Optimizing Control of Annual Bluegrass Weevils Using Conserve, 2010

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In the spring of 2010, we conducted a field trial to determine the optimum timing of application for spinosad (Conserve™) against annual bluegrass weevil (*Listronotus maculicollis*) larvae. Some colleagues had suggested that Conserve™ could be applied as early as mid April and still provide excellent control of ABW larvae, but our observations in previous years did not support that recommendation. We designed a test that included three different dates of application (12 April, 7 May, or 19 May) and two rates of application (1.0 or 1.2 fluid ounces per 1,000 square feet). We also included a bifenthrin (Talstar™) application at the traditional adult timing (*Forsythia* "half green, half gold", which was 12 April in 2010), as well as a single application of Aloft™, also applied at the traditional adult timing.

The test was conducted on a fairway at TPC – River Highlands, in Cromwell CT. Each plot was 6 feet by 6 feet, and the test was replicated five times using a CRB design. All applications were made by hand using a watering can and 2 quarts of water per plot. All applications were irrigated lightly (ca. 0.05 inch) about 30 minutes after the last application was made. We sampled the plots on 1 June by collecting 10 cores (1.9 inch diameter) from near the center of each plot. We transported the plugs to our Amherst laboratory and used a saturated saline solution to dislodge insects from the samples.

The results of that trial are provided below. Any number in the column describing "mean larvae per plug" that is followed by the same letter is not significantly different than any other number followed by the same letter.

Treatment	fl oz/1000	Date	Mean larvae per plug	s.e.	Mean larvae per sq. ft.	PERCENT CONTROL
Check	---	---	2.75 ab	2.133	139.9	---
Conserve	1.0	12 Apr	2.85 ab	2.824	145.0	0
Conserve	1.2	12 Apr	1.02 bcd	1.074	51.9	63
Conserve	1.0	7 May	2.72 ab	2.552	138.4	1
Conserve	1.2	7 May	1.10 bcd	1.336	56.0	60
Conserve	1.0	19 May	0.38 d	0.640	19.3	86
Conserve	1.2	19 May	0.52 cd	0.847	26.4	81
Aloft	0.27	12 Apr	1.55 abcd	1.921	78.9	44
Talstar	(0.1 lb A1/A)	12 Apr	3.60 a	3.342	183.2	0

Numbers followed by the same letter are not significantly different, Fishers Protected LSD, $F = 9.71$, $P < 0.0001$

In this test, only the Conserve™ applications that were made on 19 May (around *Rhododendron catawbiensis* full bloom) reduced larvae populations significantly compared to the untreated control. The two earlier applications of Conserve™ (12 April or 7 May) and the two adulticides (Talstar™ and Aloft™) did not provide adequate control. However, Arysta recommends that Aloft™ be applied at much lower volumes of water than we used in this trial, so it is possible that the translaminar activity was reduced as a result of the higher water volume.