

US EPA ARCHIVE DOCUMENT

## EFFICACY REVIEW

**PRODUCT:** Pointer Insecticide

**REG. NUMBER:** 69117-1

**DATE:** June 3, 2009

**DP BARCODE:** D361773

**DECISION NUMBER:** 405874

**GLP:** N/A (public literature)

**CHEMICAL:** Imidacloprid (5%)

**CHEMICAL NUMBER:** 129099

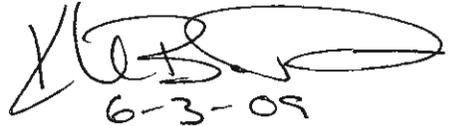
**PURPOSE:** Provide efficacy data to support one year claim for emerald ash borers.

**MRID:** 47662601; 47415401; 47415402; 47415410; 47415411;  
47415413; 47415414; 47415415

**TEAM REVIEWER:** Kable Bo Davis

**EFFICACY REVIEWER:** Kable Bo Davis, M.S., Entomologist

**SECONDARY EFFICACY REVIEWER:** Joanne Edwards, M.S., Entomologist



### BACKGROUND:

Agency review dated September 5, 2008 (D355995) required the submission of additional data to support the retention of control of Emerald Ash Borer and Asian Longhorned Beetle claims. In an attempt to satisfy these deficiencies, MRIDs 47415401 – 47415415 have been submitted.

### DATA REVIEW:

The following data review is comprised of explanations of materials and methods, and a summation of experimental results containing tables with reformatted data.

**MRID # 47662601**

Movement of Trunk-injected Imidacloprid in Green Ash (Mark Harrell)

Experiments were conducted in Nebraska to evaluate the movement of imidacloprid throughout trees when applied via trunk injection. Groups (2 sites) of green ash trees were treated either in May or July. To evaluate movement, sap and tissue samples were analyzed 0, 3, 7, 30, 60 and 90 days post-treatment. Each product was injected following label directions and rates. Each treatment, including control, was replicated three times at both sites. Pointer was applied via wedge.

Results-

**Table 1. Sap (July); Imidacloprid Concentration**

| Treatment | Imidacloprid Concentration (ppb) |       |        |
|-----------|----------------------------------|-------|--------|
|           | 3 DAT                            | 7 DAT | 30 DAT |
| Pointer   | ~2.5                             | ~4    | ~10    |
| Imicide   | ~1                               | ~2    | ~4     |
| Control   | 0                                | 0     | 0      |

**Table 2. Leaf; Imidacloprid Concentration**

| Treatment | Imidacloprid Concentration (ppb) |        |
|-----------|----------------------------------|--------|
|           | 30 DAT                           | 90 DAT |
| Pointer   | >1000                            | >500   |
| Imicide   | <250                             | <250   |
| Control   | 0                                | 0      |

**Table 3. Xylem & Cambial Zone; Imidacloprid Concentration**

| Treatment | Imidacloprid Concentration 90 DAT (ppb) |                        |
|-----------|---|------------------------|
|           | 0.5 m above injections                  | 1.0 m above injections |
| Pointer   | ~9                                      | ~55                    |
| Imicide   | 0                                       | 0                      |
| Control   | 0                                       | 0                      |

The concentration of imidacloprid found in sap, leaves and xylem and cambial zones was significantly greater in trees treated with Pointer insecticide as compared to controls and Imicide. The author of the study hypothesizes that the difference between the two imidacloprid applications is due to the wedge application, which results in less damage to the tree.

**MRID # 47415401**

The experimental design consisted of injecting ~50 ash trees in Windsor, Ontario with a 5% imidacloprid solution at a rate of 0.25 g/cm DBH. The trees ranged from 7 to 26 cm DBH. Observations on adult emergence, number exit holes and canopy dieback

were taken one year post-treatment. In addition, the concentration of imidacloprid within the leaves was recorded.

Result-

MRID 47415401 was comprised solely of a published abstract. In addition to no raw data, very little information was provided concerning results. However, the abstract did note that imidacloprid injections provided “effective protection” one year post-treatment. In addition, the abstract stated that concentrations of imidacloprid remained at levels which are toxic to EAB.

**MRID # 47415402**

The experimental design consisted of treating a number of ash trees, located in Troy, Michigan, with several different formulations (10 per treatment). The trees were between 12 and 26 years old, and ranged in diameter from 7 to 24 inches DBH. Treatments were conducted in 2004. Observations on larval density and canopy dieback were taken in 2005.

Results-

**Table 4. Troy, Michigan (One Year Efficacy)**

| 2004 Treatment                  | Rate   | 2005 Dieback | 2005 larvae/m <sup>2</sup> |
|---------------------------------|--|--------------|----------------------------|
| IMA-jet trunk Injection (5% ai) | 4 ml/inch: trees <12 inches<br>8 ml/inch: trees >12 inches | 24.3%        | 24.3                       |
| Control                         | -  | 50.3%        | 65.4                       |

Trees injected with a 5% imidacloprid product resulted in reduced canopy dieback and larval density approximately one year post-treatment, as compared to untreated trees.

**MRID # 47415410**

This MRID is comprised of “treatment history” from the USDA. According to the article, ~250,000 trees have been treated with imidacloprid between 2000 and 2006. All trees were located within Illinois, New York or New Jersey and showed damage of being infested with Asian longhorned beetles. Of the ~250,000, 8,372 were dissected for number of eggs and exit holes. In total, only 6 trees had adult emergence within a year of being treated with imidacloprid.

MRID # 4741511, 47415413, 47415414 and 47415415 all contained Chinese field data, which showed that tree injected imidacloprid is effective at reducing population numbers of Asian longhorned beetles. However, it is important to note that the imidacloprid product tested was a 10% imidacloprid solution. These data are considered supplemental.

## RECOMMENDATIONS:

The submitted data support the retention of control claims for Emerald Ash Borers and Asian Longhorned Beetles to the Pointer Insecticide label. The following recommendations apply:

1. On page 12 of the label, revise "*Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased and control of most problems is reached in as little as three to five days.*" to read "*Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased and control of most problems can start to be seen in as little as three to five days.*"
2. On page 12 of the label, delete the statement "*The Direct-Inject System is among the most efficient chemical delivery systems available.*" Statements such as this cannot be qualified. However, statements such as "*The Direct-Inject System is an efficient chemical delivery system.*" are acceptable.
3. In review of the company's website, multiple unacceptable claims were found. As stated in the Agency review dated September 5, 2008 (D355995) and Agency letter dated September 30, 2008 all "curative" and 2 year control claims must be deleted. More specifically, delete the following claims from the website:
  - "*Proven curative control of HWA, EAB, and many other pests.*"
  - "*Now labeled for 2-year control!*"
  - "*Pointer Insecticide is now labeled for two-year control after testing showed that one application of Pointer provided extended control of many pests including adelgids, borers, and aphids.*"

## CLARIFICATION:

1. MRID numbers used to support the retention of Emerald Ash Borers: 47514201, 47415401 and 47415402.
2. MRID numbers used to support the retention of Asian Longhorned Beetles: 47415410, 47415411, 47415413, 47415414 and 47415415.
3. MRID number 47662601 was used to support the retention of translocation of imidacloprid claims.