

DOES PREVIOUS STAND MANAGEMENT INFLUENCE GYPSY MOTH-RELATED MORTALITY?

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ABSTRACT

Oak-hickory forest stands were sampled for tree mortality using a series of temporary plots. Stands were classified by gypsy moth defoliation and by thinning treatment timing. Uncut, undefoliated stands had a 12.1 percent mortality (sq. ft. basal area/acre), while thinned, undefoliated stands had mortality rates of 3.6 to 7.2 percent. Defoliated, uncut stands ranged from 17.6 to 55.7 percent mortality depending on defoliation intensity and frequency, while thinned, defoliated stands had mortality rates ranging from 10.2 to 51.7 percent. Significant differences in mortality occurred between thinning treatments in undefoliated stands. Defoliated stands, due to high variability, showed few significant differences due to thinning. Thinning of forest stands does accomplish its goal of reducing mortality in undefoliated stands, however, the effect is not present when stands are defoliated. Defoliation causes increased mortality in larger size stems while maintaining mortality rates of small stems.