

RECOMMENDED ACTIONS REGARDING FOREST TENT CATERPILLAR (FTC) DEFOLIATION ON NEW HAMPSHIRE FORESTLANDS.

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In 2005 FTC defoliation increased from 10,000 acres to 70,000 acres in Sullivan County and parts of Grafton, Merrimack, Cheshire, and Hillsborough Counties. The host is mostly red oak with some sugar maple. Our surveys indicate that 2006 will be like 2005 in terms of acres defoliated- possibly more.

For this reason we'd like to share our management recommendations. These recommendations have been developed with the approval of the Forest Pest Advisory Group (FPAG) which is comprised of pest specialists representing the NH Division of Forests and Lands, US Forest Service, NH Department of Agriculture Foods and Markets, UNH Cooperative Extension, The Society For the Protection of New Hampshire's Forests, and the USDA Animal and Plant Health Inspection Service. These organizations are brought together by the State Forester to provide oversight in the management of major forest pest outbreaks. Please keep in mind that FTC is native to New Hampshire and its parasites, predators, and diseases have historically ended our past FTC outbreaks- usually before significant forest impacts occurred.

Recommended forest management practices in FTC-defoliated forests:

We recommend that you postpone timber harvesting in forests that have been defoliated by FTC. Historically FTC only lasts a few years in any one stand and only 3-6 years state-wide. Wait at least two growing seasons after the outbreak subsides to allow depleted energy reserves within the trees time to recover. Adding additional tree stresses from soil compaction, root and basal wounding, and crown breakage during timber harvesting could increase the severity of defoliation's impact and cause increased crown dieback, reduced growth, root rots, and mortality of residual trees. This time interval also allows for trees that will die to succumb helping to discriminate between trees to harvest and residual trees. Lastly, FTC outbreaks may last longer in thinned stands because FTC's natural enemies are more effective in closed canopy situations. Tailor your management decisions to specific site factors and landowner objectives. Sites with better soils should minimize tree stress and with one or two defoliations may allow you to enter these stands sooner after the outbreak ends. Landowners who are practicing even-aged management through the use of clear-cutting won't be affected because the outbreak shouldn't effect establishing early successional species.

Recommended actions within an active sugarbush:

The Division of Forests and Lands and the FPAG support the use of aerial applications of registered insecticides in forests and sugarbushes and recommend it for FTC control

when: 1) the trees have already been severely defoliated two years in a row; and 2) winter egg mass counts predict a third severe defoliation the next year.

Although the Division of Forests and Lands cannot organize and coordinate a spray program, **we are available to help sugarbush operators assess damage to their forest and predict how much defoliation can be expected in 2006.** This information could help determine if conservatively tapping in some areas or not tapping at all within a particular site on the property may be an effective management strategy.

Effectively controlling FTC defoliation with insecticides is logistically difficult to accomplish. The preferred material for application is the bacterium *Bacillus thuringiensis* var. *kurstaki* (Btk) and it's most effective on young caterpillars. FTC eggmass populations hatch at separate times within a 2-3 week window on trees and in forest stands. This creates a wide variety of caterpillar sizes within a forest block making the timing of spray difficult. Also, weather during an ideal spray window, in mid to late May, is often poor and postpones application. Be prepared to accept that a spray application may not achieve control worthy of the project's cost.