
Pest Management Tactic Surveys, Crop Profiles, and Strategic Plans

D2. Survey – Profile – Plan Literature Review, Previous Work, Related Experience

The pest management tactic survey format was not included in the original state network RFA in 2000. The New England Pest Management Network added that component as a necessary precursor for valid crop profiles and strategic plans. These are not the standard pesticide use survey. Through the use of a statistically validated protocol (Coli et al. 2001, Dillman 2000), the surveys are a research tool to discover stakeholder pest priorities, pest control tactic selection, user evaluation of efficacy for different options, degree and types of IPM implementation, and major influences on pest management decision making. In addition, the surveys provide basic census information on stakeholder population groups for IPM, Pesticide Safety Education, and other programs addressing pest management needs in the region. We find this information more detailed and realistic than the USDA agricultural statistical summaries which seem to have a bias toward over-counting acreages and numbers of commercial crop growers.

Crop profiles are a synopsis of pests and management options for a specified crop or other IPM setting (Burr 2000a). Crop profiles provide the foundation for a pest management strategic plan. In addition, the drafting of a crop profile can reveal and provide impetus for improving existing pest management guidelines. For IPM settings for which there is not a current, regionally-focused pest management guidelines publication, the crop profile can be a useful tool for the information it aggregates into a single document. Because the peach and pear pest management recommendation guide for New England has not been updated since 1997, the recently completed New England Peach and Pear Crop Profiles are now the most current and complete references for Extension recommendations on those crops in 2004.

Pest management strategic plans (PMSPs) are the culminating step in the sequence. A PMSP provides EPA and USDA with information needed to account for New England's unique needs in pesticide registration and other regulatory decisions (Burr 2000b). A PMSP also benefits producers and other IPM stakeholders through the guidance it provides for IPM Extension specialists and researchers. The PMSP does this by outlining pest management constraints, opportunities, research topics, and Extension delivery priorities. The PMSP also serves as a preliminary "emergency preparedness plan" by reviewing various contingencies such as the loss of major pesticide tools, arrival of new pesticide resistant pest strains or new imported pest species, or other significant regulatory or market developments that would impact pest management decisions.

Through the sequence of statistically rigorous Pest Management Tactic Surveys, leading to Crop Profiles and Pest Management Strategic Plans (PMSP), the New England Pest Management Network has documented current practices, challenges, contingencies and opportunities for nine high priority New England food crops. Reports completed in 2002-2003 were: apple crop profile, apple PMSP, peach survey, peach profile, pear survey, pear profile, tomato survey, peas-carrots survey, beans survey, winter squash survey.

Initiated in 2003 and due for completion in early 2004 are: highbush blueberry survey, peas profile, beans profile, carrots profile, pear PMSP, peach PMSP, tomato PMSP, and a winter squash PMSP.

In 2004 we will continue sequences begun in 2003 with a highbush blueberry crop profile and a strategic plan for peas, beans, and carrots. In 2004 we will begin new sequences with pest management tactic surveys for sweet corn (in cooperation with the Vegetable IPM Working Group who will complete the sweet corn profile and PMSP), and strawberries.

These crops were chosen using the criteria of number of producers, number of acres, economic value, pesticide reliance, and perceived exposure to impacts from the Food Quality Protection Act and other changes in pesticide regulation.

In 2005-2007, we will complete a strawberry profile and PMSP, and survey-profile-PMSP sequences for bell peppers and cole crops (broccoli, cabbage, cauliflower). In 2007 we will conduct a pest management tactic survey for caneberries (raspberry, blackberry).

In 2005 – 2007, we will extend the sequence beyond its food-crop roots to include School IPM (i.e. school buildings and grounds) and Landscape turf as a major pesticide use areas and emerging issues in New England. Furthermore, we will extend the sequence for School IPM by adding an action component. This will take the form of a regional publication to provide needed resources identified in the school IPM strategic plan, and a regional coordination/training meeting for New England school IPM implementers. These Year 2-4 activities are mentioned here because of their relation to the Year 1 activities covered in this proposal. Details on those objectives are not included because they occur after the funding period addressed by this proposal.

Year	Surveys	Profiles	Pest Management Strategic Plan
2004	Sweet corn, Strawberry	Highbush blueberry	Peas – Beans - Carrots
2005	Bell peppers, Landscape Turf, School IPM	Sweet corn, Strawberry, School IPM	Highbush blueberry
2006	Cole crops (broccoli, cabbage, cauliflower)	Bell peppers, Landscape Turf	Sweet corn, Strawberry, School IPM
2007		Cole crops	Bell peppers, Cole crops, Landscape Turf

E2. Survey – Profile - Plan Objectives

Project Goal 3. Provide accurate current information on pest management practices, constraints, needs and opportunities to EPA and other Federal regulatory agencies.

Objective 3a. Conduct a pest management tactic survey using the Dillman protocol for sweet corn in 2004, with representation from each New England state.

Objective 3b. Conduct a pest management tactic survey using the Dillman protocol for strawberry in 2004, with representation from each New England state.

(Surveys for caneberrries (raspberries and blackberries), cole crops, peppers, school buildings and grounds, and landscape turf will follow in Years 2 – 4).

Objective 3c. Create a Crop profile for Highbush blueberries in 2004 based on a survey conducted by the New England Pest Management Network in 2003.

(Crop profiles for cole crops, peppers, strawberries, school buildings and grounds, and landscape turf will follow in Years 2 – 4).

Objective 3d. Organize a Pest Management Strategic Plan (PMSP) meeting and create PMSP document for peas, carrots and beans in 2004.

(PMSPs for cole crops, highbush blueberries, peppers, school buildings and grounds, landscape turf, and strawberries will follow in Years 2 – 4).

F2. Survey – Profile - Plan Procedures

The New England Pest Management Network has established specific protocols for pest management tactic surveys, crop profiles, and pest management strategic plans (PMSP). These requirements supplement the USDA requirements (Burr 2000a, 2000b). Examples of surveys, crop profiles and PMSPs already completed by the New England Pest Management Network are available online at <http://pronewengland.org/Content/PROInfoSurvey.htm>

Procedures for objectives 3a,b (Pest management tactic surveys).

Natalia Clifton, Massachusetts state liaison, will conduct the sweet corn survey. William Lord, New Hampshire state liaison, will conduct the strawberry survey. Surveys will be done in accordance with the Dillman method (Dillman 2000) and the New England Pest Management Network survey protocol (attachment 9).

Natalia Clifton will assist with the strawberry survey by applying her experience with the Dillman to provide oversight and consultation for implementing the Dillman protocol. She will also be responsible for entering and summarizing survey responses.

The other state network project liaisons will assist survey authors by providing commodity mailing lists, and reviewing the survey questionnaire to see if it is appropriate for use in their state. Liaisons may use the expertise of other persons in their state to aid in that determination, but the state liaison is responsible for determining that the survey is suitable for their state. If changes are needed to make it suitable, it is incumbent on the state liaison to

identify those changes and to notify the person doing the survey. No surveys will be sent to the mailing list from a state until the state liaison has given approval. State liaisons will share draft survey forms with appropriate University and state government staff in their state to make them aware of the survey activity.

Procedures for objective 3c (Crop profiles).

Ann Hazelrigg, Vermont state liaison, assisted by Sarah Kingsley-Richards, will create the highbush blueberry crop profile. The procedures and final crop profile document will comply with USDA requirements (Burr 2000a) and the New England Pest Management Network crop profile protocol-template (attachment 10).

Other state liaisons will assist in creating the highbush blueberry crop profile by reviewing the draft version to check that it accurately represents their state. Liaisons may use the expertise of other persons in their state to aid in that determination, but the state liaison is responsible for determining that the crop profile is valid for their state. If changes are needed to make it valid, it is incumbent on the state liaison to identify those changes and to notify Ann Hazelrigg as the crop profile author. The highbush blueberry crop profile will not be submitted to the national database until it has been reviewed and accepted by each of the state liaisons.

Procedures for objective 3d (Pest management strategic plans).

Margaret Siligato, Rhode Island state liaison, will organize the peas-beans-carrots pest management strategic plan (PMSP) meeting and create the PMSP document. The procedures and final PMSP document will comply with USDA requirements (Burr 2000b) and the New England Pest Management Network PMSP protocol-template (attachment 11).

State liaisons will supply contact information and help enlist growers, industry representatives, Extension specialists, and other pertinent stakeholders as participants for the PMSP meeting. As with crop profiles, each state liaison is responsible for determining that the draft PMSP is valid for their state, or for identifying changes needed to make it valid, and notifying Margaret Siligato as the PMSP author. The peas-beans-carrots PMSP will not be submitted to the national database until it has been reviewed and accepted by each of the state liaisons.

G2. Survey – Profile - Plan Literature Cited

Brunner, J.F.; *Strategic IPM Plan for Western Apple Region*, 2000.

This document is available from the Washington State University Tree Fruit Research and Extension Center web site at <http://opus.tfrec.wsu.edu/reqstrat.html>

Burr, W.; *Instructions for Preparing Crop Profiles*, USDA Office of Pest Management Policy and Pesticide Impact and Assessment Program. 2000a

Available at <http://pestdata.ncsu.edu/cropprofiles/instructions.html>

Burr, W.; *Organizing A Pest Management Strategic Plan Meeting: A Check List*. USDA Office of Pest Management Policy and Pesticide Impact and Assessment Program. 2000b

Available at <http://Pestdata.Ncsu.Edu/Pmsp/Checklst.pdf>

Coli, W.M., Christie, D.R. Cooley, R.V. Hazzard, D.N. Ferro, T. Smith, S.G. Schloemann, And R. Szala; *Assessing Grower Adoption of Integrated Pest Management (IPM) Systems in the Northeastern U.S.A., and Identification of Future Research, Training, and Extension Needs*; Am. J. Alt. Agric., 2001.

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

H2. Probable Duration for Survey – Profile – Plan: 12 months for the products described in this proposal. This proposal covers Year 1 (2004) of a four year sequence.

12. Survey – Profile – Plan Evaluation Plans

OBJECTIVES	Performance Rating & Documentation
3a. Sweet corn pest management tactic survey	Implementation of Dillman and NEPMNet survey protocol (see attachment 9). Survey results summary published on the PRONewEngland website. Mailing list corrections sent to state liaisons.
3b. Strawberry pest management tactic survey	Implementation of Dillman and NEPMNet survey protocol (see attachment 9). Survey results summary published on the PRONewEngland website. Mailing list corrections sent to state liaisons.
3c. Highbush blueberry crop profile	Crop profile document conforms to USDA and NEPMNet crop profile protocol (see attachment 10). Acceptance of crop profile as valid by state liaisons in all six New England states. New England highbush blueberry crop profile accepted by USDA national crop profile database and linked to the PRONewEngland website.
3d. Peas – Beans – Carrots pest management strategic plan	Two-day Pest Management Strategic Plan (PMSP) meeting and document conform to USDA and NEPMNet protocol (see attachment 11). Acceptance of the strategic plan as valid by state liaisons in all six New England states. New England Peas – Beans – Carrot Pest Management Strategic Plan (PMSP) accepted by USDA national PMSP database and linked to the PRONewEngland website.

Timeline for Year 1 Survey – Profile – Plan Evaluation Plans
(timeline is contingent upon funding approved by April 1, 2004)

- April 30 – Sweet corn pest management tactic survey Dillman process initiated.
- August 30 – Strawberry pest management tactic survey Dillman process initiated.
- November 30 – Sweet corn pest management tactic survey summary completed.
 - Highbush blueberry crop profile completed and submitted to national database.
 - Peas, Beans, Carrots pest management strategic plan meeting held.
- December 31 – Strawberry pest management tactic survey summary completed.
 - Peas, Beans, Carrots pest management strategic plans completed and submitted to the national PMSP database.