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2. IPM PLANNING and ASSESSMENT DOCUMENTS

2a. New England Maple Syrup Pest Management Concerns Survey

PROBLEM, BACKGROUND AND JUSTIFICATION

Two thirds of U.S. maple syrup production comes from New England. Despite being a $26 million/year industry, with iconic value that contributes to quality of life and to the tourist industry, maple syrup production has received relatively little attention as an IPM venue. This is apparently due to the traditionally low use of pesticides on maple syrup trees and the focus of Extension IPM programs on commodities with more intensive pesticide use. However, new and increased pest threats to sugar maple trees have emerged in recent years. A problem with pear thrips in the 1990s highlighted the fact that sugar maple trees are subject to pest damage. The EPA lists maple syrup production in New England as a high priority need for a crop profile.

In 2007, a major forest tent caterpillar outbreak continued for at least the 4th year in New England. In Vermont, 343,000 acres were affected by forest tent caterpillar defoliation compared to 230,000 in 2005 (Anonymous, 2007c). In response, 5,488 acres of sugar maple trees were treated with aerial insecticide by the Vermont Department of Forests, Parks and Recreation. Other spray operations were conducted elsewhere as the outbreak has been widespread.

The saddled prominent, another caterpillar that defoliates sugar maple and other hardwoods, has increased in some locations. While not as widespread, its feeding is more damaging because it can lead to tree mortality after just one or two years of defoliation. Fall cankerworm and the green striped mapleworm are other maple defoliators with elevated populations in New England in recent years. Gypsy moth populations in New England have not been especially problematic lately, but it remains as a widespread endemic hazard.

European fruit lecanium is a scale insect that feeds on sugar maple sap. Populations of this species have fluctuated and affected tree health in recent years. Asian longhorned beetle looms as major invasive risk with potential to devastate sugar maple stands. Winter moth is an early season destroyer of maple and other hardwood buds. The first known eastern U.S. infestation was discovered in Massachusetts in the mid-late 1990s (Childs and Swanson, 2006). Other threats such as the fungus disease anthracnose and climate change mediated pest issues challenge the long-term viability of the New England sugar maple industry.

OBJECTIVES AND ANTICIPATED IMPACTS

This survey will provide a statistically valid census of pest management concerns and practices by maple syrup producers in New England. The data collected will help maple syrup producer associations, state agencies, USDA and EPA identify the IPM priorities for the maple syrup industry. Until we know how and if growers are managing pests, and what their significant pest concerns are, it is not possible to develop measures to increase food safety, protect the environment, and to direct research and Extension efforts. This survey can provide much of that missing information.

APPROACH AND PROCEDURES

The PRONewEngland team has developed expertise and a track record for conducting statistically rigorous pest management surveys. Ann Hazelrigg, University of Vermont, will develop the sugar maple pest issues questionnaire. PRONewEngland state liaisons and industry experts will provide feedback which will be incorporated into a final version. Hazelrigg will manage the Dillman process mailings. Glen Koehler, University of Maine, will manage data entry and summary. Koehler has developed an analytical spreadsheet for a previous PRONewEngland survey, and has extensive experience with the software that will be used to summarize the data (Microsoft Excel).

Procedures for all of these steps are outlined in detail in the PRONewEngland Pest management Network survey template (Koehler, 2006a). Those procedures are based on the Dillman survey method developed to insure unbiased sample populations, high return rates, and statistically valid results (Dillman, 2000).

EVALUATION PLANS

The sugar maple / maple syrup survey will be conducted in summer-fall 2008. The questionnaire, tabulated results, and executive summary of responses will be made available through the PRONewEngland.org website.

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2b. Pest Management Strategic Plan for Brambles in New England

PROBLEM, BACKGROUND AND JUSTIFICATION

Raspberry and other brambles contribute over $4 million annually to the small farm economy in New England. Brambles are grown on over 500 farms, and that count does not include Connecticut (Anonymous, 2007d). There is currently no bramble/raspberry/caneberry PMSP in the national PMSP database for any eastern state. The only existing PMSP was done in 2003 for Oregon and Washington. Raspberries are among the crops commonly consumed by children. In addition, a high percentage of the crop is sold on a pick-your-own basis, meaning that children could be exposed to pesticide residue in the fields during picking.

A PRONewEngland raspberry pest management survey was completed in 2007, and a New England raspberry crop profile draft is scheduled for February 2008. Those documents provide the necessary foundation for completing the PMSP. In addition to the grower community, there are a number of New England Extension personnel with pest management expertise for raspberry and other brambles (Lorraine Los in Connecticut, David Handley in Maine, Sonia Schloemann in Massachusetts, Becky Grube in New Hampshire, Heather Faubert in Rhode Island, and Ann Hazelrigg in Vermont).

OBJECTIVES AND ANTICIPATED IMPACTS

Organize a New England bramble pest management strategic plan workshop and produce a PMSP document.

Pest management strategic plans help agencies and IPM practitioners assess the status of pest management practices, challenges and needs. The process of creating a PMSP is one that participants often find to be rewarding and well worth volunteering their time for the two days of intensive discussion. The benefits do not end after the PMSP meeting. The issues raised drive future Extension and research programming for New England growers. The PMSP document supplies valuable information from stakeholders to the EPA, university research and extension programs, and to the industry.

APPROACH AND PROCEDURES

In fall 2008, Ann Hazelrigg, University of Vermont, will organize a brambles pest management strategic plan meeting and create the PMSP document. The procedures and final PMSP document will comply with USDA requirements (Burr, 2000) and with the New England Pest Management Network PMSP protocol and template (Koehler, 2004b).

Using results from the PRONewEngland survey completed in 2007, the crop profile in progress, and their own experience and knowledge, growers and Extension specialists will identify regulatory, research, education, and extension IPM priorities, and discuss strategic plans for existing and potential pest challenges. The resulting document will be provided to the national PMSP database.

Ann Hazelrigg and her staff at University of Vermont have already successfully completed 3 PMSPs (apple, blueberry and strawberry) with a fourth PMSP (peppers) awaiting finalization of the precursor crop profile. The New England Pest Management Network has an established system for completing PMSPs. State liaisons supply contact information and enlist growers, industry representatives, Extension specialists, and other pertinent stakeholders as participants for the PMSP meeting. State liaisons are responsible for determining that the draft PMSP is valid for their state, or for bringing changes needed to the attention of the PMSP author.

EVALUATION PLANS

The bramble PMSP meeting will be held in late fall 2008 when all field work for the growers is finished. The completed document will be submitted to the Northeast IPM Center in early 2009.