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EFFICACY OF TRUNK INJECTION AND BOLE SPRAY TREATMENTS AGAINST SPOTTED LANTERNFLY AND ASSOCIATED SOOTY MOLD PRODUCTION

Donald M. Grosman

Arborjet Inc., 99 Blueberry Hill Road, Woburn, MA 01801

ABSTRACT

The spotted lanternfly (SLF), *Lycorma delicatula* (White), an invasive planthopper native to southeast Asia, was discovered in Berks County, PA in 2014. It has since spread to additional counties in southeast PA, DE, MD, NJ and northern VA, and sighted in CT, MA, NY and WV. Direct control options for SLF are limited. We were interested in determining the efficacy of systemic insecticides (imidacloprid, azadirachtin and acephate) and two experimental active ingredients (P and C) using trunk injection and/or bole spray techniques against different SLF life stages and associated sooty mold. Imidacloprid injections and Experimental P bole spray treatments provided the best overall protection of host trees by causing high levels of mortality, thus reducing numbers on the trunk, feeding on the host, and low levels of sooty mold. The acephate injection did not appear to cause much in the way of direct mortality, rather it appears that it deterred nymphs and adults from feeding and/or staying on the host, thus reducing sooty mold production and egg laying. Experimental formulation C and azadirachtin do not appear to be active against SLF. However, these and the other treatments will be monitored in 2020 to determine their effect on egg viability and length of residual activity.