

2014

Selected Highlights of the 2014 Cranberry IPM/ Weed Program

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Sandler, Hilary A. and Ghantous, Katherine, "Selected Highlights of the 2014 Cranberry IPM/Weed Program" (2014). *Cranberry Station Research Reports and Surveys*. 18.

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with support by: Mss. N. Demoranville, K. DeMoranville, and D. Medeiros

Research Highlights:

Management Tools for Poverty Grass. Poverty grass (PG) is a serious weed problem in cranberry beds. Many growers report that PG is difficult to manage and that the populations are increasing in coverage on their farms. We compared three graminicides (herbicides specific for grass control) for postemergence control in July. All three herbicides were effective at reducing the biomass of PG by approximately 65-75%, and the herbicides prevented the PG from making any seeds. We also tested several fall and spring applied herbicides for preemergence control. Our research indicated that no single tactic will control PG, as existing plants and newly emerging plants from seeds produced the previous year must both be managed. This requires a diversified approach. We are currently working on a Fact Sheet to inform growers of our finding and management recommendations.

Poison Ivy Management. Anecdotal observations from several growers are that repeated spot treatment applications of a tank mix of sethoxydim (Poast) and mesotrione (Callisto) will control poison ivy (PI) populations. We concluded a 2-year study (initiated in 2013) that showed this treatment significantly reduced PI cover in treated areas. Callisto alone, at chemigation rates, has not been observed to affect PI. Spot treatment mixtures used a higher concentration of herbicide. We initiated a study in 2014 that looked at the effects of each herbicide individually at the higher rate, as well as in combination. Initial results suggest that high rates of Callisto play an important role in PI control.

Outreach Highlights:

- We worked with Cranberry Growers Service, Wareham, MA, to build a prototype walk- behind sprayer that could be used for accurate spot treatments with liquid products. The cantilevered sprayer has a spray swath of 15 feet. Development was supported by a Special Call Grant Program through the UMass Center for Agriculture.



- **Scholarworks** (a digital library) remains an important outlet for the Extension work at the Station. For the period of Sept 2013-Aug 2014 we had 2001 downloads of various Chart Book files including 103 downloads of the entire 2014 Chart Book (a total of 440 downloads for entire 2011-2014 Chart Books), 259 downloads of our Cranberry Production manual (CP-08), and 1103 downloads of our BMPs. We had 2,496 downloads of our various PPT presentations and 420 downloads of fact sheets.
- The **Cranberry Station web site** is also quite active. We had 19,660 page views and 5,341 users. People spent an average of almost 2 minutes per session on the site. Over 25% of the users spent at least 30 sec, 8% spent 1-3 minutes, and 5% spent 10-30 minutes on the site. Most of our users came from desktops, but 15% used mobile devices and 9% used tablets. Users were mostly US (81%), but we had visitors, from Germany, New Zealand, Netherlands, South Africa, India, Canada, and the UK.
- Our lab published 1 refereed article and 3 abstracts; 1 refereed article is in press.
- Sandler was chair of the Search Committee for our new Extension Faculty in Plant Pathology, Dr. Erika Saalau-Rojas.

Other Program Highlights:

- Tested various rates and timing of an unregistered compound that was shown to be effective for moss control in cranberry in 2013.
- Identified a farm with a history of heavy dodder infestation and repeated failure of Casoron to control dodder. Worked with the grower to treat large areas of the bog with different rates of Casoron applied as a split treatment separated by 2 weeks.
- Initiated a greenhouse experiment studying the effects of sanding prior to Casoron application for preemergence dodder control.
- Screened new herbicides for postemergence dodder control and for pre- and postemergence control of broadleaf and grass weeds.
- Tested the crop safety of an unregistered herbicide that was shown to have preemergence dodder control in a 2013 greenhouse study.
- Tested the effects of commonly used adjuvants on cranberry plants for phytotoxicity.
- Developed a test system to simulate frost protection events that can be used to study herbicide soil movement, which will be used in future experiments.
- Conducted 4th year of treatments for studying the long-term effects of delayed applications of Casoron on four cranberry varieties.