

# 'Water, Wildlife, and Pesticides'

Western IPM Center Symposium Targets Environmental Problems

The Western IPM Center Symposium, "Water, Wildlife, and Pesticides in the West: Pest Management's Contribution to Solving Environmental Problems," will include keynote speeches on water and IPM issues, as well as endangered species.

The symposium takes place Wednesday and Thursday, Aug. 31 and Sept. 1 in the Doubletree Hotel, Lloyd Center, Portland, Ore. Those who register on or before July 15 will receive a discount, announced WIPMC director Rick Melnicoe. Continuing Education credits are available.

To register, see the yellow box on the home page at www.wripmc.org. The hotel phone number is (503) 281-6111.

The agenda, as of May 20, includes:

### Wednesday, Aug. 31

Wednesd	ay, Aug. 31 ja	super as well as endanaered species
8:30 a.m.	Poster Session	iocs, as well as chaungerea species.
9:45 a.m.	Objectives/Goals of the	
	Symposium	
10 a.m.	Keynote Speaker Jonathan Kaplan, Nat	ural Resources Defense Counci
10:30 a.m.	Keynote Speech: "Broad Perspective of	IPM and Water Issues"
	— Frank Zalom, University of California	, Davis

### **Center Scope**

WIPMC enhances communication between federal and state IPM programs in the western United States: Alaska, Arizona, California, Colorado, Hawaii and the Pacific territories, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. It serves as an IPM information network, designed to quickly respond to information needs of the public and private sectors.



WIPMC symposium will zero in on water, pests, and IPM

### Western Region IPM **Grants: 8 Funded**

Eight of the 41 proposals submitted to the Western Region IPM Grants Program have been forwarded to USDA with a recommendation for funding.

They include five research grants totaling \$485,000, and three research/ extension grants totaling \$176,652. More details will be released once USDA completes the contracts.

A panel reviewed 34 of the 41 proposals submitted. Seven were returned to the principal investigators: six lacked a relevancy statement and one P. I. was outside the Western Region.

Of the 34 proposals reviewed, 22 were research proposals seeking a total of \$2,007,411. Others included 10 research/ extension proposals, totaling \$836,287, and two extension proposals for \$94,457.

The Regional IPM Competitive Grants Program is administered by the land-grant university system's four regions (North Central, Northeastern, Southern, and Western), in partnership with USDA-CSREES. The proposals were due Feb. 18.

What's Inside Director's Comments.....2 WIPMC Discusses Federal Budget......3 Profile: Cathy Tarutani, API Comment Coordinator ......4 WIPMC Work Groups: What They Do .....5 WERA Participants 'Connect' ......6

> continued on page 8

CSREES Photo)

# Director's Comments Don't Change a Program That's Working

By Rick Melnicoe

President Bush's proposed budget for USDA-CSREES for the 2006 fiscal year seeks to consolidate various line items, zero out some, and create new programs. Unfortunately, it eliminates the Integrated 406 line items that include the Regional IPM Centers, Water Quality, Food Safety, Organic Transitions, and several other programs.

Currently, the 406 programs are limited to a 20 percent indirect rate; university negotiated rates are nearly 50 percent. Plans call for retaining these programs and funding but moving them into the National Research Initiative (NRI) line, with a proposed increase of \$70 million and a new line, State Agricultural Experiment Stations Competitive Grants, with \$75 million. Additionally, the proposed budget would slash the Hatch Act funding in half and reduce it to zero in FY07.

The Western IPM Center was advised to craft a white paper outlining the impact of this proposal. Several western state individuals and groups and the Western Experiment Station and Extension directors also became involved, as did leaders of other Regional IPM Centers and several lobbying and commodity organizations. As a result, many documents are floating around that discuss in varying details what the IPM Centers are, how important they are to stakeholders, and why it's critical not to tinker with the funding.

The major effects to the Western IPM Center would be loss of funding due to increases in the indirect rates, potential loss of identity within the NRI, and potentially, the loss of fourth-year funding, inked in the current grant.

- The message I am sending is threefold:
- Don't change a program that is working.
- If the IPM Centers are moved, ensure a seamless transition.
- If the indirect cost rates increase, then increase funding to that level or more for the Centers to maintain continuity.

At this point, it seems that our views are reaching Congress. The House Budget Subcommittee examined the issue in early April. Early reports filtering back indicate that some members dislike the proposed changes and will fight them. The Senate subcommittee met in mid-April, but as of this writing, no information is available.

### **Progress Report**

On a happier note, we at the Western IPM Center submitted our progress report and request for third year funds in February.

## Way to Go, Jane!

The work of Pacific Northwest Comment Coordinator Jane Thomas, featured in the February 2005 edition of *The Western Front*, is definitely making a difference.

USDA's Teung Chin reported that EPA has decided to forego application buffers for chlorsulfuron, at least for this round of re-evaluation. The decision, he said, was based on Jane's comments and comments from Oklahoma officials. Jane was invited to sit in on the chlorsulfuron closure call, held May 5.

EPA reserves the right to reconsider its decision when it reviews the issue in three or four years.

We reported many important accomplishments and innovations, and we are all proud of them. We received approval and funds were released of these funds in early May.

### Western IPM Regional Grants Program

Management of the Western IPM Regional Grants Program is going very well. Frank Zalom of UC Davis is doing a great job as panel manager. The relevancy review component (new to the program this year) went fairly well. We are already working on improvements for the next round of grants. We expect to release the next RFA approximately two months earlier this year. Funding recommendations will be announced when USDA completes the contracts.

### PMAP

The Pest Management Alternatives Program (PMAP) included a regional component this year. Also new was a relevancy component that will be combined with the technical review for final decisions on funding. The relevancy panel meeting went smoothly, and I met with the national technical panel at the end of April to provide the western relevancy scores. Each regional IPM center conducted its own relevancy reviews using a standardized form across the four regions.

State Briefs

### Washington State

The pest management issue with the greatest potential impact for Washington growers will be the EPA release of county-specific bulletins. Release of the bulletins, designed to protect threatened or endangered species, is anticipated to occur sometime in 2005. — Catherine Daniels, Extension Specialist, Pesticide Information Center, Washington State University. E-mail: cdaniels@wsu.edu.

# Mountain West IPM Information Network (Colorado and Wyoming)

Mountain West recently hosted a meeting for the Environmental Protection Agency (EPA) Region 8 Pesticide Program and university research and extension specialists from Colorado State University and University of Wyoming. The objective: to give the EPA team a better understanding of the role of Cooperative Extension and Experiment Stations. All participants now have a better understanding of the role that each group plays in IPM, and EPA requests that this be an annual meeting. Mountain West compiled contact information for all IPM research and specialists from the two universities and provided it to EPA Region 8. — Sandra K. McDonald, Environmental and Pesticide Education Specialist, Colorado State University. E-mail: smcdonal@lamar.colostate.edu.

# WIPMC Advisory, Steering Committees Discuss Federal Budget Proposal, Grants

The Western IPM Center advisory and steering committees discussed their concerns about the impact of proposed federal budget cuts on IPM centers, evaluated the WIPMC grants program, and heard a variety of reports at their annual meetings on April 11 and 12, in Portland, Ore.

"The discussions culminated in a session to discuss priorities for request for applications (RFAs) to be released this year," WIPMC director Rick Melnicoe related. "The steering committee refined these into general and specific areas and, in some cases, the best programs for listing them."



Photo by Rick Melnicoe)

Discussing the impact of the proposed federal budget cuts last April in Portland, Ore., were WIPMC advisory committee members (from left) Byron Phillips, Columbia Fruit Packers, Wenatchee, Wash.; Doug Walsh, Washington State University; Becky Sisco, Western Region IR-4, University of California, Davis; Carrie Foss, Washington State University; Wilfred Burr, USDA Office of Pest Management Policy; Michael Harrington, executive director, Western Association of Agricultural Experiment Station Directors; and Carla Thomas, Western Plant Diagnostic Network, UC Davis.

### Steering Committee

Members of the steering committee include:

- Steve Balling, Del Monte Foods, Walnut Creek, Calif.
- H. Michael Harrington, Agricultural Experiment Station, Colorado State University, Fort Collins
- Linda Herbst, WIPMC assistant director, University of California, Davis
- Tom Holzer, Department of Bioagricultural Science and Pest Management, Colorado State University
- Rick Melnicoe, WIPMC director, UC Davis
- Jennifer Miller, Northwest Coalition for Alternatives to Pesticides, Boise, Idaho
- V. Philip Rasmussen, Agricultural Experimental Station, Utah State University, Logan

### Advisory Committee

- The advisory committee includes all members of the WIPMC steering committee, plus:
- Sue Blodgett, Department of Entomology, Montana State University, Bozeman
- Barry Brennan, Department of Plant and Environmental Protection Sciences, University of Hawaii, Honolulu
- Carrie Foss, Pesticide Education, Washington State University, Pullman
- Jennifer Ryder Fox, Horticulture and Crop Science Department, California Polytechnic State University (Cal Poly), San Luis Obispo

- Steve Hopkins, USEPA/OPP/BPPD/Environmental Stewardship Branch (Office of Pesticide Programs/BioPesticides and Pollution Prevention Division), Washington, D.C.
- Paul Jepson, Department of Entomology, Oregon State University, Corvallis
- L. J. Kelvin Koong, Extension Service, Oregon State University
- John "Jack" Lloyd, Renewable Resources, University of Wyoming, Laramie
- Byron Phillips, Columbia Fruit Packers, Wenatchee, Wash.
- Laura Quackenbush, Colorado Department of Agriculture, Lakewood
- Rebecca "Becky" Sisco, Western Region IR-4 (Interregional Research Project No. 4) Program, UC Davis
- Carla Thomas, Western Plant Diagnostic Network, UC Davis
- Doug Walsh, Irrigated Agriculture Research and Extension Center (IAREC), Washington State University, Pullman
- Cindy Wire, USEPA Region 9, San Francisco Alternate to Doug Walsh
- Frank Zalom, WIPMC panel manager, Department of Entomology, UC Davis

### Ex-Officio Members

- Wilfred Burr, USDA/OPMP (Office of Pest Management Policy), Washington, D.C.
- Mike Fitzner, USDA/CSREES/PAS (Cooperative State, Research, Education, and Extension Service/Plant and Animal Systems), Washington, D.C.

State Brie

### Idaho

Our newly completed Pest Management Strategic Plan (PMSP) for alfalfa seed/clover seed in the Western U.S. is now posted on the national IPM Center Web site, *www.ipmcenters.org/index.cfm* (see "Crop Profiles/PMSP). We're now working on the sugarbeet PMSP; our workshop was held in December. We will participate in the beef PMSP workshop in Bozeman, Mont., in June. This spring, the Idaho OnePlan (conservation planner) received the Governor's Award in Agriculture for Innovation and Technology. Each OnePlan Steering Committee member (including Ronda Hirnyck, University of Idaho Pest Management Center) received a special award from Gov. Dirk Kempthorne. — Ronda E. Hirnyck, Pesticide Program Coordinator, University of Idaho. E-mail: *hirnyck@uidaho.edu*.

# She Serves a Diverse, Unique Area

### **Cathy Tarutani,** API Comment Coordinator

Cathy Tarutani, the American-affiliated Pacific Islands (API) comment coordinator for the Western Region, serves an area that is as diverse as it is unique.

Her territory encompasses Hawaii, Guam, the Commonwealth of the Northern Mariana Islands, American Samoa, the Federated States of Micronesia, the Republics of Palau, and the Marshall

Islands, spanning an area larger than the continental United States. (See map.)

"Although separated by vast expanses of open ocean, Hawaii and the other Pacific islands share many pest management issues, as well as the potential for solutions," said Cathy, who is based in the Department of Plant and Environmental Protection Sciences, University of Hawaii, Honolulu. "The diversity of the region's crops, cropping economics and methods, environmental conditions, and pests distinguish API from the continental United States."

Communicating the uniqueness of API to American agriculture is an important component of her work as comment coordinator. "The regulatory decisions affecting pest management practices can have a major impact on ultra-minor crop producers and consumers and on fragile island ecosystems."

Information originates from a wide variety of sources. "Farms in the API vary from large operations of several thousands of acres each to very small farms where more of the production is consumed by the growers and their families than sold," she said. "There are a few grower and industry groups in Hawaii, but regionwide, very few of the growers are organized."

Cathy said that requesting input for USDA and EPA "is always a laborintensive project."

"This process usually begins by



API comment coordinator Cathy Tarutani (far right) works closely with growers. From left are grower Touan Louangrath, worker Nanh; Leticia McElroy of the Risk Management Agency, USDA, Davis; and Cathy Tarutani at Louangrath's farm, Waialua, Hawaii.

determining if a particular request or Federal Register notice is likely to be relevant to any of our stakeholders. The content of each request guides the selection of individuals to be solicited for responses, and a customized contact list is developed for each request."

She e-mails "a brief explanation of pesticide reregistration, the action being proposed, the specific information being sought, and why it may be important for a response."

Cathy also posts a notice on the Hawaii Pest Management Information and Regulatory Information Network Web site (*http://pesticides.hawaii.edu*). She follows up with phone calls to those who "may have particularly large stakes in the results of a particular inquiry or who may be in a position to provide representative information."

"In addition to farms, landscapes, recreation areas, and conservation areas may be affected by proposed pesticide regulatory actions," she said. "In practice, information can be collected only indirectly from knowledgeable individuals such as extension agents and specialists and the sole crop production consulting company in Hawaii.

"Often, the true impact of any efforts from Hawaii or even small island entities is unknown," Cathy pointed out. "However, we feel strongly that it is important for our constituents to have a voice in the reregistration process and work to facilitate their providing input and identifying their pest management needs. The stakes can be quite high.

"Even in Hawaii, changes in the allowable use pattern of a pesticide may present that product's users with very few, if any immediately viable alternatives," she said. "In the other islands of the API, very few pesticides are available and local expertise is in short supply, alternatives may be non-existent. The result could be illegal pesticide use which would endanger growers as well as their vulnerable environments."

A native of Honolulu, Cathy received her bachelor of science degree in biology from the University of Hawaii at Manoa. She accepted her current position shortly after graduation.

(Contact Cathy at cathy@pestworld.stjohn.hawaii.edu)

## **API Territory Spread from Hawaii to Palau**

This is the area that Cathy Tarutani serves as the comment coordinator for the American-affiliated Pacific Islands (API).

Entity	Population*	Square Miles
Hawaii	1.2 million	6,425
Guam	154,805	212
Federated States of Micronesia (FSM)	Total: 104,213	
Chuuk State	Chuuk (59,367)	Chuuk (49)
Pohnpei State	Pohnpei (37,013)	Pohnpei (133)
Kosrae State	Kosrae (7,833)	Kosrae (43)
Commonwealth of Northern Mariana Islands	69,221	181
American Samoa	57,291	76
Republic of Marshall Islands	52,671	70
Republic of Palau	19,100	188
*Estimate 2000		



# What the WIPMC Work Groups Do

What do the Western IPM Center work groups do? What are their objectives and proposed outcomes? Here's a capsule report provided by the principal investigators.

PNW Work Group Meeting Coordinator and 2003–2005 Summary Impacts and Achievements Report Principal Investigator: Tom Jahns, Alaska fftrj@uaf.edu

**Objectives:** Collaborate with state principal investigators (Alaska, Idaho, Oregon, Washington, Montana, and Utah) to develop intra/interstate crop profiles and pest management



Members of the WIPMC Weather Work Group examined interpolated climate maps at their meeting last March in Portland, Ore. From left are Chris Daly, Spatial Climate Analysis Service, Oregon State University, Corvallis; Alan Fox, Fox Weather LLC, Fortuna, Calif.; Joyce Fox Strand, University of California Statewide IPM Program; Carla Thomas, Western Plant Diagnostic Network, UC Davis; and Bill Pfender, USDA-ARS NFSPRC (Agricultural Research Service/National Forage Seed Production Research Center), Corvallis.

strategic plans, rank and prioritize emerging issues, and develop regional publications. Coordinate three meetings a year to encourage continued collaboration. Participate in "Alignment to the IPM Roadmap" development projects.

**Outcomes:** Set priorities and assign future projects in support of WIPMC objectives. Detail activities and priorities in annual report.

#### Crop Insect Losses and Impact Assessment Working Group

Principal Investigator: Peter Ellsworth, Arizona peterell@ag.arizona.edu

**Objectives:** Collaborate with scientists and stakeholders throughout the low desert areas of Arizona and southern California. Serve as a forum to discuss and develop crop insect loss and impact assessment for key economic crops, starting with cotton, leafy vegetables, and melons. Periodically assemble diverse sources of information and perspective to evaluate crop losses and the associated causes and underlying costs.

**Outcomes:** Assess in detail the role of insects and insecticides in the production of cotton, melons and leafy vegetables (key low desert crops). Provide ready access to pest management data (what is sprayed on crops, the intent or target of those sprays, and other information), for economists, entomologists, other pest managers, regulators, policymakers, and other state, regional, and federal officials. Provide interested parties with specific information about crop loss, insects, and other factors to guide new and existing research, implementation, and IPM outreach efforts.

### Regional Work Group on IPM Consequences of Herbicide-Tolerant and Insect Resistant (HTIR) Crops

Principal Investigator: Patrick Byrne, Colorado pbrne@lamar.colostate.edu

**Objectives:** Organize a work group of Western agricultural professionals concerning herbicide tolerant and/or insect resistant crops. Initiate a series of videoconferences in late spring 2004 for the work group. Develop a set of priorities for research and information needs and a strategic plan to address them. Develop a prototype Web site to provide coordinated access to HTIR information resources.

**Outcomes:** Improve communication and collaboration among workers concerned with

HTIR crops in the region. Develop a prototype Web site to provide access to information resources. Develop a strategic plan to identify priority information needs for Western HTIR crops, and how to address them.

#### Incorporation of IPM Guidelines in Natural Resources Conservation Service (NRCS) Conservation Planning

Principal Investigator: Ronda Hirnyck, Idaho rhirnyck@uidaho.edu

**Objectives:** Facilitate a team of pest management experts to design a methodology and process for collaborating with NRCS. Identify or design a process/system to incorporate IPM guidelines into NRCS conservation plans. Identify additional funding sources to build an IPM Planner that would satisfy NRCS planning requirements. Facilitate relationships with multiple government agencies to promote collaboration and reduce duplication of effort.

**Outcomes:** Recommend an NRCS process and system which incorporates IPM guidelines into NRCS conservation plans.

#### Work Group for Beet Curly Top Virus (BCTV): Biology, Transmission, Ecology, and Management

Principal Investigator: Rebecca Creamer, New Mexico creamer@taipan.nmsu.edu

**Objectives:** Assemble a work group to include university, government, extension, and commodity-based personnel to assess the status of BCTV and set priorities for research. Organize research on BCTV genetics in the western U. S. Organize research to assess the genetics and biology of populations of the beet leafhopper vector, *Circulifer tenellus*, within the western U.S., study the role of weed hosts, and examine strategies for managing BCTV.

Outcomes: Assess the research status and identify and set

> continued on page 7

# WERA-069 Participants 'Connect' with IPM Practice, Strategies

Participants connected with "IPM Practices, Priorities, and Strategic Directions" at the annual meeting and workshop of the Western Region Research and Extension IPM Coordinating Group (WERA-069, formerly WCC-069), held April 19-21 in Wilsonville, Ore.

Ray William, extension specialist in horticulture, Oregon State University, led a farming systems analysis workshop, funded by the WIPMC. Farm systems tools were evaluated for their utility and potential to enhance Pest Management Strategic Plans.

Three groups visited nursery stock, blueberry, and vegetable producers to examine where IPM is used and how it can enhance the entire production system.

At the annual meeting, state and territory presentations showed the diversity of the West and the variety of issues that IPM coordinators face.

- Fred Brooks of American Samoa described pest management issues that arose after the recent hurricane. Both taro and banana production were set back 6 to 12 months, he said.
- Fred Sorenson of Alaska discussed cooperation with the U.S. Forest Service to educate the public on exotic forest pests.
- Mary Staben of Oregon State University, coordinator of the Integrated Soil Nutrient and Pest (iSNAP) Water Quality Education Program, chronicled plans to expand the program to include grower education workshops, funded by a WIPMC grant.
- Len Coop, Oregon State University, discussed the new regional/national capacity for weather-based decision support.



Above: Production horticulturist Sam Doane (center, front) of the nursery operation of J. Frank Schmidt and Son, Co., of Boring, Ore., explains what his company does at the WERA workshop in April. Around them are crabapple trees.

Right: Paul Jepson, director of the Integrated Plant Protection Center, Oregon State University, draws a diagram at the April meeting of the Western Region Research and Extension IPM Coordinating Group (WERA-069) in Wilsonville, Ore.



Photos by Rick Melnicoe)



#### Macadamia Nut Pest

A new pest advisory released by the Hawaii Department of Agriculture warns macadamia nut growers of a scale insect first detected Feb. 25 in South Kona on the Big Island of Hawaii. The pest, native to Australia, is the macadamia felted coccid (MFC) or *Eriococcus ironsidei*. For more information:

http://www.hawaiiag.org/hdoa/newsrelease/05-04.htm

#### Brown Marmorated Stink Bug

The Oregon Department of Agriculture has issued a pest alert following the discovery last fall of an invasive exotic pest, the brown marmorated stink bug (BMSB), *Halyomorpha halys* in Portland.

BMSB is a major agricultural pest in Asia, where it attacks crops including apples, pears, peaches, citrus, persimmon, and soybeans. For more information:

http://egov.oregon.gov/ODA/PLANT/docs/pdf/ippm\_ halyomorpha.pdf

See Pest Alerts at www.ncpmc.org/NewsAlerts/index.html.

State Brief

California

The UC Statewide IPM Web site has launched a database that supplies pesticide impacts on water quality. Tables let readers readily compare risks to water quality among all the pesticides recommended in a UC IPM Pest Management Guideline (*www.ipm.ucdavis.edu/PMG*) for a specific crop and pest, such as cutworms in cotton and whiteflies in strawberry.

The new database provides information on the environmental risk of pesticides. Use it to evaluate a pesticide's potential to move with water and eroded soil or organic matter, and to affect nontarget organisms. It can help farmers consider the risks of leaching and runoff in making pest management decisions, particularly pesticide choice. From a guideline, click on the "compare treatments" button to see the display.

The program is a partial implementation of the Windows Pesticide Screening Tool (WIN-PST, **www.wcc.nrcs.usda.gov/pestmgt/winpst.html**) developed by USDA-Natural Resources Conservation Service. — Joyce Fox Strand, Information Systems Manager, UC Statewide IPM Program. E-mail: **jfstrand@ucdavis.edu**.

# Hawaii Ag Corp. Owner Calls 406 Centers 'Invaluable'

The owner of an agricultural corporation in Hawaii who works closely with Cathy Tarutani, comment coordinator of the American-affiliated Pacific Islands (API), says the services offered by the Integrated 406 Regional Integrated Pest Management Centers are "invaluable to the continued success of agriculture in Hawaii."

President Bush's proposed budget for USDA-CSREES for the 2006 fiscal year deletes the Integrated 406 line items that include the Regional IPM Centers and several other programs. Plans call for some line items to be moved elsewhere and others to be eliminated.

"The work done by the centers is invaluable to the continued success of agriculture in Hawaii," declared John J. McHugh, Jr., owner of Crop Care Hawaii, LLC, Aiea, in a letter of support dated April 15.

In the letter, John noted he has worked with Cathy at the University of Hawaii pesticides program over the last three to four years under the auspices of the Integrated 406 Regional Pest Management Center. "During that time we have produced Pest Management Strategic Plans and crop profiles for bananas and watercress," John wrote. "This effort is especially critical to Hawaiian agricultural industries because of the very small industry size relative to mainland crops."

"We are an island state with distinct disadvantages related to shipping, acreage, and water available for crop production. Additionally, the favorable climate year round creates an environment in which pest management is a constant and unceasing effort."

As a direct result of the Banana Pest Management Strategic Plan prepared in 2003, a Banana Action Group formed, 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 is banana bunchy top, a devastating viral disease spread by the banana aphid and first discovered on the island of Oahu in 1988. Since that time, per-acre banana production on Oahu has decreased by 50 percent. In March of 2004, the aphid and the disease were discovered on the eastern side of the island of Hawaii in the Hilo district. State officials quickly mobilized efforts to secure an emergency exemption from the USEPA to allow the use of Provado to kill the aphids that carry and spread the virus.

John praised the Banana Action Group for being "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," he wrote. "None of this effort would have been possible were the Banana Pest Management Strategic Plan not produced. The Plan is acting as the road map it was intended to be in focusing pest management efforts in banana. Similarly, other crops where Pest Management Strategic Plans have been developed, have managed to concentrate and coordinate efforts to minimize pest impact and maximize technology transfer to industry."

### WIPMC Work Groups—from page 3

priorities for needed BCTV research. (This is a two-year proposal with one work group meeting per year). Develop an action plan to determine who will accomplish the work. Work together to seek funding for the top priority research by the second year. Coordinate preliminary research to obtain information needed to secure grant funding.

### Western Region IPM Center Work Group on Weather Systems Principal Investigator: Paul Jepson, Oregon

*jepsonp@science.oregonstate.edu* **Objectives:** Develop a technical work group that will discuss and refine standards and protocols for the collection, analysis and Web delivery of weather data for IPM purposes. Increase awareness of, access to, and use of forecasting and epidemiological models in IPM that exploit high quality weather data. Coordinate application for regional, federal and state-based grants that support the use of weather data and modeling tools in IPM. Publish reports, technical documents and refereed articles that help to advance the use of

weather data and modeling tools in IPM. **Outcomes:** Facilitated access to expertise and data sources for weather-based information, through the WIPMC Web site, and the work group Web link, and also through participation in meeting run by the workgroup. Prioritization of needs in technical areas associated with weather data acquisition and use for IPM purposes. Development of new partnerships and collaborations that lead to successful grant applications that involve stakeholders and end users.

### Establishment of a Small Fruits Work Group for Oregon and Washington

Principal Investigator: Tom Peerbolt, Oregon tom@peerbolt.com

**Objectives:** Create a Pacific Northwest Small Fruits Work Group to identify IPM needs and resources and make recommendations. Identify and prioritize IPM research projects. Develop, coordinate and disseminate a funding database and elicit research proposals.

**Outcomes:** Involve all aspects of the caneberry community growers, field workers, processors, and researchers. Serve as the nucleus to gather and disseminate information concerning IPM needs and caneberry research projects. Encourage and support IPM research, and enlarge IPM's role for small fruits to help ameliorate the environment. Focus on IPM research and reduce duplication of effort by uniting organizations and small fruits professionals (many are already working on various aspects of IPM), for a single collaborative effort in the Pacific Northwest.

### Symposium — from page 1

11 a m	Keynote Speech: "Endangered Species and IPM"
1 1 <b>G</b> .m.	
	(Broad Perspective)—Dan Kent, Salmon-Sate, Inc.
11:30 a.m.	Lunch in Ballroom
12:30 n m	"Integrated Pest Management Practices and Tools to Protect
12.00 p.m.	Mater Quality" Maderater Decide Librards Librarity of
	water Quality — Moderator Ronad Hirnyck, University of
	Idaho
12:35 n m	"Using Data and Collaborations to Reduce Stream
12.00 p.m.	
	Pesticide Concentrations in the Hood River Basin — Eugene
	Foster, Oregon Department of Environmental Quality
1 n m	"BASMAA in Bay Area Project: Urban Pesticide Education
r p.m.	
	Campaign in the Bay Area —Geoff Brousseau,
	Bay Area Stormwater Agencies Association
1.25 n m	ΤΒΆ
1.20 p.m.	
1:50 p.m.	Interpretation of water Quality Data for Practical Use by
	the General Public"—Bob Mahler, University of Idaho
2·10 n m	Introduction to the OnePlan Pest Management Planner
2.10 p.m.	
	(pre-breakout demonstration)—vvayne Newbill, Idano
	Association of Soil Conservation Districts
2·15 nm	Question and Answer Session
2.10 p.m.	Describer and 7 the web describer
2:30 p.m.	break
3 p.m.	Breakout Sessions—Prepared Questions—5 Breakouts
3·45 nm	Breakout Sessions Report Back to General Assembly
0.40 p.m.	IF Minutes Fault
4:30 p.m.	Adjourn
5 n m	Wine and Cheese Social and Poster Session
4.20 mm	Diagan
0:30 p.m.	Dinner
7:15 p.m.	Invited Speaker John Kitzhaber—"Water and Land Use"
•	(Broad Perspective)
0	Adiaum
o p.m.	Adjourn
Thursday,	Sept. 1
7 a m	Continental Broakfast/Postors
7 u.m.	Commental Dieuklusi/rosiers
V	
8 a.m.	"Endangered Species"—Session Moderator Cindy Wire,
8 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9
8.05 a m	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triagaring Action?:
8 a.m. 8:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?:
8:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit"
8 a.m. 8:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to
8 a.m. 8:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides
8:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides
8:05 a.m. 8:35 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget
8 a.m. 8:05 a.m. 8:35 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture
8:05 a.m. 8:35 a.m. 9:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Contourt"—Alicen Stapton BMP Exercised
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Broak
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:20 a.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush UC Davis
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1: 45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner,
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:15 p.m. 2:45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:15 p.m. 2:45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Agurtic Organisms"—Iohn Stark Washington State
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:15 p.m. 2:45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:15 p.m. 2:45 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State University
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:15 p.m. 2:45 p.m. 3:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State University Break
<ul> <li>8 a.m.</li> <li>8:05 a.m.</li> <li>8:35 a.m.</li> <li>9:05 a.m.</li> <li>9:35 a.m.</li> <li>9:50 a.m.</li> <li>10:20 a.m.</li> <li>11:30 a.m.</li> <li>8 a.m.</li> <li>2:30 p.m.</li> <li>1 p.m.</li> <li>1:15 p.m.</li> <li>1:45 p.m.</li> <li>2:45 p.m.</li> <li>3:30 p.m.</li> </ul>	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State University Break Discussion Group Breakouts
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 10:20 a.m. 11:30 a.m. 8 a.m. 2:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:45 p.m. 3:15 p.m. 3:30 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State University Break
8 a.m. 8:05 a.m. 8:35 a.m. 9:05 a.m. 9:35 a.m. 9:35 a.m. 9:50 a.m. 10:20 a.m. 11:30 a.m. 12:30 p.m. 1 p.m. 1:15 p.m. 1:45 p.m. 2:45 p.m. 2:45 p.m. 3:15 p.m. 3:30 p.m. 4:15 p.m.	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State University Break Discussion Group Breakouts Breakout Sessions Report Back to General Assembly
<ul> <li>8 a.m.</li> <li>8:05 a.m.</li> <li>8:35 a.m.</li> <li>9:05 a.m.</li> <li>9:35 a.m.</li> <li>9:50 a.m.</li> <li>10:20 a.m.</li> <li>11:30 a.m.</li> <li>8 a.m.</li> <li>2:30 p.m.</li> <li>1 p.m.</li> <li>1:15 p.m.</li> <li>1:45 p.m.</li> <li>2:45 p.m.</li> <li>3:15 p.m.</li> <li>3:30 p.m.</li> <li>4:15 p.m.</li> <li>5 p.m.</li> </ul>	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State University Break Discussion Group Breakouts Breakout Sessions Report Back to General Assembly Wrap-Up
<ul> <li>8 a.m.</li> <li>8:05 a.m.</li> <li>8:35 a.m.</li> <li>9:05 a.m.</li> <li>9:35 a.m.</li> <li>9:50 a.m.</li> <li>9:50 a.m.</li> <li>10:20 a.m.</li> <li>11:30 a.m.</li> <li>8 a.m.</li> <li>2:30 p.m.</li> <li>1 p.m.</li> <li>1:15 p.m.</li> <li>1:15 p.m.</li> <li>2:15 p.m.</li> <li>2:45 p.m.</li> <li>3:15 p.m.</li> <li>3:30 p.m.</li> <li>4:15 p.m.</li> <li>5 p.m.</li> <li>5:30 p.m.</li> </ul>	"Endangered Species"—Session Moderator Cindy Wire, USEPA Region 9 "What's in the Water That's Triggering Action?: How Environmental Groups Built a Landmark Lawsuit" —Norma Grier, Northwest Coalition for Alternatives to Pesticides "Court-Ordered Buffers, the Agricultural Impact"—Bridget Moran, Washington State Department of Agriculture "Weed Management in a Threatened and Endangered Species Context"—Alison Stanton, BMP Ecosciences "Issues in the Klamath Watershed"—Alice Kilham, Klamath River Compact Commission Break Discussion Breakouts Lunch Continental Breakfast/Posters Breakouts Report Back to General Assembly "Reduced-Risk IPM Practices"—Session Moderator Rick Roush, UC Davis "Opportunities and Constraints to Using Alternatives to Pesticides Within a Crop"—Bill Snyder, Washington State University "Transition Toward Environmentally Friendly Pest Management in Western Orchard Systems"—Jay Brunner, Washington State University "Year-Round Planning to Reduce Pesticide Residues in Water"—Rick Roush, UC Davis "Understanding Toxicological Effects of Pesticides on Aquatic Organisms"—John Stark, Washington State University Break Discussion Group Breakouts Breakout Sessions Report Back to General Assembly Wrap-Up Adiourn



### Mark Your Calendar

#### 2005 June

- Ninth Annual San Francisco Urban IPM Conference and Green Golf Tour, June 1, San Francisco
- Second Annual Regional IPM Conference, June 14, Oakland, Calif. (Coordinated by Santa Clara County)
- WIPMC: Livestock PMSP workshop, June 18-19, Bozeman, Mont.
- California Coalition for Food and Farming Presents "Collaborating on a Food and Farm Bill," June 28, Sacramento, Čalif.

July

• WIPMC: Papaya PMSP workshop (tentatively scheduled sometime this month), Honolulu, Hawaii

Augus

- 2005 Western IPM Center Symposium: "Water, Wildlife and Pesticides in the West: Pest Management's Contribution to Solving Environmental Problems, Aug. 31-Sept. 1, Portland, Ore.
- Septem
  - IR-4 Food Use Workshop, Sept. 13–15, San Diego, Calif.
- Octobe
  - 2005 Annual International Research Conference on Methyl Bromide Alternatives and Emission Reductions, Oct. 31–Nov. 3, San Diego, Calif.

November

- WIPMC: Sweet cherry PMSP workshop, Nov. 2, The Dalles, Ore.
- Entomological Society of America Annual Meeting, Nov. 6–9, Fort Lauderdale, Fla.
- Annual Meeting of the American Society of Agronomy. Crop Science Society of America, Soil Science Society of America, Nov. 7–10, Salt Lake City, Utah

### 2006

- March
  - Western Society of Weed Science Annual Meeting, March 14–16, Sparks, Nev.

April

- Fifth National IPM Symposium, "Delivering on a Promise," April 4–6, St. Louis, Mo.
- May

Director:

 Fifth Natural Resource Extension Professionals Conference, May 14–17, Park City, Utah

For more information, see WIPMC Web site: "Other News/Announcements" and "Funding Opportunities."

The Western Front is published four times a year by the Western Integrated Pest Management Center (WIPMC) at 4249 Meyer Hall, One Shields Ave., University of California, Davis, Calif., 95616. The newsletter is available online at www.wripmc.org. WIPMC is supported by a grant from USDA-CSREES.

Rick Melnicoe, (530) 754-8378

E-mail: rsmelnicoe@ucdavis.edu

Editor: Kathy Keatley Garvey, UC Statewide IPM Program



Design: Marianne Post, Repro Graphics, UC Davis

Acknowledgments: Banner images: wheat field, Rick Melnicoe, WIPMC; Seattle skyscrapers, Denny Fleenor, Washington State University; and creek in foothills, Suzanne Paisley, ANR Communication Services.