

ASIAN LONGHORNED BEETLE (ALB) *ANOPLOPHORA GABRIPENNIS*: ADVANCEMENTS IN THE ERADICATION PROGRAM

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ABSTRACT

Current detections of Asian longhorned beetle (ALB): August 1996--Brooklyn, NY, later detected on Long Island and in other parts of New York City; July 1998--Chicago, IL; October 2002--Jersey City, NJ; August 2004--Carteret, NJ; August 2008--Worcester, MA. Declared eradication of ALB infestations: April 2008--Chicago, IL, and Jersey City, NJ. Currently regulated for ALB: 241 square miles in New York (142), New Jersey (25), and Massachusetts (74).

The goal of the ALB program is to eradicate the pest in the United States to protect the hardwood forests of North America. To achieve this goal, the ALB program has developed and implemented eradication protocols, an area-wide, science-based strategy. Visual survey of host trees for signs of ALB: there are no traps or lures available to attract ALB; four negative surveys are required to declare eradication of ALB in an area; and surveys are conducted by climbers, ground crews, or bucket trucks. Tree removal: infested trees are removed; exposed host trees may be removed to further reduce populations. Removed trees must be chipped to become deregulated material. Chemical treatment: exposed host trees chemically treated for a minimum of 3 consecutive years to prevent infestation and reduce ALB populations. Regulatory activities to prevent the pest's spread: enforce the quarantine to keep potentially infested materials from leaving the infested area; educate local tree care companies and

other industries that work with regulated items about ALB regulations; issue compliance agreements to companies to ensure regulated materials are handled appropriately within the infested areas. Replant with non-host species to assist in the regeneration of the tree canopy. Outreach to educate the public and industry about the ALB: to obtain their assistance in looking for the beetle and to gain their cooperation while carrying out program activities. Besides standard program outreach to the infested areas, a large outreach initiative was carried out in nine northeastern states in 2009 to raise awareness of ALB. Other components of the eradication strategy include quality assurance to ensure survey, removals, and treatments are done correctly so that these actions are effective; and methods development to improve program effectiveness and delivery. Science-based eradication protocols: biology and population dynamics. New technologies for chemical control: basal soil injection; low-pressure trunk injection; Ecojet capsule injection--operational pilot. DNA analysis of populations: to assist in determining the origin of infestations; three confirmed ALB introductions into the United States—New York, Illinois, and New Jersey; DNA analysis is pending in Massachusetts. Aging studies of infested trees: to determine the first year of infestation; studies have shown that infestations remain localized for the first 4 years and then populations disperse.