ensuring 100% mortality of the Hessian fly based on the 75-day emergence tests.