Asian Longhorned Beetle Cooperative Eradication Program Program Accomplishments 2001

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Abstract

APHIS spent approximately $3 million to continue ALB eradication activities in New York and Illinois in FY 2001. In New York 6,615 trees were removed, over 4,500trees replanted, and approximately 121 square miles were under quarantine. In Illinois 1,529 trees were removed, over 2,200 trees replanted, and approximately 31 square miles were under quarantine. Surveys conducted through December 2001 resulted in only 616detection's of infested trees (547 in New York and 69 in Illinois). In NY, APHIS began trunk injection treatments with the systemic insecticide, Imidacloprid, this year. The outermost boundaries of the infested areas were targeted for the NY treatment. In IL, a second year of treatment was completed, with all infested areas receiving treatment. There were 23,740 trees treated in NY and 35,490 in IL.

A very aggressive treatment program is planned for 2002. The program is expanding the treatment area from 1/8 mile beyond an infested area to ¼ mile. In addition, soil injection treatment will be used for the first time operationally within limited areas of the IL eradication project. Over 40,000 trees are planned for treatment in IL and over 111,000 trees in the NY infested area.

Areas targeted for survey were increased in 2001 and will continue in 2002. The survey area now extends to a 1-½ mile radius outside the infested core. In addition, surveys were completed primarily with bucket trucks and tree climbers. APHIS implemented five survey contracts in New York and one in IL. However, due to a delay in funding and the contracting process, the contracts were implemented after mid year. Table 1 shows the survey results in positive trees detected each program year.

Table 1.—ALB-Infested Trees

State	FY 1996	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
NY	812	841	978	1,798	715	547
IL	0	0	521	728	209	69
Total	812	841	1,499	2,526	924	616

As a result of expanded surveys, the size of the infested area has increased. Approximately 21 square miles of new infested area (Table 2) was discovered in FY 2001.

Table 2.—Size Of ALB-infested Areas (NY & IL) (in square miles)

FY 1997	FY 1998	FY 1999	FY 2000	FY 2001
70	113	149	157	178

The regulated boundaries increased in November 2001. In NY, 19 square miles were added for a total of 121 square miles. The regulated area boundary expansion now covers the width of the lower end of Manhattan and includes the area between the Brooklyn/Queens regulated area and the Bayside/Flushing regulated area. In Illinois, the total regulated square miles is 31, an increase of 9 from FY2000. The regulated area in Illinois now covers primarily the Ravenswood, Loyola, and Kilbourn Park areas on the north side of Chicago and the suburbs of Addison, Summit, Park Ridge, and an area near O'Hare Airport.

ALB Research is a joint effort of ARS, APHIS, FS, and several State Universities, in cooperation with Chinese research institutions. A concerted effort was made this year to align all research activities toward the eradication goals. The following research efforts should be available for operational use within the next few years.

1) Acoustical Detection Devices – To hear beetles chewing through the wood. This technology, which is being researched by FS and ARS, could be used for delimiting around infested trees. Removing trees earlier will hasten eradication. Field-testing from

2001 yielded promising results for a prototype in the spring of 2002.

2) Entomopathogens – A fungal pathogen, *Beauvaria brongniartii*, is being used to control *Anoplophora malasiaca/chinensis* in Japan and has shown promise against ALB in laboratory studies. A Cornell researcher has placed commercially prepared bands impregnated with the pathogen on NYC trees in the summer of 2001 as part of a larger project to develop this technology for use against ALB. This could be operational next flight season if efficacy, operational, and environmental issues are satisfied.

3) New Chemicals – Several new chemicals and formulations are being tested to replace Imidacloprid if necessary, or for specialized uses such as forested areas or potted plants on rooftops.

4) New Application Methods – Imidacloprid spikes or drenches for potted plants should be available in the summer of 2002. The program is also developing a spot treatment, but operational use is several years away.