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Spotted lantern fly, a new pest from Asia

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SPOTTED LANTERNFLY AND GRAPEVINES: DAMAGE ASSESSMENT AND CHEMICAL CONTROL

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ABSTRACT

Spotted lanternfly (*Lycorma delicatula* (White)) is a polyphagous planthopper that has the potential to become a serious pest of many agricultural commodities in Pennsylvania. Previous studies indicate spotted lanternfly has a preference for tree of heaven (*Ailanthus altissima*) and grapevine (*Vitis vinifera*), which could endanger Pennsylvania's more than \$20.5 million grape industry. Feeding from this insect reduces overall plant vigor, increases disease susceptibility, and attracts secondary pests. In addition, these planthoppers secrete a sticky, sugar-rich liquid called "honeydew" which accumulates at the base of their feeding area and encourages sooty mold growth and the formation of fungal mats. Korean research indicates sooty mold growth on grapevines blocks sunlight absorption, increases labor costs, and decreases fruit marketability. Private and commercial vineyard owners in the Berks Co., PA quarantine area did not report spotted lanternfly in their vineyards in 2014 and 2015. In 2016, these owners did report spotted lanternfly populations on their grapevines, particularly in rows adjacent to forested areas. Adult insects were commonly observed on wild grapevines in courting pairs or clusters. Feeding competition between adult females was recorded in the field and in our laboratory colonies. This coming season, we plan to perform insecticidal bioassays in a commercial vineyard to test the efficacy of insecticides registered for grapevines. We will continue to observe and record spotted lanternfly behavior on cultivated and wild grapes within the quarantine zone. Lastly, we are currently taking temperature readings to verify degree-day models for *L. delicatula*. Results from these studies will be made available to grape growers to inform them about the potential impact of this pest and aid them in making pest management decisions.