

Northeastern IPM Center – IPM Partnership Grants – 2010 – Proposal Project Description

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Project Title: New England Wine Grape Integrated Pest Management Tactic Survey

Project Type: IPM Planning and Assessment Documents

Project Summary

The wine grape industry is a rapidly growing industry in New England. In the past several years, New England Extension programs have been conducting research and education for this emerging industry. With the end of the initial funding of these activities, it has become important to identify the priorities for research, education and regulatory initiatives. Integrated pest management tactic surveys, crop files and strategic plans have been conducted and developed for many of the widely grown and important crops in the region, including apples, pears, peaches, strawberries, brambles, winter squash, and sweet corn. However similar efforts have not been conducted for wine grapes. In order to better understand the extent of the pest problems and crop management challenges, and to determine the adoption of IPM practices, we proposed to develop and conduct a Dillman method integrated pest management tactic survey for wine grapes that can be the first step to complete a New England Wine Grape Crop Profile and Strategic plan.

Background and Justification

The wine grape industry is a rapidly growing industry in New England. Unlike other commodities in New England both vineyard acreage and wineries are on the increase. Many wine grape growers are new entry farmers, who are coming from previous occupations not related to agriculture. According to survey conducted by the Massachusetts Department of Agricultural Resources, Massachusetts alone has added 20 new vineyard operations in the last 10 years representing approximately 193 new acres of production. This trend is repeated in all the New England states.

As a result there is a need to determine the research and educational concerns for this industry. In recognition of the need there has been an increase in Extension activities for this industry in New England. The University of Massachusetts (Coli) received a USDA Sustainable Agricultural Research and Education (SARE) grant for Integrated and Sustainable Wine Grape Production in Southern New England. This grant was used to establish both an Extension research and education program for this industry for southern New England.

Wine grape acreage is rapidly increasing especially in Northern states using newer cold-hardy cultivars. In a recent meeting of the Cold Climate Viticulture Research/Extension Planning Workshop held in Burlington, VT participants a survey of the wine grape industry indicated that the majority (55%) of the vineyard acreage in these states was 0-3 years old. While acreage has been in the ground longer in Southern New England, many more acres are currently being planted.

Although there have been surveys conducted for this industry in the past few years there has been no New England-wide survey that encompasses both the specific pest management practices as well as the adoption of integrated pest management strategies. Previously, Coli et al, have conducted IPM adoption surveys five years apart for growers in Massachusetts, Connecticut and Rhode Island. Results have been previously reported to NESARE under the project title Integrated and Sustainable Wine Grape Management for Southern New England. These surveys documented that growers had modified their behavior by adopting several sustainable IPM practices that they had received education programming about. The proposed survey will be an additional follow up to these but with the inclusion of growers in the northern tier of New England states.

Objectives and Anticipated Impacts

This survey will provide a statistically valid census of pest management concerns and practices by grape producers in New England. The data collected will help grape producer associations, state agencies, USDA and EPA identify the IPM priorities for the grape 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.

Approaches and Procedures

Massachusetts has developed expertise and a track record for conducting statistically rigorous pest management surveys. Surveys have been conducted for apple (*Clifton, 2005*), bean (*Clifton, 2004*), high bush blueberry (*Clifton, 2005*), pea and carrot (*Clifton, 2004*), brambles (*Clifton, 2007*), sweet corn (*Clifton, 2005*), and winter squash (*Clifton, 2004*) with an average response rate of fifty-eight percent. Natalia Clifton will develop the wine grape integrated pest management tactic questionnaire. Schloemann and Bartholomew will provide feedback which will be incorporated into the final version. New England wine grape grower mailing lists will be provided by Bartholomew (Connecticut), Koehler (Maine), and Schloemann (New England states). Clifton will manage the Dillman process, mailings, data entry and summary. Procedures for all of these steps are outlined in detail in the PRONewEngland Pest Management Network pest management tactic survey template (Koehler, 2007). These procedures are based on survey systems developed to insure unbiased sample populations, high return rates, and statistically valid results (Dillman, 2000).

Evaluation Plans

The wine grape survey will be conducted in fall 2010. The questionnaire, tabulated results, and executive summary responses will be made available through the PRONewEngland.org website.

Cooperation, Institutional Units and Key Personnel Involved

Natalia Clifton

- Wine grape IPM tactics survey: develop survey instrument, define mailing lists, and manage four-step Dillman mailings in compliance with the NEPMNet survey template.
- Data entry, analysis, results tables, and summary report for wine grape IPM tactics survey.

Candace L. Bartholomew

- Provide mailing list for Connecticut wine grape growers and review survey instrument per letter of support.

Glen Koehler

- Provide mailing list for Maine wine grape growers per letter of support.

Sonia Schloemann

- Provide mailing list for New England wine grape growers and assist in development in survey instrument per letter of support.

Literature Cited

Clifton, N. P. 2005. *New England Apple Pest Management Survey Results*. New England Pest Management Network, University of Massachusetts Amherst.

<http://www.pronewengland.org/INFO/PROpubs/Survey/AppleSurveyResultsTables.pdf>

Clifton, N. P. 2004. *New England Bean Pest Management Survey Summary*. New England Pest Management Network, University of Massachusetts Amherst.

<http://www.pronewengland.org/INFO/PROpubs/Survey/BeansSurveySummary.pdf>

Clifton, N. P. 2005. *New England High Bush Blueberry Pest Management Survey Results*. New England Pest Management Network, University of Massachusetts Amherst.

<http://www.pronewengland.org/INFO/PROpubs/Survey/BlueberrySurveyResults.pdf>

Clifton, N. P. 2004. *New England Pea and Carrot Pest Management Survey Summary*. New England Pest Management Network, University of Massachusetts Amherst.

<http://www.pronewengland.org/INFO/PROpubs/Survey/Peas&Carrots-SurveySummary.pdf>

Clifton, N. P. 2007. *New England Brambles Pest Management Survey Results*. New England Pest Management Network, University of Massachusetts Amherst.

<http://www.pronewengland.org/INFO/PROpubs/Survey/RaspberrySurveyResults2007.pdf>

Clifton, N. P. 2005. *New England Sweet Corn Pest Management Survey Results*. New England Pest Management Network, University of Massachusetts Amherst.

<http://www.pronewengland.org/INFO/PROpubs/Survey/SweetCornSurveyResultTables.pdf>

Clifton, N. P. 2004. *New England Winter Squash Pest Management Survey Results*. New England Pest Management Network, University of Massachusetts Amherst.
<http://www.pronewengland.org/INFO/PROpubs/Survey/WinterSquashSurveyResultsTables.pdf>

Koehler, G.W.; 2007. *Procedures and Template for IPM Tactics surveys*. New England Pest Management Network. <http://www.pronewengland.org/INFO/PROpubs/Survey/Template-Survey.pdf>

Dillman, D.A.; 2000. *Mail and Internet Surveys: The Tailored Design Method*. 2nd Edition; John Wiley Co., New York.