

## **Guidance in Developing a Pest Management Strategic Plan August 15, 2007**

Pest Management Strategic Plans (PMSPs) are widely recognized as a conduit for communication from growers and other IPM practitioners to regulators and granting agencies. These documents give a realistic view of pest management issues and strategies used in the field and provide a forum to set meaningful research, regulatory, and educational priorities. Pest Management Strategic Plans (PMSPs) are developed by growers or other stakeholders to identify their pest management needs. Each plan has a state, region or national focus. The plans take a pest-by-pest approach to identifying the current management practices (chemical and non-chemical) and those under development. Plans also state priorities for research, regulatory activity, and education/training programs needed for transition to alternative pest management practices.

Although the IPM Centers have sponsored the majority of completed PMSPs to date, other agencies and groups such as EPA and grower organizations have also funded the development of these documents. The involvement of multiple organizations and facilitators makes it necessary for authors to follow a system that will ensure consistency in the content and format of all PMSPs. Completed PMSPs are hosted on the National IPM Centers website at <http://www.ipmcenters.org>.

Numerous benefits may result from completing a PMSP.

- Regulators receive information on actual pest management practices and therefore will be less likely to use default assumptions in risk assessments.
- Regulators are provided information on important uses for special concerns (e.g., resistance management, geographical concerns).
- Stakeholders identify appropriate contact people to facilitate future communication.
- Grant seekers acquire documentation of stakeholder priority needs to support funding requests.
- Growers have available documentation to support Section 18 Emergency Exemption and Section 24(c) Special Local Needs requests.

- Participants gain insight in emerging pest management issues toward prioritizing their research, education or other programs they sponsor.
- Commodity representatives get a document that can be used to convey their needs to policy makers.
- Support for IR-4 Food Use Workshop research prioritization is provided.
- Registrants may use PMSPs to identify niche markets for development of new products.
- Workshops provide a forum to discuss reduced-risk management options.
- PMSPs foster multi-state and multi-regional collaboration resulting in less duplication of efforts and more judicious use of limited dollars.
- PMSPs provide readily available information for interested members of the general public, students and others.

The IPM Centers serve as the lead organization to aid in the proper completion, review, approval and web publication of PMSPs. **Organizers of PMSPs need to contact their region's IPM Center early in the PMSP development process.** Center contacts can (1) help to identify stakeholders for PMSP work groups, (2) assist with the draft document structure, (3) facilitate meetings, (4) check the final draft to assure it meets the national content standards, (5) assist with funding, in some cases, and (6) forward the finished PMSP to the national database. Although steps 1 - 5 can be accomplished without IPM Center assistance, the final PMSP must go through the appropriate regional IPM Center office before it is forwarded for public posting. The guidance and involvement of the IPM Centers will help to build more useful and effective PMSP documents.

The following pages contain steps for developing a PMSP. Not all steps are necessary for each PMSP written. The checklist identifies leadership needs, necessary contacts, and logistics of a PMSP.

These guidelines will assist in completing a PMSP. There can be different means to completing a final document. The list of required elements (Step 14) must be in each completed PMSP prior to posting on the National IPM Centers web site.

## **STEPS TO DEVELOP A PEST MANAGEMENT STRATEGIC PLAN**

### **STEP 1: SELECTING A COMMODITY/SETTING**

Commodities (or other settings such as rangeland, rights-of-way, urban and recreational areas) at risk of losing pest management tools or with critical pest management needs are good candidates. It is easier to work with one commodity/setting at a time. For example, even closely related commodities can have a significantly different pest complex and subsequent control measures. Use the following checklist to help determine which commodity is a good candidate for a PMSP.

- Work with commodity organizations or other groups, if they are established, that have an interest in developing a PMSP.
- Use crop profiles, if available for the commodity and state(s).
- Use production manuals, if available.
- Determine geographic area to be covered (state, regional, national).

### **STEP 2: CONTACT YOUR REGIONAL IPM CENTER FOR ASSISTANCE**

- Northeast contact:
  - Carrie Koplinka-Loehr, [ckk3@cornell.edu](mailto:ckk3@cornell.edu)
  - John Ayers, [jea@psu.edu](mailto:jea@psu.edu)
- North Central contact:
  - Lynnae Jess, [jess@msu.edu](mailto:jess@msu.edu)
  - Larry Olsen, [olsenl@msu.edu](mailto:olsenl@msu.edu)
- Southern contact:
  - Steve Toth, [Steve\\_Toth@ncsu.edu](mailto:Steve_Toth@ncsu.edu)
  - Jim VanKirk, [jim\\_vankirk@ncsu.edu](mailto:jim_vankirk@ncsu.edu)
- Western contact:
  - Linda Herbst, [lherbst@ucdavis.edu](mailto:lherbst@ucdavis.edu)
  - Rick Melnicoe, [rsmelnicoe@ucdavis.edu](mailto:rsmelnicoe@ucdavis.edu)

### **STEP 3: SELECTING A LEAD PERSON**

This person is the point of contact with the regional IPM Center, responsible for checklist items and deadlines. He/she does not necessarily write the PMSP. He or she should be familiar with the commodity and be willing to spend 150-200 hours over 3-6 months on the project.

- Find someone who has connections with the industry and/or growers and researchers

### **STEP 4: SELECT MEETING FACILITATOR**

The facilitator does not need to be intimately involved with the topic area. He/she should have experience facilitating diverse groups of people. Guidance on this topic can be provided by the regional IPM Center.

### **STEP 5: FUNDING ISSUES**

Costs can vary depending upon complexity of the commodity(ies), geographic region, and number of participants involved in the workshop. The regional IPM Center has experience with budgeting for PMSPs.

- Determine cost sharing with workshop participants (e.g., commodity group(s), growers, etc.).
- Develop a budget including support for a facilitator (if paid), document preparation, travel, lodging, meals, meeting facility, etc.
- Submit proposals to appropriate funding sources such as regional IPM Centers, EPA regions, commodity organizations and other grant programs

### **STEP 6: DEVELOP THE WORK GROUP**

The regional IPM Center can help identify and contact participants. A good workgroup size is 15-25 members. The suggested invitees may include participants from each of the groups below. The diversity of the workgroup should be appropriate to address different growing regions and pest management issues. Some of the state and federal agency invitees will attend as observers to gain a better understanding of the issues facing the industry. Additionally, they will be able to describe how information in the PMSP is used by their agencies and its importance in making informed regulatory decisions.

- Regional Integrated Pest Management Center/USDA personnel
- Grower Association/Commodity/Industry group(s) representatives
- Growers representing:
  - Both fresh and processing markets
  - Variations in soil types within the area
  - Different growing regions within the state or region
  - Both large and small farms
  - Organic and conventional production systems
- Crop consultants, pest control advisors, farm advisors
- Land-grant researchers/Extension specialists, may include (where appropriate):
  - Entomologists
  - Plant pathologists and nematologists
  - Weed scientists
  - Agronomists and horticulturalists, ag economists (if available)
  - IPM personnel
  - Commodity storage experts
- Commodity processors/packers
- Non agricultural settings should include appropriate experts
- State lead agency or Agriculture Department from participating states
- EPA personnel, include:
  - FQPA Strategic Ag Initiative person (Contact Tom Brennan, [Brennan.Thomas@epa.gov](mailto:Brennan.Thomas@epa.gov) for regional representatives)
  - Biological and Economic Analysis Division, Nikhil Mallampalli, [Mallampalli.Nikhil@epa.gov](mailto:Mallampalli.Nikhil@epa.gov) or Jonathan Becker, [Becker.Jonathan@epa.gov](mailto:Becker.Jonathan@epa.gov)
  - Pesticide Environmental Stewardship Program (PESP) staff, [Brennan.Thomas@epa.gov](mailto:Brennan.Thomas@epa.gov)
  - Minor Crop Officer, Pat Cimino, [Cimino.Pat@epa.gov](mailto:Cimino.Pat@epa.gov)
- IR-4 representatives:
  - State
  - Regional
  - National (for multi-regional PMSPs, Jerry Baron, [jbaron@aesop.rutgers.edu](mailto:jbaron@aesop.rutgers.edu))

Some of the suggested attendees below might be invited as observers.

- Specific observers, include:
  - USDA – OPMP, CSREES, NRCS
  - Other commodity representatives within the state/region that are interested in writing a PMSP, such as Farm Bureau
  - Pesticide registrants can be very helpful with technical product information. It is hard to get them to stay for the whole workshop, but they may be willing to help review the draft, and add information
  - Environmental organizations interested in pest management (e.g., World Wildlife Fund, National Resources Defense Council, National Coalition Against Pesticides)

## **STEP 7: PLANNING THE MEETING**

- Determine when to hold the meeting
  - Plan around stakeholders' schedule
- Choose a convenient meeting location (Note: if the meeting is within driving distance, some participants may not return for the second day.)
  - Hotel (Ask for group rates)
  - Conference center
  - University, including Extension offices
  - Other, such as commodity organization meeting room
- Set the final meeting agenda, times, location and hotel information.
- Determine meeting room configuration.
  - A U-shaped or big square arrangement of tables is strongly advised
  - Avoid a “head” table or classroom situation
- Arrange for meals and refreshments to be provided to make the best use of limited time.
  - Water on tables during meeting
  - Lunch
  - Snacks
- Apply for Continuing Education Units (e.g., pesticide recertification, Pest Control Advisor, Certified Crop Advisor) a minimum of 45 days in advance.

## STEP 8: PRE-MEETING PREPARATIONS

- The following information should be provided prior to the work group meeting. It can be advantageous to develop a web site for the meeting with the following information.
  - Meeting dates, times and hotel information to get on calendars.
  - List of participants: affiliations, phone numbers, E-mail addresses, etc.
  - Links to crop profiles, when possible.
  - IR-4 commodity lists from Regional IR-4 Field Coordinator for reference on current IR-4 projects and to aid in priority setting. (North Central: Satoru Miyazaki, [ncrir4@msu.edu](mailto:ncrir4@msu.edu); Northeast: Edith Lurvey, [ell10@cornell.edu](mailto:ell10@cornell.edu); Southern: Charles Meister, [Cmeister@mail.ifas.ufl.edu](mailto:Cmeister@mail.ifas.ufl.edu); West: Rebecca Sisco, [rsisco@ucdavis.edu](mailto:rsisco@ucdavis.edu) )
    - Food use program data, [http://ir4.rutgers.edu/FoodUse/Food\\_Use.cfm](http://ir4.rutgers.edu/FoodUse/Food_Use.cfm)
    - New pest control technologies, (<http://ir4.rutgers.edu/FoodUse/newchem.cfm>)
- Write initial draft Pest Management Strategic Plan or matrix (crop stages, pests, control measures), without priorities that will be decided by the work group using:
  - Crop profiles, <http://www.ipmcenters.org/CropProfiles/index.cfm>
  - State IPM manuals and guidelines
  - IR-4 informationFor an example of a completed PMSP <http://www.ipmcenters.org/pmsp/pdf/PNWPotatoPMSP.pdf>
- Review the draft materials, with a couple of university extension specialists before sending out to the work group.
  - Matrix
  - Draft efficacy table template (<http://www.ipmcenters.org/pmsp/EfficacyTables.pdf>) (<http://www.ipmcenters.org/pmsp/EfficacyTables.doc>)
  - Draft toxicity to beneficials table template (optional as long as narrative covers effects to beneficials) (<http://www.ipmcenters.org/pmsp/beneficialsRatings.pdf>) (<http://www.ipmcenters.org/pmsp/beneficialsRatings.doc>)

- Draft worker activity timeline template  
(<http://www.ipmcenters.org/pmsp/WorkerActivity.pdf>)  
(<http://www.ipmcenters.org/pmsp/WorkerActivity.doc>)
- Draft pest timeline template  
(<http://www.ipmcenters.org/pmsp/ExamplePestOccurrence.pdf>)  
(<http://www.ipmcenters.org/pmsp/ExamplePestOccurrence.doc>)
- Regional tables, where appropriate for the above

### **STEP 9: TWO WEEKS PRIOR TO THE MEETING:**

- A personal phone call to work group members is strongly recommended to follow up and be sure they are still planning to attend, remind them of what they need to bring, confirm they have hotel reservations, etc. The “personal touch” helps enhance participation and ensures that the appropriate people attend.
- Send Draft materials, including draft tables completed by experts

### **STEP 10: ARRANGE FOR EQUIPMENT NEEDS**

- Large name placards and name tags.
- Computer(s).
- Computer projector.
- Projector screen.
- Extension cords.
- Note pads for all participants.
- Pens for all participants.
- Flip charts with self-adhesive pages or with contractors’ tape (easy removal, no wall damage).
- Magic markers that won’t bleed through paper.
- If feasible and cost effective, an Internet connection may be helpful
- Disks/CDs to save backup document

### **STEP 11: SUPPORTING DOCUMENTATION TO BRING TO THE MEETING:**

- Copies of the working draft PMSP, including comments from those who could not attend the workshop

- Crop reference materials, including production manuals, label books, etc.
- IR-4 lists of:
  - Food use program data
  - New pest control technologies
- EPA list of reduced-risk pesticides.
- Continuing Education Units sign-in sheets.

## **STEP 12: THE MEETING AGENDA**

- Introductions
  - Opening comments by industry representative and/or whoever is leading the meeting
  - Brief comments from either Regional IPM Center staff or USDA
  - Brief EPA comments
  - Introduction of meeting participants
  - Facilitator sets meeting guidelines and agenda
- General discussion of crop and pests.
  - Define growing regions
  - Description of crop and crop rotation practices
  - Definition of crop stages and time of occurrence
  - Begin to discuss crop stages and the pests that drive pest management tactics and worker activities
  - Identify any worker activities that may occur during the specific crop stage
    - For each pest
      - Brief description of pest's importance
        - When occurs
        - When treatment takes place
      - Discuss control measures that are used and recommended by consultants, advisors, or extension personnel
      - Break down into cultural, biological, and chemical
      - Identify pros and cons for pest management options used including efficacy, effects on beneficial organisms and pollinators
      - Highlight general IPM and or resistance management issues

- Identify environmental issues (water and air quality, endangered species, etc.)
  - Discuss state/local or processor pesticide restrictions or limitations, export issues, etc
  - Identify labeled Restricted Entry Intervals (REI) and Pre- Harvest Intervals (PHI) and grower needs
  - Highlight any regional differences (including in tables)
  - Identify critical issues for research, regulatory, and education under pest category (insects, diseases, weeds, etc.)
- Overall priority setting.
- Based on all previous work, identify top 5-8 critical needs for research, regulatory, and education (suggest smaller random groups for this activity)
  - Allow sufficient time to identify top 5-8 critical needs of/from the stakeholders
  - Smaller groups can brainstorm, then limited voting to narrow to five
  - Maximize input from stakeholders
  - Build group consensus and prioritize the list to reflect stakeholder needs
- Wrap up meeting
- Set schedule and process for writing and reviewing document
  - Thank meeting attendees for their participation
  - Remind people who have assignments to complete them in the agreed-upon time frame
  - Identify additional people, other than work group participants, to review the document, if necessary
  - Make sure appropriate stakeholders have reviewed document

### **STEP 13: POST MEETING FOLLOW-UP**

- Write executive summary
- Keep it short (no more than 5 pages)
  - Use bullets to emphasize points
  - One paragraph on commodity/setting background

- One paragraph on commodity/setting uniqueness and issues:
    - Resistance and IPM issues
    - Secondary pest concerns
    - New pests
    - Trade issues (export and import)
    - Localized regulatory restrictions
  - One paragraph highlighting the identified top priorities for the industry that may include possible solutions to these critical needs:
    - Research
    - Regulatory
    - Education/training
- Make necessary changes to draft document to include comments from the meeting and from others who could not attend the workshop
- Send final draft to the work group for final review, corrections and approval
- Include list of contact people if anyone has questions about the document

#### **STEP 14: MINIMUM REQUIRED ELEMENTS**

- Title and date of completion.
- List of participants and affiliations (no need for phone numbers).
- Contact person(s) – Name, address, telephone, e-mail.
- Table of Contents.
- Executive Summary (include process statement and Critical Needs).
- General description of commodity/setting and pests, acreage, value, production, etc.
- Control measures (pros and cons of each).
- Crop Stage/Worker Activity/Pest occurrence timeline(s). Separate or combined.
- Efficacy tables.
- Toxicity to beneficials table (optional as long as there are discussions included in narrative).
- Acknowledgements.
- References.

## **STEP 15: FINAL STEPS**

- Forward completed PMSP to Regional IPM Center for compliance with national PMSP standards to be included on National web site. The guidance and involvement of the IPM Centers will help to build more useful and effective PMSP documents.
- Advise work group when posted on the Internet.