



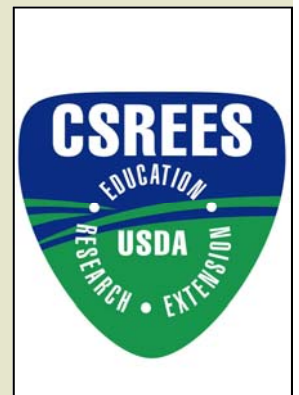
# **Western Integrated Pest Management Center Mid-Term Report**

## **Collaborations Projects**

## **Impacts on Research, Extension and Education Future Plans**

**From Self-Study Document Prepared for  
Regional IPM Centers Program Review**

**February 14-17, 2006**



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# About This Report

*Regional Integrated Pest Management Centers, through the CSREES 406 Integrated Programs, are increasing collaboration and coordination among institutions and individuals involved with IPM research, education and implementation. Centers have strengthened the federal, regional, and state partnerships in service to stakeholders in agriculture, urban and natural resource arenas.*

When CSREES provided funding for the four Regional IPM Centers in fiscal year 2003, it required that a mid-term review be conducted to “assess the Center’s configuration, performance, and engagement with other programs.” CSREES formed an external review team to assess the performance of the IPM Centers during the first two years of the funding cycle (fiscal years 2003 and 2004). All IPM Centers were asked to develop a self-study document, in a format designated by CSREES. This self-study, which was provided to the review team, focuses on the structure, programmatic aspects, impacts/outcomes, challenges and future plans of the Western IPM Center.

This report provides key examples of how the Western IPM Center has improved coordination, communication and collaborations among university scientists, growers, NGOs, regulators, other USDA regional programs and federal agencies, and stakeholders.

The mid-term review occurred in Washington D.C. on February 14-17, 2006. The IPM Centers have not received the written recommendations from the review panel at the time of this report. However, in the verbal exit interviews conducted by the review panel, the Western IPM Center received very positive comments on our efforts and some recommendations for the future. We are already following up on the recommendations.

We are presenting this report to, highlight some of the successes, opportunities available through the Center, and provide the structure of the WIPMC.

For more information about the Western IPM Center, please contact Rick Melnicoe, Director, WIPMC at [rsmelnicoe@ucdavis.edu](mailto:rsmelnicoe@ucdavis.edu) , 530-754-8378, Dr. Tom Holtzer, Co-Director, WIPMC at [Thomas.Holtzer@ColoState.edu](mailto:Thomas.Holtzer@ColoState.edu) , 970-491-5843, Linda Herbst, Associate Director, WIPMC at [llherbst@ucdavis.edu](mailto:llherbst@ucdavis.edu), 530-752-7010.

<http://wripmc.org>



## Organization

### Staff

The Western Integrated Pest Management Center (WIPMC) is organized into five key structures: the Center staff, a Steering Committee, an Advisory Committee, work groups, and Information Network participants.

#### **Director** (0.75 FTE)

Rick Melnicoe, University of California, Davis

Directs the WIPMC; identifies regional and national IPM objectives; formulates strategies to address IPM issues; manages a multi-million dollar USDA contract; administers subcontracts to western region programs; coordinates crop profiles and Pest Management Strategic Plans in the west; provides coordination and collaboration with other pest management programs, commodity organizations, state and federal agencies and other stakeholders; provides expertise on western region and California pest management issues to USDA and USEPA; serves on state, regional and national committees; provides guidance to western states pest managers; reviews USDA and EPA documents; facilitates meetings for Pest Management Strategic Plans (PMSPs) with growers, extension, commodity organizations, USEPA and USDA.

#### **Co-Director** (0.05 FTE)

Dr. Thomas Holtzer, Colorado State University

Maintains liaison with the WERA-69 as the administrative advisor; member of the Advisory, Steering and National IPM Coordinating Committees; serves on WIPMC committees and subcommittees providing regional and national guidance to the IPM Centers.

#### **Associate Director** (1.0 FTE)

Linda Herbst, University of California, Davis

Directs certain aspects of the WIPMC; serves as the grant manager for a \$1.8M competitive grants program; identifies regional and national IPM objectives; formulates strategies to address IPM issues; administers subcontracts to western state programs; coordinates crop profiles and Pest Management Strategic Plans in the west; provides coordination and collaboration with other pest management programs, commodity organizations, state and federal agencies and other agricultural stakeholders; serves on state, regional and national committees; serves as the Center liaison to funded WIPMC work groups; facilitates meetings for Pest Management Strategic Plans with growers, extension, commodity organizations, USEPA and USDA.



**Western Region IPM Panel Manager**  
(0.084 FTE)

Dr. Frank Zalom, University of California,  
Davis

Serves as the grant panel manager for the Western Region IPM grant program. As the panel manager for this competitive grant program, Dr. Zalom assists Center Administration in development of the Request for Applications, selects the technical panel review members, assists with the selection of relevancy panel members and chairs the relevancy review panel conference call, acknowledges receipt of proposals, chairs the technical review panel meeting, notifies successful applicants of the WIPMC recommendations for funding to CSREES and prepares the details regarding funding recommendations for CSREES.

**Pacific Northwest (PNW) Comment Coordinator** (0.58 FTE)

Jane Thomas, Washington State University

The Comment Coordinator interacts with Information System contacts from the PNW Work Group states (Washington, Alaska, Oregon, Montana, Idaho, Montana and Utah) to build and lead a network of individuals or groups with the technical expertise and willingness to comment on pesticide issues related to coalition states' interests. An electronic tracking and reporting system for work activities was created and is maintained by the PNW Coordinator.



**American Pacific Islands (API) Comment Coordinator** (0.25 FTE)

Cathy Tarutani, University of Hawaii

The API includes the following states and territories: Hawai`i, Guam, the Northern Mariana Islands, American Samoa, the Federated States of Micronesia and the Republics of Palau and the Marshall Islands. Responsibilities of this position are to contact pertinent stakeholders within the API about pending regulatory actions on pesticides; collect responses from stakeholders and submit them to the requesting agency (e.g., USDA, EPA); work with and keep the WIPMC apprised of activities; cooperate with other Regional Comment Coordinators within the Western Region.

**Pest Management Strategic Plan (PMSP) Coordinator** (0.50 FTE)

Joe DeFrancesco, Oregon State University

The PMSP Coordinator seeks opportunities for development of Regional PMSPs by contacting IPM coordinators, pesticide coordinators, state extension specialists, commodity groups and others to review opportunities for PMSPs in WA, OR, ID, UT, AK and MT. The Coordinator updates crop profiles and PMSPs as time permits. He takes a leadership role in the preparation,

development and completion of Pest Management Strategic Plans. He coordinates and serves as the facilitator for PMSP workshops. He serves as a liaison with commodity representatives regarding information or data requests from USDA/EPA and provides guidance and advice to personnel at land-grant universities concerning research priorities for crops grown in the Pacific Northwest.

**Pest Management Strategic Plan Research Assistant (0.25 FTE)**

Lisa Downey, University of Idaho

The PMSP Research Assistant collects data and prepares drafts of PMSP documents. This includes preparation of a preliminary rough draft (following the national and regional approved template) prior to the PMSP workshop; acting as a recorder at the workshops; coordinating with extension specialists and research faculty regarding background data for PMSP draft and final document preparation; submission of final document to PMSP project leader for review and final editing; submission of final PMSP document to WIPMC staff for inclusion on the National IPM Center website.

**Pest Management Strategic Plan Editor (0.25 FTE)**

Sally O'Neal Coates, Washington State University

The editor performs necessary reviews on each of the PMSP documents forwarded to her by the PMSP Coordinator or Research Assistant. The editor may also assist on-site with meeting arrangements and serving as recorder at the PMSP workshop. Copies of the final documents are forwarded to the WIPMC Director/Associate Director and made public on the <http://www.ipmcenters.org> website.

**WIPMC Work Groups**

Work groups are self-establishing multi-state collaborations formed to address information, resource, and research needs in region-wide or broad area categories including: minor crops, major crops, non-crop areas, IPM metrics and/or impact assessments, urban IPM, cropping systems, geographical, school IPM and other issues. These work groups must enhance communication and collaborations within the region for the IPM topic area addressed by the work group. A work group could also coordinate efforts to develop proposals for funding to address critical issues within the West. Work groups are funded for one to two years.



**WIPMC Information Networks**

Information Networks are the state, multi-state and/or sub-regional links in the overall western IPM information system. They provide a two-way information conduit between federal and state regulatory offices and those who are impacted by the regulations. Each Information Network participant is expected, at a minimum, to serve as a resource for information about the importance of pesticides and other pest management tactics in local production systems covered by the network; develop a network that can respond to information

requests from USDA, EPA and others within a short time frame (1 day to 2 weeks); collaborate and/or coordinate with a diverse group of stakeholders, including extension IPM coordinators, to identify critical/emerging issues; maintain a web site for the network; and aid in identification of appropriate individuals to address IPM tactics use surveys, crop profiles and Pest Management Strategic Plans (PMSPs).

### **Steering Committee**

The Steering Committee (a subset of the Advisory Committee, below) is the policy-setting body of the WIPMC. It is responsible for gathering input from stakeholders, recommending the Center budget allocations, determining broad policy goals and priorities, reviewing draft RFAs and directing Center staff in timely and effective Center management. Steering Committee members are ineligible for WIPMC funding. Steering Committee membership is indicated in Appendix 1.



### **Advisory Committee.**

The WIPMC Advisory Committee consists of a wide range of stakeholders and provides broad vision and guidance to the Steering Committee and Center staff. The Advisory Committee is a key link for the Center to stakeholder needs and priorities for IPM programs. Membership of the Advisory Committee is shown in Appendix 1.

### **The role of Surveys, Pest Management Strategic Plans, Regional Symposiums, Information Networks, IPM Coordinators and the WIPMC Advisory and Steering**

### **Committees in Identifying and Prioritizing IPM**

Program priorities for the Western IPM Center (WIPMC) are established using a broad range of mechanisms, all of which rely heavily on stakeholder input. These include surveys; meetings of the Advisory Committee, Steering Committee, and western region IPM coordinating committee (WERA-69); and critical needs identified in Pest Management Strategic Plans (PMSPs). Priorities have also been identified at each of two Regional IPM Center Symposiums, by the Information Networks, by work groups and via other interactions with stakeholders. The priorities identified have been used in development of WIPMC RFAs, which include Western Region IPM Grants Program, Pest Management Alternatives Program and WIPMC funded competitive grant programs.

### **Surveys**

Several surveys were undertaken by Information Network participants within the western region to determine IPM priorities. The surveys, conducted by a variety of methods, all requested that interested groups submit suggestions for pest management priorities for possible inclusion in calls for proposals to be released in 2004 and 2005. The surveys were clear in informing stakeholders that the WIPMC has funding available to address critical and/or emerging issues relating to pest management in agriculture, urban and natural systems. Evidence of stakeholder need of priorities is required in order for them to be forwarded to the Advisory Committee. Stakeholder need can be evidenced through PMSPs, work groups, meetings or other documented means.



### **Pest Management Strategic Plans**

The WIPMC has been involved in supporting the development of Pest Management Strategic Plans since 1999. The process has evolved and PMSPs continue to be valuable documents for growers/commodity groups, USDA, USEPA and others in evaluating current crop management practices and pest management tools. 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 for agricultural producers and allied professionals to set meaningful research, regulatory, and educational priorities. PMSPs are developed by growers (conventional and organic), university scientists, commodity organizations, crop consultants and other stakeholders to identify the pest management needs and priorities of a particular commodity. Each plan focuses on commodity production in a particular state, region or the nation. The plans take a pest-by-pest (and generally seasonal) 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. The WIPMC

serves as the clearinghouse for all regional PMSPs and reviews the documents for compliance to the National PMSP Guideline found at the National IPM Center web site (<http://www.ipmcenters.org>). Once the PMSP has been approved it is placed on the national web site.

The Western region has completed 42 PMSPs for crops including alfalfa seed, almond, avocado, banana, barley, bean (snap), blackberry, blueberry, caneberry, carrot, celery, cherry, chickpea, clover seed, citrus, cotton, cranberry, grape (table and wine), kiwifruit, lentil, lettuce, melon, mint, nectarine, olive, onion, peach, pear, pea (dry), pepper, plum, potato, prune, raspberry, strawberry, sugarbeet, tomato (fresh market), watercress and wheat. The PMSP process has been successful in bringing together stakeholders and research and extension personnel to assess and identify critical needs for pest management. Many of the western region's PMSPs are multi-state or multi-regional. The information gleaned has been utilized in the development of regional, national and state requests for proposals in pest management programs. The completed PMSPs provide a commodity with a proactive pest management plan based on sound science, current information, professional knowledge and practical experience. The priorities identified in PMSPs are reviewed annually for inclusion in the WIPMC requests for proposals (RFPs).





## Regional IPM Symposium

The Western IPM Center sponsored a regional symposium entitled *Water, Wildlife and Pesticides in the West: Pest Management's Contribution to Solving Environmental Problems*. The format of this symposium included plenary sessions, breakouts and poster sessions. The agenda involved presentations followed by breakout sessions. The breakout sessions were facilitated by the speakers to allow for detailed discussions of topics brought forth during the presentations. It was a goal of the planning committee to develop an agenda that would draw stakeholders from non-traditional avenues. The breakout sessions gave stakeholders the opportunity to help identify research and extension priorities in the West. These priorities will be reflected in calls for proposals and other activities of the WIPMC. Many issues and concerns were identified during the breakout sessions. The proceedings for the symposium were provided to each participant; it included an addendum highlighting the priorities and issues identified during the breakout sessions.



## IPM Coordinators

Statewide IPM Coordinators in the West have several different avenues for

participation in the identification of IPM priorities. They were sent a survey asking for their input into possible IPM priorities. Input on priorities was sought during the WERA-69 annual meeting. Also, three states IPM Coordinators are members of the WIPMC Advisory Committee and participate in the final priority recommendations submitted to the Steering Committee.

## Information Networks

The WIPMC Information Network participants provide input into the priority-setting process in several different ways. They are in constant contact with stakeholders and relay information to WIPMC. They participated in surveys both by conducting them and responding to them after getting stakeholder input. Many are active members of current WIPMC work groups and as such are involved in developing work group priorities. Many take the lead in developing PMSPs and communicate and follow-up on the stakeholder-identified priorities (e.g., “critical needs”) included in individual PMSPs.

## The Advisory and Steering Committees

The Advisory Committee and the Steering Committee are key links for the Center to stakeholder needs and priorities for IPM programs. At our first Committee meeting in 2003, we held a facilitated session to develop guidelines for our Advisory Committee representation and tenure. We have continued to solicit new representatives and replace representatives who have rotated off. Over the past two years, we have had nearly 100% attendance at our meetings, which has strengthened our stakeholder base. The members bring their constituents’ issues forth and relay information on

WIPMC activities back to their colleagues as well as update other Advisory Committee members.

A compilation of all the submitted critical and/or emerging issues is presented to our Advisory Committee annually for their recommendations to the Steering Committee regarding priorities to include in our Center RFAs. The WIPMC Advisory and Steering Committees meet each year to identify critical pest management issues in the west. The Steering Committee makes the final recommendations for inclusion of priorities in RFAs.

### Impacts – Outcomes of our Priority Setting Process

- The WIPMC has instituted a relevancy review for all proposals submitted to the Western Region IPM grants and the Pest Management Alternatives programs.
- Projects that are funded with WIPMC competitive grant programs are relevant to stakeholder needs in the West.
- Because of our stakeholder priority setting process the WIPMC requires proposals to provide evidence of “stakeholder identified need.” This helps to insure that the limited funds available are expended where the stakeholders perceive the need.
- Having a broad pool of stakeholders allows the WIPMC to focus the competitive grant program into areas that include agriculture but also urban and natural settings such as recreational sites.



### Challenges in Identifying and Prioritizing IPM

- Due to the complexity of agriculture, as well as urbanization and natural resources, it is difficult to address all areas or even be aware of all issues across such a large and diverse geographic area.
- One of the biggest challenges has always been to provide priorities in the RFA that are broad enough to not be considered prescriptive and yet descriptive enough to address IPM issues relevant to the West and stakeholder-identified needs.
- Getting responses from enough people to be confident we have representative stakeholder input is a challenge.

### Plans for the Future

- Continue to seek a wide variety of stakeholder input for priorities.
- Seek additional urban and natural settings partnerships.
- Four additional PMSP workshops have been held in the West beyond those reported as finished. The resulting documents (Rangeland Cattle, Sweet Cherry, Macadamia Nut, and Papaya) are at various stages of completion.

- Workshops for updates of the Pulse Crop (dry pea, chickpea, lentil) and Potato PMSPs were conducted in January and February 2006.
- Workshops for an Organic Potato and Forage Crop PMSPs were conducted in February 2006.
- WIPMC will continue to develop stakeholder-driven priorities that reflect needs in West.

### **The Role of Work Groups, Information Networks, Funded Projects and PMSPs in addressing Identified WIPMC Priorities**

**Mission Statement:** *The Western Integrated Pest Management Center will work with stakeholders to create collaborative relationships that identify and address critical pest management needs that are responsive to economic, environmental, and human health and safety concerns.*

This Mission Statement epitomizes the Center's commitment to USDA's National IPM Roadmap. The Roadmap lists three goals for the National IPM Program: (1) Improve economic benefits related to the adoption of IPM practices, (2) Reduce potential human health risks from pests and the use of IPM practices, and (3) Minimize adverse environmental effects from pests and the use of IPM practices. The WIPMC addresses these goals through work groups, competitively funded projects, Information Networks and special projects.

### **Work Groups**

The WIPMC releases an annual call for proposals for self-establishing multi-state work groups to address information, resource and research needs in region-wide or broad area categories including: minor crops, major crops, non-crop areas, IPM metrics and/or impact assessments, urban

IPM, cropping systems, geographical, school IPM and other issues. Each work group must enhance communication and collaborations within the region for the IPM topic area they address. A work group could also coordinate efforts to develop proposals for funding or policies necessary to address critical issues within the West. Work groups can be funded for up to two years.



### **Information Networks**

Information Networks within the WIPMC are funded competitively in response to an annual RFA for one year at a time.

Each Information Network in the WIPMC is comprised of many people working on a variety of issues. Their main functions are to serve as resources for information about the importance of pesticides and other pest management tactics in local production systems, urban settings and natural areas covered by the network; to collaborate and/or coordinate with a diverse group of stakeholders including Extension IPM coordinators; to identify critical issues; and to aid in identification of appropriate individuals to participate in IPM tactics use surveys, crop profiles and Pest Management Strategic Plans (PMSPs).

The Networks are involved in many activities directly related to the goals of the WIPMC. They are members of work groups

and PMSP teams (often organizing the workshops) and they participate in peripheral programs such as IR-4, Water Quality, NRCS, Sustainable Agriculture and many others. This involvement provides avenues for the WIPMC to hear, understand and address stakeholder needs. Follow-up activities from PMSPs have resulted in several research projects, IPM manuals, and pesticide registrations, and have improved IPM in many crops.

Responses to information requests are coordinated through the Comment Coordinators; however the Information Networks provide the raw information and in some cases reply directly to USDA and USEPA. There are many successes associated with these replies from added worker protection to retained pesticide uses for minor crops.

### **Other Competitively Funded Projects**

The WIPMC grant projects undertake tasks that reflect the goals of the Center. The projects serve as a focal point for interactive communication; involve stakeholders in identifying needs and priorities for IPM in serving agriculture, food and natural resource systems; facilitate the development of knowledge, information, technology, communication and education to enhance IPM for the benefit of regional stakeholders and the environment; promote interdisciplinary and multi-organizational collaborations; facilitate relationships with multiple government agencies; promote collaboration to minimize duplication of effort; and/or organize responses to emerging regional issues. Solicitations for these projects include the Critical Issues RFA, the Western IPM Issues RFA, the ongoing Special Issues call for proposal (limited to \$5,000), and the Western IPM Grant Program RFA. For this report we

have provided general categories and provided a table (Appendix 2) that lists all funded competitive projects.

***Outreach & Communication.*** This category of projects is pivotal to the accomplishment of several of our goals but is particularly effective in helping the Center facilitate the development of knowledge, information, technology, communication and education to enhance IPM for the benefit of regional stakeholders and the environment; promote collaboration to minimize duplication of effort; organize responses to emerging regional issues; and facilitate relationships with multiple government agencies.



***Education & Outreach.*** This category of projects has supported the Center's goal to facilitate the development of knowledge, information, technology, communication and education to enhance IPM for the benefit of regional stakeholders and the environment.

***Research & Extension.*** This category of projects has supported the Center's goals to promote collaboration to minimize

duplication of effort and to facilitate the development of knowledge, information, technology, communication and education to enhance IPM for the benefit of regional stakeholders and the environment. The WIPMC strongly encourages multi-state and multi-discipline collaboration. WIPMC has managed this program for only one year and currently has not completed reviews and recommendations for a second year of this grant program.

### **PMSP Follow-up**

Once Pest Management Strategic Plans have been completed and posted on our national web site, state contacts, regional staff and work groups continue to track and evaluate the identified research, regulatory and education needs so the IPM Center can assess the impacts and outcomes derived from these documents.

### **WIPMC Communications Highlighting Center Activities**

A newsletter, *The Western Front*, is published 3 times per year. It is e-mailed and posted on the Western IPM Center web site (<http://wripmc.org>). The Center produces an annual report that highlights grants administered by the WIPMC, reports from funded projects and other activities of the WIPMC. It is available on the web site. The Center maintains an e-mail list that is used to inform hundreds of people of funding opportunities and of other important issues.

### **Impacts – Outcomes of WIPMC Sponsored Activities**



- **Weather Work Group**

The Western Region IPM Weather Systems Work Group, funded by a grant from the Western IPM Center, has been meeting on a regular basis. It is comprised of agricultural meteorologists, climatologists, plant epidemiologists and IPM specialists in the western region. The group has developed a white paper identifying weather-related issues that need to be addressed for next-step IPM practices. Some of the issues are routine production scale issues, while others are basic research needs. The group is pursuing web-based applications to meet these needs and has invited others in the Western IPM region to participate. Several proposals have been submitted by this group to pursue funding to meet these needs. It is expected that the group will continue to pursue multiple avenues of funding jointly. Through the partnership of the National Plant Diagnostic Network, The Western IPM Center and others, it is anticipated that these efforts will have national scope and applicability to IPM practitioners and researchers as well as biosecurity efforts. The group will be expanding a GIS system with weather-driven crop,

disease and pest models that will be useful in supporting IPM decisions at the field, regional and national levels. In the fall of 2005, members of the work group received a \$600,000 grant from the NRI to continue activities begun with WIPMC seed money.



- Pacific Northwest (PNW) Work Group Member states Alaska, Washington, Oregon, Idaho, Utah, Montana and Nevada have worked on a number of joint projects that advance IPM. As part of the regional prioritization process, PNW Work Group members identify which western states will be included in each planned PMSP workshop based on crop production practices. Members routinely contribute names of university specialists, growers and other professionals whose attendance at each PMSP workshop is critical, or whose review of the workshop document is essential. Members of this work group identified an important issue in 2003, namely that each state was being individually asked for FQPA-related cropping information by USDA or EPA. The seven member states share a large number of cropping systems with one or more states and, in the

majority of cases, filling these information requests was duplicative. Accordingly, a PNW Work Group member submitted a grant proposal, which was funded, for a regional regulatory information coordinator. This person, also referred to as the PNW Comment Coordinator, receives requests for information and then develops an expert database from those member states where such queries can be answered. All state contacts interact with the Comment Coordinator and review written comments before they are submitted to USDA or EPA, but states no longer have to individually search out data to answer duplicate requests. This system has received high reviews from EPA, grower groups, and USDA as a model for reducing duplication, increasing efficiency across the region and assuring that EPA is given the best data available. The Comment Coordinators' work eliminates a former functional inefficiency among western states. Several outreach projects that are currently funded, wholly or in part, by the WIPMC have been developed among PNW Work Group member states. The OnePlan project works with NRCS to develop an IPM tool for growers participating in NRCS cost-share programs. The iSNAP (Integrated Soil, Nutrient, and Pest) water quality project shows growers in a workshop setting how to use IPM to improve water quality on their farms. In early 2005, during the budget discussions surrounding the move of AREERA 406 funds within the USDA budget, PNW Work Group members developed an information sheet for clientele that

demonstrated the outputs and outcomes of funding this specific work group within the IPM Centers (see Appendix E.21). These examples demonstrate the types of output the PNW Work Group has been able to achieve specifically because of its rich regional collaborations. The ability to respond to the varied needs and issues of our region is due to the fact that the PNW Work Group is geographically based, has multi-disciplinary and multi-institutional members, and provides a structure for constructive brainstorming, critique and regional project design. Disciplines represented within the PNW Work Group are: entomology, horticulture, environmental science, toxicology, weed science, and regulatory issues. State network contacts are a focal point for interactions within their states with other programs. The listing below describes the programs with which the PNW Work Group members interact.

- ID IR-4, Food Safety, IPM, SARE, Water Quality, Pesticide Safety Education, Master Gardeners, and organic programs.
- WA IR-4, IPM, Pesticide Safety Education, Master Gardeners, and organic programs.
- OR IR-4, IPM, Pesticide Safety Education, and Water Quality programs.
- MT Pesticide Education, Food Safety, IPM, and Environmental Quality programs.
- UT IR-4, Pesticide Safety Education, IPM, Water

Quality, Endangered Species, and Food Safety programs.

- AK IR-4, Pesticide Safety Education, Master Gardeners, Water Quality, and IPM.

- Crop Insect Losses and Impact Assessment Working Group

The Crop Insect Losses and Impact Assessment Working Group (CILIAWG) was established with WIPMC funding in 2003. It facilitates the collection of accurate, “real world” data on crop insect losses through a face-to-face survey process. Data collected (e.g., metrics on insecticide use patterns, costs, targets, and frequency; crop losses due to various stressors of yield and quality) are expected to provide an objective basis for assessing change in the systems. CILIAWG expanded this past year to include cotton, melons and lettuce in Arizona and the low desert regions of California. In 2003–2004, six interactive workshops involving more than 140 stakeholders took place in the two states.



## WIPMC Mid-term Report

- **Urban IPM Work Group**

This work group deals with issues of residential and urban IPM. Through the Center's funding, the Urban IPM Work Group assessed the need for IPM education of property managers, pest management professionals, and residents/tenants of multifamily dwellings in the western region. Participants in the work group included five western states (WA, CA, ID, AZ & CO) and many different programs and agencies.
- **Small Fruits Working Group**

This work group has 16 members from a cross-section of small fruits interests: 5 university researchers, 2 extension researchers, 5 growers, 2 industry representatives and 2 crop advisors. Four people in British Columbia have also been recruited to assist in coordinating research that affects small fruits on both sides of the border. A database of funding opportunities has been developed and is being used. The work group identified a need to educate growers on scouting and have submitted proposals to support this effort.
- **PMSPs – Newly registered products listed in PMSPs as regulatory needs include:**
  - Pyraclostrobin/caneberries
  - Spinosad/caneberries (organically approved formulation)
  - Clomazone/mint
  - Sulfentrazone/mint
  - Bifenazate/mint
  - Azoxystrobin/dried peas
  - Pyraclostrobin/dried peas
  - Sulfentrazone/dried peas
  - Thiabendazole/dried peas
  - Several previously unregistered products/potatoes in Alaska
- After the PNW Potato PMSP Workshop (held in February 2002), the Potato Growers of Idaho developed a Best Management Practices Standards Checklist to be used by their growers on an annual basis. This checklist was developed with the assistance of many potato experts and industry professionals. The purpose of this checklist is to evaluate IPM practices currently in use by the growers, monitor changes in practices and encourage adoption of IPM practices.
- The International Pulse Crop PMSP was the first attempt at developing a strategic plan for a crop grown both inside and outside of the United States (in this case, also in Canada). This document was not only international in focus but also included representatives from both the Western and North Central regions. This collaboration has enhanced communication and interactions between Canadian, Western, and North Central pulse growers.
- After the Rangeland Cattle PMSP workshop held in Bozeman, Montana in June 2005, the USDA Federal Crop Insurance Corporation (FCIC), through its Risk Management Agency (RMA) granted Washington State University \$385,425 to pursue Reduced-Risk Pest





Management Strategies in Beef Cattle over a three-year period beginning October 1, 2005 and continuing through September 30, 2008. Among the justifications used in the grant application were some of the critical needs identified at the PMSP workshop.

- As a direct result of the Hawai'i Banana Pest Management Strategic Plan devised in 2003, a Banana Action Group was formed that is comprised of University of Hawaii researchers and extension personnel, state of Hawaii Department of Agriculture officials, the USDA Pacific Basin Agricultural Research Center and banana growers. Of utmost concern has been the virus disease Banana Bunchy Top. The Banana Action Group has been instrumental in developing research, educational and outreach materials for growers and homeowners. Research continues on genetically modifying banana to be resistant to the deadly virus. None of this effort would have been possible without the Banana Pest Management Strategic Plan. The PMSP is acting as the road map it was intended to be in focusing pest management efforts in banana.
- WIPMC has funded projects that foster work in collaboration with the National Resource Conservation Service, toward the national IPM Roadmap goal of environmental protection.

The One-Plan IPM Planner is a unique means of incorporating IPM implementation into a comprehensive farm conservation plan concept. It involves multi-state, multi-disciplinary and multi-agency cooperation. It is stakeholder-driven, with stakeholder input continually utilized in the design of the project. Idaho is currently mandating the use of the OnePlan Nutrient Management Planning Tool for

compliance with the state's nutrient management program. This project addresses several objectives of the National IPM Roadmap by developing user incentives for IPM adoption and working with risk management programs including NRCS EQIP and other cost-share programs. It proposes to leverage federal resources with state and local public and private efforts to implement IPM. When completed, the OnePlan IPM Planner will be a valuable tool to spotlight and measure IPM successes.

- Communicated the opportunity for stakeholders to respond to Center RFAs.
- Developed Potato IPM Scouting Manual in Spanish and English.
- Produced *Invasive Plant Resource Guide* for use in the West.



- Supported on-farm trials using “Green Manure Crops for Controlling Cyst Nematode in Sugar Beet,” a new IPM tactic that had not been utilized by growers.  
Before the sugarbeet pest management strategic planning process produced a finalized plan, a new grant project was submitted and secured by the Amalgamated Sugar Company. With funding from the

American Farmland Trust, the Amalgamated Sugar Company will implement green manure cropping into the sugarbeet rotations of ten growers and share the findings with the grower-owned processing company's 1,100 growers. The WIPMC Special Projects funds increased the number of growers involved in this project. The WIPMC investment in developing PMSPs has already helped the industry to seize an opportunity and increase their IPM efforts.

- Provided timely information on the web regarding the West Nile Virus in the western states.
- Sponsored a session on West Nile Virus during the Western Regional Mosquito Control Seminar.
- Sponsored a one-day workshop during the WERA-69 annual meeting.
- Supported Western Plant Diagnostic Center's training for first detectors of Sudden Oak Death.
- Assessed and communicated potential water resource benefits to producers.
- Determined viable management alternatives that meet producer needs.
- Improved management practices through on-farm research and monitoring.
- Promoted registration of new control tactics.
- Identified alternative control measures to protect against the development of resistance.
- Educated regulatory agencies as to the needs of growers.
- Worked to promote regulatory decision-making that reflects what is really being done rather than the use of default assumptions.
- Fostered better awareness of IPM in farming systems.
- Began developing revised PMSPs, building on the strength of original

PMSP successes. Examples include the Pacific Northwest Potato PMSP originally produced in 2002 and the National Pulse Crop PMSP originally produced in 2003. Both of these commodities have PMSP revision workshops scheduled for first quarter of 2006, with potato divided into two separate workshops for traditional and organic practices.

- Developed new and strengthened existing multi-state communications and collaborations.
- Our Information Network participants provide a bridge for the WIPMC to state-based commodity groups that result in enthusiastic and committed participation in PMSPs and other WIPMC activities. They also provide linkages between the WIPMC and other regional programs such as 406 Regional Water Quality, state-based NRCS, and state-based PESP.
- The National IPM Evaluation Committee has developed a draft logic model that addresses the goals of the National IPM Roadmap.



### Challenges in Addressing Identified Needs within the West

- Developing PMSPs for over 600 commodities produced in the Western Region
- Reaching non-traditional audiences
- Travel required of staff because of distances, number and variety of pest management issues
- Limited funding
- Shrinking number of extension specialists in the west and the competition for their time
- Administration of numerous small grants
- Issuance of multi-year grants are a problem because of year-to-year funding and restricted end dates on the WIPMC's prime award.

### Plans for the Future

The WIPMC will continue to develop 5 or more PMSPs each year and regularly update existing PMSPs. The Center will strengthen its collaborates with Regional Water Quality programs in the West.

**Organizing Multi-state Communication Networks through our regional website, work groups, information networks, Pest Management Strategic Plans, regional symposiums and Comment Coordinators.**

### WIPMC Web Site

The WIPMC has developed a regional website (<http://wripmc.org>) that includes links to participating states' IPM Center web pages, funding opportunities (state, regional or national), electronic copies of our newsletters and other documents, information on upcoming events, electronic copies of information responses, and a link to the National IPM Center's web site that

houses crop profiles, PMSPs and additional funding information.



### PMSPs

The WIPMC has a PMSP subcommittee that includes the state contacts, PMSP Coordinator, PMSP Research Assistant, PMSP Editor, and the WIPMC Associate Director. Conference calls throughout the year allow us to discuss: the scope of new PMSPs, which states to include, the timeline for workshops, and estimated completion dates. The PMSP process has been a great platform for collaborations between western states, regional centers and even international entities. An ongoing RFA for PMSPs appears on our regional web site.

### Work Groups

The WIPMC requires all of our work groups to have multi-state collaborations. This has been very successful in increasing the communication between states in the West.

### Information Networks

The WIPMC encourages multi-state communication via the Information Networks in several different ways. The development of state web pages has been a requirement of funding; all participants have developed them. The creation of Comment

Coordinator positions in the West that coordinate responses to information requests among several different states has facilitated multi-state communication.

### Comment Coordinators

In direct response to questions from EPA and USDA relating to worker protection issues, endangered species, use patterns and pests controlled by pesticides our regional Comment Coordinators have assembled comment packages addressing more than 37 different pesticides. More than 130 replies to information requests are posted on the WIPMC web site. In addition to these responses, it is not unusual for EPA or USDA to call directly for information that does not warrant a formal reply. Several examples of outcomes to information replies are below:

*EPA decided to forego application buffers and not to change application rates for chlorsulfuron. EPA made this decision based on the comments they received from Jane Thomas, Pacific Northwest Comment Coordinator, and from Oklahoma.*

*Dimethoate use on succulent beans and peas was not cancelled. EPA received information from several sources in the west that the uses are important to growers across the country.*

*USDA requested information regarding common chemigation practices via a questionnaire. The information was submitted to the Agricultural Handlers Exposure Task Force (AHETF) and will be used in designing exposure study protocols for implementation by the AHETF.*



### Regional Symposiums

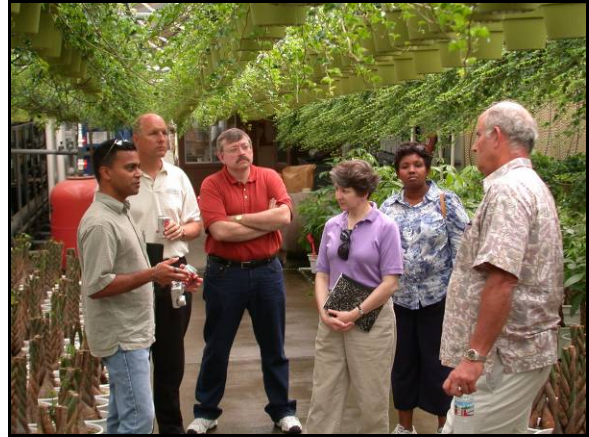
The WIPMC has sponsored two symposiums in the last two years. Representatives from many different states within the West were in attendance. The objectives of these symposiums were to share information, exchange data, develop collaborations and define priorities.

### Impacts of Multi-State Collaborative Efforts Funded by the WIPMC

- The Center has encouraged and provides opportunities for multi-state communication by supporting PMSPs and work groups and encouraging multi-state participation in our competitive grant programs.
- Most PMSPs originating in our region in the last 3 years have covered multiple states. This can be attributed largely to our PNW Work Group and the PMSP subcommittee that is chaired by the WIPMC Associate Director. The very nature of the PMSP process lends itself to collaborations among states regardless of the region in which they are located. WIPMC has led several PMSPs and participated in others that included states outside our region, including those for pulse crops, rangeland cattle and cranberry. Limited only by the

variability of production issues within a cropping system, we continue to look for ways to collaborate with as many states as possible in the development of these documents.

- Priorities for RFAs and special projects have been set for multiple states and subregions.
- Collaborations have been formed and continue to thrive.
- Stakeholder input has been solicited and received across state and regional boundaries.
- Education takes place across state and regional boundaries.
- Creating the PNW Comment Coordinator position has provided a prototype for a new and effective means of multi-state communication.
- Arid Southwest Information Network responds to information requests not just for Arizona but also for New Mexico. New Mexico is not currently an Information Network participant, so by responding to information requests for New Mexico (in consultation with New Mexico state extension agents), Arizona's work enhances the opportunities for collaboration.
- An Inter-mountain West Information Network led by Colorado represented both Wyoming and Colorado, increasing the communication between these two states.
- The American Pacific Island Comment Coordinator position has provided the conduit for multi-state/territory communications.



### Challenges in Developing Multi-State Collaborations within the West

- Because of limited funds and the geographical distances between the Pacific Rim territories, Hawai'i and the mainland, the Western IPM Center struggles to provide adequate representation of the territories.
- Getting people to work with others outside their states can still be a challenge due to outmoded notions of "turf" and competition.
- Obtaining adequate funds to support meetings of people from various western states is difficult.
- We must continue to maintain and improve existing, effective multi-state collaborations.
- We must be vigilant about recognizing which other states should be included in PMSPs and other processes due to similarities of pest management needs.
- Differences in administrative structures and styles can present barriers to cooperation.

### Plans for the Future

- Continue to communicate with leadership of western universities, agricultural experiment stations and Cooperative Extension on the successes

of the WIPMC and the positive benefits of past and continuing collaborations.

### **Linkages between the WIPMC and other Regional and National Programs and Governmental Agencies.**

The WIPMC goals that focus on building relationships with other regional and national entities are: promote interdisciplinary and multi-organizational collaborations; facilitate relationships with multiple government agencies; and promote collaboration to minimize duplication of effort. The Center structure has been designed to accomplish these objectives by using not only the Center Administrative staff but also Center-funded work groups and Information Networks. We encourage all participants to “think outside the box” and expand their traditional partnerships to include other agencies, universities, commodity groups and growers. The Center facilitates this by only funding multi-state work groups, encouraging multi-state PMSPs, utilizing multi-state comment coordinators and supporting, through special grants, opportunities for interested persons to gather together to discuss emerging issues within the western states.



### **Western Sustainable Agriculture Program**

The Director for the WIPMC was appointed to the Western Sustainable Agriculture

Research Education (SARE) Administrative Council in 2004 and has served as an ad hoc member since 2002. Also the Western SARE Director has been a member of our Advisory and Steering Committees since 2003.

### **Regional EPA**

The Director (3 years) and Associate Director (2 years) are members of EPA Region 9’s FQPA proposals Review Panel and comment on the draft RFA prior to its release. We have an EPA Region 9 representative on our Advisory Committee and have also had a regional EPA representative as a member of our WIPMC grant review panel. We include the other regional EPA Strategic Agriculture Initiative staff in all appropriate meetings and correspondence.

### **Natural Resource Conservation Service (NRCS)**

Our Center has developed linkages with several different state NRCS programs in the West through our Information Networks, work groups and Administrative Staff. Collaborations in which we have engaged included training of NRCS staff on IPM, participation in revision of State Conservation Practice Standard Code 595, pest management, and development of a web-based Conservation Farm Plan (<http://www.oneplan.org/ConservationPlan.shtml>).

### **Western Region IR-4**

The Western Region Field Director for the IR-4 Program is a member of the WIPMC Advisory Committee. The Field Director is located in the same department that houses the Center and we collaborate on issues of mutual interest throughout the year.

### **National IR-4 Liaison**

The WIPMC Director is the IPM Center liaison to the National IR-4 Program. In this capacity, he collects priorities developed in PMSPs from all the Centers, collates them and presents them to the National IR-4 Program for inclusion in their national priority setting process for regulatory needs. Our Director also makes an annual presentation to the National IR-4 Project Management Committee regarding Center activities.

### **Regional Water Quality**

The Director and Associate Director are fostering a linkage with the Western Water Quality Program. We are attending a meeting of water quality program leaders in the West to identify ways in which the WIPMC and the Western Water Quality Program can work together.

### **Regional IPM Centers**

The Regional Centers collaborate in many ways, including thrice yearly meetings, meetings of the National IPM Web Site Technical Committee and the national PMSP Subcommittee, production of Pest Alerts, participation in the national IR-4 priority-setting subcommittee, developing national PMSPs and participation in the national EPA/USDA/Center Indicator Work Group.

### **National Foundation for IPM Education**

A representative from this foundation serves as a member of the Center Advisory and Steering Committees. The WIPMC Steering Committee met with this group in October of 2004.

### **Indicator Work Group**

This work group consists of representatives from USEPA, SARE, USDA, EPA Regional, Regional IPM Centers, and the Office of Pest Management Policy. The group has met annually for the last two years.

### **National IPM Coordinating Committee**

Representatives from the WIPMC have met with this committee annually to update them on Center activities.



### **USEPA/BEAD**

The WIPMC provided a week-long Greenhouse and Ornamental Workshop for 5 members of USEPA Biological and Economic Assessment Division. This involved tours of nurseries, classroom presentations and an extensive workbook.

### **National IPM Evaluation Committee**

The Associate Director served as chair of this committee in 2005. She also coordinated and chaired the planning committee for the 2005 meeting held in Portland, Oregon in August 2005. She continues to represent the IPM Centers as a member of this committee, which also has representatives from USDA, EPA, and

American Farmland Trust. The goal of this committee is to develop logic models aligned with the objectives identified in the National IPM Roadmap.

### **Pest Management Alternatives Program**

Priorities are established regionally for a national RFA. Regional relevancy panels convene to assign proposal relevance. The Director participates in the national technical review to present the regional relevance for projects.



### **Impacts – Outcomes of WIPMC Collaborations**

- Standardized reporting system for several different agencies with common indicators.
- National IPM Evaluation Committee with participants from USDA, EPA and others developing logic models that coincide with the National IPM Roadmap.
- Improved communication between USDA and EPA.
- The web-based One Plan Nutrient Management module developed in Idaho is being implemented in Oregon and Vermont. This is an example of a multi-state and multi-region collaboration.
- Funding of the iSNAP Program is an example of the WIPMC partnering with other programs for the benefit of IPM education and adoption.
- Committees to develop IPM-approved tactics eligible for NRCS EQIP program and training of NRCS personnel in IPM tactics have provided opportunities for growers to receive financial incentives for adoption of IPM practices. NRCS is a state-based program but Information Network participants from many of the western states have been involved.
- The IPM Center Director is a member of the Advisory Committee for the Western Plant Diagnostic Network. He participates in the annual meeting and various conference calls throughout the year. He maintains a close working relationship with the Director and Deputy Director in order to collaborate on projects of mutual interest.
- The WIPMC has worked with the North Central IPM Center, which has taken the lead in developing Coordinated Pest Alerts, in an example of a coordinated effort that reduces duplication.
- A National Committee met to explore what the infrastructure of a national IPM information system should look like, how it would work, who would manage it, and how it would be sustained. This meeting sought to expand the Soybean Rust Monitoring System developed by APHIS and the National Plant Diagnostic Network. This is an example of the IPM Centers and other programs working toward a national effort.
- Advising and providing educational materials on exotic pests that may be introduced into the west.
- The IPM Centers submitted an e-Extension Proposal.
- Multi-regional PMSPs.
- Better communication between USEPA, USDA and Centers.



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- Collaboration between regional centers has eliminated duplication of efforts.
- Critical needs from PMSPs receive a high priority in the IR-4 annual priority setting process.
- Better understanding by the National Foundation for IPM Education of Center goals and objectives. Discussions about ways that both entities could collaborate in the future.
- Stakeholders have direct input into national priority-setting processes.
- The development of two crop time lines and a reference/workbook for participants of the Greenhouse and Ornamental Workshop are examples of ways the Center provides resources and education for more informed decision making by regulatory agencies.
- The WIPMC, at the request of Burleson Smith, Special Assistant to the Deputy Secretary of Agriculture, convened a meeting of western experts on salmonid endangered species to advise USDA on

proposed pesticide buffer zones impacts to agriculture.

### **Challenges in Developing Regional and National Linkages**

- Identifying other regional programs and people for collaboration.
- Working with NRCS, as it is state-based, not regionally structured.
- Time in which to foster linkages.
- Identifying common priorities among programs for collaborations.
- Input from national program leaders to encourage local collaborations.

### **Plans for the Future**

- Increase collaboration with water quality programs.
- Continue interaction with the indicator work group that represents many agencies.

## Financial Aspects

Income: Fiscal Years 2003 & 2004*					
Funding Source	North Central	Northeastern	Southern	Western	Total
<b>FY 2003</b>					
CSREES Total	1,945,368	2,104,644	2,161,914	1,828,189	8,040,115
Centers	1,081,730	1,068,900	1,068,901	1,068,868	4,288,399
RIPM	847,644	670,744	928,629	759,321	3,206,338
PMIDSS	15,994		164,384		180,378
Other					
Carryover		365,000			365,000
Other Agency Total	29,783			87,805	117,588
EPA	14,518			17,805	32,323
USDA/ARS	15,265			70,000	85,265
<b>FY 2003 Total</b>	<b>1,975,151</b>	<b>2,104,644</b>	<b>2,161,914</b>	<b>1,915,994</b>	<b>8,157,703</b>
<b>FY 2004</b>					
CSREES Total	1,801,422	1,571,510	1,976,285	1,641,239	6,990,456
Centers	970,319	968,686	958,686	958,686	3,856,377
RIPM	762,103	602,824	834,946	682,553	2,882,426
PMIDSS	15,000		132,653		147,653
Other	54,000		50,000		104,000
Carryover					
Other Agency Total	95,299	22,000	2,385,075	30,000	2,532,374
USDA/APHIS	12,499				12,499
USDA/ARS		22,000		30,000	52,000
USDA/Forest Service	82,800				82,800
USDA/RMA			2,301,852		2,301,852
USAID/CRSP			83,223		83,223
<b>FY 2004 Total</b>	<b>1,896,721</b>	<b>1,593,510</b>	<b>4,361,360</b>	<b>1,671,239</b>	<b>9,522,830</b>
<b>Grand Total</b>	<b>3,871,872</b>	<b>3,698,154</b>	<b>6,523,274</b>	<b>3,587,233</b>	<b>17,680,533</b>
* Reflects the first two years in the 4-year grant cycle for the Regional IPM Centers, which runs from FY 2003 through FY 2006. However, carryover funds from the previous grant cycle (FY 2000-2002) may be included.					

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<b>Expenditures – Core Operations: Fiscal Years 2003 &amp; 2004</b>					
<b>FY 2003</b>	<b>North Central</b>	<b>Northeastern</b>	<b>Southern</b>	<b>Western</b>	<b>Total</b>
<i>Full Time Equivalents</i>	2.8	2.5	3.1	3.6	12
Total Salaries, Wages & Fringe Benefits	200,263	169,550	249,690	314,049	933,552
Materials, Supplies & Equipment	10,000	8,000	1,959	5,121	25,080
Travel of Center Staff	15,000	30,000	6,412	11,358	62,770
Advisory & Steering Committees		12,000	9,880	8,832	30,712
Review Panels	12,800	12,000	17,152	2,812	44,764
Publications and Web Development	14,388	35,000	1,766		51,154
Indirect Costs*	203,096	106,534	160,806	203,079	673,515
<b>FY 2003 Total</b>	<b>455,547</b>	<b>373,084</b>	<b>447,665</b>	<b>545,251</b>	<b>1,821,547</b>
<b>FY 2004</b>	<b>North Central</b>	<b>Northeastern</b>	<b>Southern</b>	<b>Western</b>	<b>Total</b>
<i>Full Time Equivalents</i>	3.1	2.7	4.2	3.6	13.6
Total Salaries, Wages & Fringe Benefits	225,956	250,263	339,800	320,677	1,136,696
Materials, Supplies & Equipment	10,000	8,000	**22,041	9,062	49,103
Travel of Center Staff	18,250	29,286	26,045	25,131	98,712
Advisory & Steering Committees	7,884	12,000	15,267	9,254	44,405
Review Panels	11,633	12,000	3,884	15,584	43,101
Publications & Web Development	15,000	29,500	7,000	3,805	55,305
Indirect Costs*	172,614	60,949	177,389	182,150	593,102
<b>FY 2004 Total</b>	<b>461,337</b>	<b>401,998</b>	<b>591,426</b>	<b>565,663</b>	<b>2,020,424</b>
<b>Grand Total</b>	<b>916,884</b>	<b>775,082</b>	<b>1,039,091</b>	<b>1,110,914</b>	<b>3,841,971</b>
*Reflects only indirect costs for CSREES IPM Center Projects.					
** Includes \$20,000 for facilities.					

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<b>Expenditures – Project Investments: Fiscal Years 2003 &amp; 2004</b>					
<b>FY 2003</b>	<b>North Central</b>	<b>Northeastern</b>	<b>Southern</b>	<b>Western</b>	<b>Total</b>
Information Network	295,618	224,714	157,255	174,712	852,299
Working Groups				105,214	105,214
Critical Issues		39,999	20,034		60,033
Pest Management Strategic Plans		108,382	79,758	140,969	329,109
Crop Profiles					
Special Projects			77,546	7,350	84,896
RIPM	771,917	630,744	908,629	722,413	3,033,703
Identified Priorities		68,970			68,970
Carryover	285,003	107,607			392,610
<b>FY 2003 Total</b>	<b>1,352,538</b>	<b>1,180,416</b>	<b>1,243,222</b>	<b>1,150,658</b>	<b>4,926,834</b>
<b>FY 2004</b>	<b>North Central</b>	<b>Northeastern</b>	<b>Southern</b>	<b>Western</b>	<b>Total</b>
Carryover from FY03	285,003				285,003
Information Network		203,500	174,977	210,312	588,789
Working Groups	147,158	30,000		44,581	221,739
Critical Issues	349,999	25,000	21,914	325,982	722,895
Pest Management Strategic Plans		79,299	58,500	128,060	265,859
Crop Profiles				12,346	12,346
Special Projects	41,729		195,322	39,973	277,024
Identified Priorities		62,753			62,753
RIPM	686,949	582,824	814,700	682,553	2,767,026
Pink Hibiscus Mealybug			50,000		50,000
Legume Risk Management			2,251,852		2,251,852
Carryover	219,708				219,708
Publications		17,111			17,111
<b>FY 2004 Total</b>	<b>1,730,546</b>	<b>1,000,487</b>	<b>3,567,265</b>	<b>1,443,807</b>	<b>7,742,105</b>
<b>Grand Total</b>	<b>3,083,084</b>	<b>2,180,903</b>	<b>4,810,487</b>	<b>2,594,465</b>	<b>12,668,939</b>

**Appendix 1 - Western IPM Center Advisory and Steering Committees**  
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## WIPMC Mid-term Report

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## WIPMC Mid-term Report

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# WIPMC Mid-term Report

## Appendix 2 Funded Projects

Program Type	Fund Date	PI	State(s)	Title	Funded Amount	Yr	Progress Report Due/Rec'd	Final Report Due/Rec'd
<b>Outreach &amp; Communication</b>								
Information Network	1/1/2004	Jahns, Thomas	AK	Alaska Information Network	\$75,627	3	7/28/2005	3/14/2007
Information Network	1/1/2004	Ellsworth, Peter McDonald, Sandra	AZ/CA	Arid Southwest IPM Network	\$50,000	2	7/28/2005	3/14/2007
Information Network	1/1/2004	Kawate, Mike	CO/WY	Mountain West IPM Network	\$56,778	2		3/14/2006
Information Network	1/1/2004	Hirnyck, Ronda	HI	Hawaii Information Network	\$96,713	3	7/28/2005	3/14/2007
Information Network	1/1/2004	Jenkins, Jeff	ID	Idaho Information Network	\$125,355	3	7/28/2005	3/14/2007
Information Network	1/1/2004	Jepson, Paul	OR	Oregon Information Network	\$50,000	2	7/28/2005	3/14/2006
Information Network	1/1/2006	Daniels, Catherine	OR	Oregon Information Network - 2006	\$25,000	1		3/14/2007
Information Network	1/1/2004	Blodgett, Sue	WA	Washington State Information Network	\$74,738	3	7/28/2005	3/14/2007
Information Network	1/1/2005	Jepson, Paul	MT	Montana Information Network	\$29,976	1		3/14/2007
Information Network	1/1/2006	Jepson, Paul	OR	Weather Modeling Web Server	\$5,116	1		3/14/2007
Work group	1/1/2004	Byrne, Patrick	CO/ID/AZ/OR	IPM Consequences of Herbicide Tolerant & Insect Resistant Crops	\$21,942	2	8/14/2004	3/14/2007
Work group	1/1/2004	Ellsworth, Peter	AZ/CA	Crop Insect Losses & Impact Assessment Working Group	\$26,778	3	7/22/2005	3/14/2007
Work group	1/1/2004	Jepson, Paul	OR/WA/CA	Western IPM Center Workgroup on Weather Systems	\$15,062	2	7/28/2005	3/14/2007
WIPMC	1/1/2005	Hirnyck, Ronda	ID/WA/OR	OnePlan IPM Planner	\$34,043	1		3/14/2006
Special Project	1/1/2004	Sisco, Becky	CA/OR	IR-4 Travel to Food Use Workshop	\$3,000	1		12/1/2004
Work group	1/1/2006	Foss, Carrie	WA/OR/CA	The Western Region Structural Pest IPM Workgroup	\$9,750	1		
Work group	1/1/2006	Peerbolt, Thomas	OR	Continuation of the Small Fruits Working Group for Oregon & Washington	\$20,444	3	7/28/2005	3/14/2007
Work group	1/1/2004	Jahns, Thomas	WA/OR/ID/AZ/UT/MT	PNW Workgroup	\$38,378	2		7/28/2005
Work group	1/1/2004	Creamer, Rebecca	NM	Workgroup for Curly Top Virus Biology, Transmission, Ecology, and Mgmt.	\$10,000	2	10/1/2005	3/14/2006
Work group	1/1/2004	Hines, Rebecca	WA/ID/CO/AZ/CA	Western Region Urban Residential & Institutional IPM Working Group	\$9,873	1		1/3/2005



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Program Type	Fund Date	PI	State(s)	Title	Funded Amount	Yr	Report Due/Rec'd	Report Due/Rec'd
Work group	1/1/2005	Hirnyck, Ronda	WA/ID/OR	OnePlan IPM Planner Workgroup	\$8,123	1		3/14/2006
Work group	1/1/2006	Mahaffee, Walter	OR/WA/CA	Western IPM Center Workgroup on Weather Systems	\$10,000	1	3/14/2007	3/14/2008
WIPMC	1/1/2004	Hirnyck, Ronda	ID/OR/WA	Incorporation of IPM Guidelines in NRCS Conservation Planning	\$15,195	2	7/28/2005	3/14/2007
Work group	1/1/2006	Daniels, Catherine	WA/OR/ID/AZ/UT/MT	2006 PNW Workgroup on Agricultural IPM Issues	\$12,631	1		3/14/2007
<b>Subtotal Communication &amp; Outreach</b>					<b>\$824,522</b>			

### Education & Outreach

Special Project	1/1/2004	McDonald, Sandra	CO	West Nile Virus Pesticide Information Website	\$4,350	1		3/14/2005
Special Project	1/1/2005	William, Ray	OR	IPM: Connecting practices, Priorities, and Strategic Directions: A Workshop	\$5,000	1		10/1/2005
Special Project	1/1/2005	Hayes, Robert	ID	Support for Mosquito Control Seminar/WNV	\$3,000	1		9/1/2005
WIPMC	1/1/2006	DiTomaso, Joe	CA	Development of a Yellow Starthistle Mgmt. Guide for the Western U.S.	\$24,000	1		
WIPMC	1/1/2006	Hirnyck, Ronda	ID	A New IPM Delivery Method to Increase Adoption Rates	\$26,325	1		
WIPMC	1/1/2005	Hirnyck, Ronda	ID	Potato IPM Scouting Manual (A Pocket Guide in English & Spanish)	\$44,814	2	8/30/2005	3/14/2007
WIPMC	1/1/2005	Jepson, Paul	OR	Regionalized IPM Outreach: Buffers, Drift Mgmt. & BMPs to Protect Water Quality	\$53,444	2	12/31/2005	3/14/2007
Special Project	1/1/2005	McFadzen, Mary	MT	Producing Invasive Plant Resource Boxes for Outreach in the West	\$5,712	1		5/25/2005
Special Project	1/1/2005	White, Allen	TX	Poster Presentation for Regional Pesticide Recommendations of the U.S. Fish & Wildlife Service for Protection of Threatened & Endangered Species	\$2,200	1		12/1/2005
Special Project	1/1/2006	Lanier, Will	MT	IPM for Museums	\$5,000	1		3/14/2007
Special Project	1/1/2006	Rondon, Silvia	OR	New Emerging Pest in the PNW: The Potato Tuber Moth, Biology & Biological Options for Mgmt.	\$5,000	1		3/14/2007
Special Project	1/1/2005	Searle, Dennis	ID	Green Manure Crops for Controlling Cyst Nematode in Sugar Beets	\$4,657	1		11/18/2005
<b>Subtotal Planning</b>					<b>\$183,502</b>			

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Program Type	Fund Date	PI	State(s)	Title	Funded Amount	Yr	Report Due/Rec'd	Report Due/Rec'd
Research & Extension								
WIPMC	1/1/2006	Hastings, Jackie	OR	Predator Control of Rodent Pests	\$20,000	2		
RIPM	6/1/2005	Godfrey, Larry	CA/WA	Development of an IPM Program for Arthropod Pests of Cool-Season Grass Hay Crops	\$140,000	2	6/1/2007	
RIPM	6/1/2005	Meiman, Paul	WY/CO	Mechanisms & Impacts of IPM for Sustainable Dalmatian Toadflax Control in the Western US	\$95,000	2	6/1/2007	
RIPM	6/1/2005	Paschke, Mark	CO/MT	Integrated Control of Spotted Knapweed: Utilizing Spotted Knapweed-Resistant Native Plants to Facilitate Revegetation	\$160,000	2	6/1/2007	
RIPM	6/1/2005	Jacobson, Barry	MT	Developing IPM Programs for Soilborne Potato Diseases Using Mycofumigation, <i>Trichoderma</i> sp., Pesticides and Host Resistance	\$50,000	1	6/1/2007	
RIPM	6/1/2005	Ocamb, Cynthia	OR/ARS	Reduced Fungicide Use for Hop Downy Mildew Management	\$40,000	1	6/1/2007	
WIPMC	1/1/2005	Barbour, James	ID	Identification of a sex pheromone of <i>Prionus californicus</i> , and its potential use in management of hop	\$44,047	2	3/14/2006	3/14/2007
WIPMC	1/1/2005	Blodgett, Sue	MT	Microbial biopesticides for small grain & Potato Wireworm Control	\$59,968	2	3/14/2006	3/14/2007
WIPMC	1/1/2005	Schwartz, Howard	CO	IYS Risk Index to Predict Virus & Thrips Responses to Mgmt. Inputs in Western-Grown Onions	\$58,716	2	3/14/2006	3/14/2007
WIPMC	1/2/2005	Vossen, Paul	CA/WA	Monitoring & Mass Trapping Olive Fruit Fly in California	\$59,281	2	3/14/2006	3/14/2007
Special Project	1/1/2005	Schwartz, Howard	CO	2004 Onion IYSV - Emerging IPM Issue	\$5,000	1		5/3/2005
Special Project	1/1/2006	Jepson, Paul	OR	Emergency Funds for Blackberry Rust _ Task Force Meeting	\$5,000	1		3/14/2007
WIPMC	1/1/2006	Menalled, Fabian	MT	Research & Extension on Integrated Biological and Cultural Management of Canada Thistle	\$47,126	2		
RIPM	6/1/2005	Ellsworth, Peter	AZ/CA	Spatially Explicit Approaches for Measuring and Implementing Higher Level, Multi-Crop, Multi-Pest IPM	\$60,000	1	6/1/2007	
WIPMC	1/1/2005	Pickel, Carolyn	CA	Walnut Pest Mgmt. Alliance: A Research & Implementation Project	\$59,292	2	3/14/2006	3/14/2007
WIPMC	1/1/2005	Alvarez, Juan	ID	Determination of Alternatives to Current Pesticides for Controlling Wireworms	\$72,039	2	3/14/2006	3/14/2007

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Program	Fund					Funded	Report	Report
Type	Date	PI	State(s)	Title	Amount	Yr	Due/Rec'd	Due/Rec'd
RIPM	1/1/2005	Coop, Len	OR	Determining the Potential for Release of Lepidopteran Parasitoids from Pesticide Limitation to Enable Biologically-Based IPM in Caneberries	\$59,979	2		
RIPM	1/1/2005	Peairs, Frank	CO	Yield Losses for Western Bean Cutworm & European Corn Borer Among Site Specific Mgmt. Zones of Field Corn	\$56,673	2		
<b>Subtotal Research &amp; Extension</b>					<b>\$1,092,121</b>			
<b>Total Competitive Grant Dollars Awarded</b>					<b>\$2,100,145</b>			

*Western*  
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