USING SILVICULTURE TO MINIMIZE GYPSY MOTH IMPACTS

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ABSTRACT

Several studies are underway to test and evaluate the use of silvicultural treatments to minimize gypsy moth impacts. Treatment objectives are to change stand susceptibility to gypsy moth defoliation or stand vulnerability to damage after defoliation. Decision charts have been developed to help forest and land managers to select the appropriate treatment for their forest and insect conditions. Extensive plots to test silvicultural manipulations have been and are being established by several state organizations including the West Virginia Division of Forestry, Ohio Division of Forestry, Pennsylvania Bureau of Forestry, and several private companies and consulting foresters. Other states (Michigan, Indiana, Virginia) are close to establishing plots. These extensive plots will be monitored for gypsy moth defoliation and mortality which will be used to compare with control stands in the same areas.

Intensive plots are established on the West Virginia University Forest in cooperation with the WVU Division of Forestry. Two treatments, presalvage thinning and sanitation thinning, are being tested against paired control stands. In addition to measures of defoliation and mortality, regeneration, seed production, gypsy moth life stages and mortality sources, predators, and secondary organisms are being measured in the plots. A research and demonstration area has been established in the Arnold's Valley Opportunity Area, Glenwood Ranger District, Jefferson National Forest as part of the AIPM Project. Silvicultural treatments will be established and followed in conjunction with control stands and stands treated with low- and high-level insect control tactics.

The use of both intensive and extensive plots to evaluate silvicultural treatments maximizes the amount of information that can be obtained from a limited funding base. As the installed treatments are defoliated and mortality is documented, the effectiveness of using silvicultural treatments can be determined.