# Low Volume Undiluted Btk Application Against Heavy Gypsy Moth Population Densities in Southern Corsica

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## Abstract

Low volume undiluted applications of *Bacillus thuringiensis* are common and efficacious against coniferous forest pests such as pine processionary moth and spruce budworm, but have not been common practice against deciduous forest pests due to coverage issues. With the introduction of higher potency Btk formulations and the advancements in aerial application technology, Gypsy Moth Forest Pest Managers have recently been able to successfully lower volumes to around 3 liters/ha with Foray 76B® (20.1 BIU/liter) and still achieve suppression program objectives. The objective of this study was to determine if foliage protection could be achieved with a single application of a higher potency Btk formulation applied at 2 liters/ha against a heavy gypsy moth population.

In 2001, a 5 hectare stand of cork and holly oak was treated with Foray 96B® (25.4 BIU/L) applied undiluted at 2.0 L/50 BIU/ha against a heavy gypsy moth population in Southern Corsica. The application was made with a Piper Pawnee equipped with 4 Micronair AU-5000 rotary atomizers rotating at maximum RPM's to produce droplets with volume medium diameter (VMD) of 100 µm. Evaluations included reduction of gypsy moth larval density measured by frass traps and defoliation estimates. The results showed that 2 L/ha of Foray 96B® was able to reduce larval density and protect Mediterranean *Quercus spp* in Corsica. Further trials are planned at 2 L/ha in more dense forest stands containing larger oak species of trees.