Western IPM Center

The Western Front

NEWSLETTER OF THE WESTERN INTEGRATED PEST MANAGEMENT CENTER October 2006

Diane Clarke Joins Western IPM Center as Writer

In August, Diane Clarke joined the Western IPM Center staff as an editor and writer for a variety of center publications, including the quarterly newsletter, annual report, Pest Management Strategic Plans, Crop Profiles, and Pest Alerts. Diane will also work on developing new informational materials and tools to support and further the center's all-important communication component. If you have suggestions or ideas, please let her know.

Kevin Roddy

A University of California, Davis employee for more than 10 years, Diane began in 1996 as an administrative assistant for the Pesticide Safety Education Program (PSEP), part of the University of California Statewide Integrated Pest Management Program. In 1998, Diane became a writer for PSEP and served in that capacity until 2004. Since then, she has worked in the International Relations Program as an academic advisor and the Office of Research as an intellectual property assistant.

Diane received her bachelor's degree in English from California State University, Fresno, and her master's degree from Fuller Theological Seminary. Diane and her husband, Kevin, spent July in Sweden where they led a UC Davis Summer Abroad course on the art, crafts, and architecture of medieval Sweden. In her spare time, Diane reads, takes exercise walks around her neighborhood, tries new vegan recipes, and is seeking to master the art of tailoring.

(Contact Diane at ***dmclarke@ucdavis.edu*** *or [530] 752-7011.)*

2006 Special Issues Projects

The Western IPM Center has an ongoing call for proposals to address special IPM issues in the West. Special issues funding may be requested to convene groups of people to address emerging issues such as a new pest, water issues, development of proposals for larger grants based on documented stakeholder needs, or development of Pest Alerts. The Western IPM Center has funded several projects under this program this year. They are:

Support for the 2006 Tamarisk Research Conference

Andrew P. Norton, Colorado State University, Fort Collins, CO

Colorado State University, the Center for Invasive Plant Management, and the Tamarisk Coalition will jointly hold the 2006 Tamarisk Research Conference in Fort Collins, CO, on Oct. 3 and 4, 2006. The large multistate meeting will have approximately 350 attendees and more than 70 presentations. The goal of the conference is to summarize and synthesize the current state of the science behind one of the West's most problematic weeds.

The four objectives of the conference are to:

1. Bring together leading researchers from different disciplines to present information on the latest and best science related to tamarisk biology, ecology, impacts, control, and restoration
2. Promote dialogue between researchers and managers to identify future research needs for effective policy and management decision making
3. Synthesize the current state of the science on tamarisk and identify knowledge gaps
4. Publish six peer reviewed, state-of-the-science papers in *Weed Science* from conference proceedings.

"Healthy Schools Inside and Out"– Workshop for Educators

Jennifer Brown, The Watershed Project, Richmond, CA

The Watershed Project received funding from the Western IPM Center to hold *Healthy Schools Inside and Out,* a daylong teacher training workshop in Napa County in spring 2006. The workshop's message is the importance of healthy streams, lakes, and wetlands. Workshop instructors will educate teachers about the impacts of pesticides on watersheds and focus on reduction of pesticide use in and around schools. Educators will also receive resources to implement IPM-based activities and lessons with their students and will

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What's Inside

Director's Comments

The 2007 Federal budget for USDA probably will not be passed before the November elections. As it stands, the House Appropriations subcommittee reduced the Regional IPM Centers' budget by 6 percent; however, the Senate subcommittee restored the 6 percent. A joint House-Senate committee will meet to iron out differences, but I expect the funding to remain level from 2006. The 2007 budget will begin a new round of IPM Centers' funding. We expect a Request for Applications to be published by the end of the year.

One of the recommendations of the IPM Centers Review Team was that each center develop a strategic plan. During the annual advisory/steering committees' meetings, we began the process of developing a Strategic Plan for the Western IPM Center. Associate director Linda Herbst is taking the lead on this project. She led a group discussion with the committees and has developed a draft to be sent out for further comment. This strategic plan will carry the center into the next 5 years.

The Western IPM Center "Issues in IPM" and "Regional IPM Grants" RFAs were released in late September with the due date for both on Dec. 11, 2006. The simultaneous release of the RFAs allows applicants to apply to either or both programs with less hassle. It also allows for more available money for the "Issues" RFA, as we now have a clearer idea of remaining funds in the current grant.

Applicants should be aware of an important change: The Regional IPM Grants applications must now be submitted via Grants.gov (***http://www.grants.gov***). Most federal grants are making the switch to Grants.gov. Well before applying, confirm with your institution that they have an account and are ready to submit via this mechanism. Universities should already be set up to do this; however private companies and individuals must set up accounts well in advance of applying.

The regional IPM centers met in June to discuss responses to the mid-term review (conducted in February) and other issues. Each center has responded to comments and suggestions made by the review team. The Western IPM Center is developing the strategic plan, identifying ways to better interact with the Pacific Territories, and periodically reassessing Information Networks, in response to specific recommendations. Information Networks were reviewed in April by the steering committee. The committee felt the Information Networks are functioning well and should continue to be supported. The committee also recommended that Information Networks be funded for multiple years during the next grant cycle.

The West is now monitoring for soybean rust and soybean aphids in Colorado, Idaho, Oregon, and Washington. Howard Schwartz, Colorado State University, is leading the effort in the West. Sentinel plots of dry beans are monitored weekly. Any suspicious samples are sent to the Plant Diagnostic Network laboratories for confirmation. The program is an extension of the soybean rust program that began two years ago in the South and Midwest. So far, no soybean rust or soybean aphids have been detected in the western plots. Plans are under way to expand the program to five additional western states in 2007. Additionally, a bean virus detection program is being planned for 2007. USDA's Animal and Plant Health Inspection Service and Risk Management Agency fund the programs. It is likely that Congress will establish a permanent soybean rust appropriation to continue monitoring and modeling of this important disease of soybeans and other legumes.

Rick Melnicoe

National IPM in Schools Pest Management Plan Proposed

By Linda Herbst, associate director, WIPMC

The Western IPM Center is collaborating with Tom Green, National IPM Institute, and others in the development of a National IPM in Schools Pest Management Strategic Plan (PMSP). This is a collaborative effort supported by all four regional IPM centers and CSREES. This project proposes to develop a consensus national PMSP for schools to better coordinate efforts, identify new funding sources and collaborators, and improve overall results. It will involve collaborators from existing organizations representing school infrastructure (such as operations, environmental health, risk managers, school health professionals, and school architects) and will determine how best to work with them to insert IPM into their normal organizational meetings, include columns in their publications, and make connections with indoor air quality and green building programs. It is expected to address regional differences in pests and strategies within a single PMSP. This project will (1) assemble a broad stakeholder group, (2) complete a PMSP for IPM in Schools, (3) improve collaborations among stakeholders, and (4) involve new stakeholders and their organizations to increase IPM awareness and adoption. The IPM in Schools Workshop is scheduled for Oct. 24 and 25, 2006 in Las Vegas, NV.

State Brief

California

Richard Roush, director, UC Statewide IPM Program, will be leaving California in late November to return to Australia. Rick has guided the UC program since 2003 and will be missed. We wish him well in his new position as Dean of the University of Melbourne's Faculty of Land and Food Resources.

Linda Herbst, associate director of the Western IPM Center, participated in the 2006 California Specialty Crops Tour in July. Participants in the tour represented several different agencies and programs such as USEPA, Cal-EPA, CDFA, USDA, IR-4, and Protected Harvest. The tour provided an opportunity for participants to interact with extension agents, university researchers, and growers on pest management and air quality, worker safety, and natural resources conservation issues. The tour was organized by the California Specialty Crop Council and supported by numerous sponsors.

Rick Melnicoe, director, and Linda Herbst, associate director, WIPMC

Arizona Holds Statewide Pest Management Summit

What do you call a statewide forum that includes growers; pest control advisers; university personnel; turf specialists; public school administrators and staff; weed, disease, and "bug" experts; horticulturalists; state, federal, and tribal agency representatives; and Western IPM Center personnel? We called it the Arizona Pest Management Center Summit, held at the Maricopa Agricultural Center in central Arizona on June 6.

The goal of the workshop was to achieve broad input on pest management needs and priorities. Over the course of this daylong interaction, we discussed the role of the new Arizona Pest Management Center (APMC) in addressing these challenges. The University of Arizona College of Agriculture and Life Sciences and the Western IPM Center sponsored the meeting.

The format included a morning session with presentations related to broad issues in IPM and afternoon focus sessions during which participants identified IPM priorities in four major areas:

- Agricultural and cross-commodity IPM
- Community and school IPM
- Noxious and invasive weed management
- Urban horticulture IPM

The presentations and the priorities identified in the focus sessions will be made available this fall on the new Arizona Pest Management Center Web site at ***http://cals.arizona.edu/apmc/***.

One challenge of assembling such a diverse group of stakeholders (110 in all) is that people working in different sectors often have different ideas and expectations related to IPM. Putting aside logistical challenges of such a broad group, this eclectic mix allowed for some interesting dynamics and discussion during the workshop. Presentation topics included methods for IPM priority-setting, market-driven approaches to IPM, resources for pest diagnostics, orientation to IPM and the federal IPM Roadmap, and an introduction to the Arizona Pest Management Center.

The Arizona Pest Management Center (APMC) represents a new model for stakeholder engagement and IPM program management at the University of Arizona. All IPM programs and activities are now organized within the APMC, an umbrella organization directed by a steering committee made up of University of Arizona faculty and other stakeholders with expertise in entomology, plant pathology, and weed science, and informed through stakeholder input. A dedicated faculty member provides leadership, manages communications, and provides support to faculty for needs assessment activities, proposal development, and program evaluation. This frees faculty to focus more on IPM research and outreach. The APMC engages with University of Arizona faculty, partner organizations, clientele, and other interested stakeholders to research, develop, and help implement innovative IPM systems in Arizona. In its first year and a half, the APMC has enhanced our IPM efforts in several ways. For example:

- The Arizona Pest Management Center Summit provided us with stakeholder input on pest management needs and priorities in Arizona, which will help us to focus our future programs.
- In collaboration with partners at UC Davis, New

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Jack Kelly Clark

Summit —from page 3

Mexico State University, Texas A&M University, and USDA Agricultural Research Service, we recently secured a $2.5m USDA Risk Avoidance and Mitigation Program (RAMP) grant to develop and implement multistate, multicrop strategies for reducing damage caused by lygus bugs in western cropping systems.

- We are developing data and methodology to quantitatively and spatially measure the adoption and impact of IPM practices on growers. An example is our Crop Insect Losses program for cotton, melons, and lettuce.

The activities of the APMC will help keep our programs strategically focused, relevant, well connected to regional and federal IPM program goals, and more competitive for external funding.

The June 6 meeting was our first public rollout for the APMC. The feedback from clientele so far has been overwhelmingly positive. Some APMC Summit participants said the workshop helped them to increase contact and collaboration with partner organizations. Many said the presentations helped them improve their knowledge of IPM and/or of University of Arizona IPM programs. Still others said they would seek out new funding sources for IPM as a result of attending the workshop. Another important outcome of the workshop is that it helped us to develop a methodology for documenting IPM priorities of stakeholders that can be easily applied to more topical, focused meetings in the future.

IPM Priorities in Brief

The priorities developed through this process, while specific to Arizona, show some common themes that are echoed in regional and national IPM priorities. For example, education ranked as a high priority in both urban and agricultural settings. While more detailed information will be posted to the APMC web site in the near future (***http://cals.arizona.edu/apmc/***), priorities from the four focus sessions are summarized briefly below.

Agricultural and Cross-commodity IPM

1. Multipest IPM research and education
2. Better herbicides and insecticides for thrips and aphid management in vegetables and melons
3. Prevention and management of herbicide resistant weeds
4. Education on intercrop pest interactions, resistance management, and labor issues
5. Prevention, detection, and mitigation of exotic pest introductions
6. Improved lygus control in multiple crops and better understanding of interactions

Community and School IPM

1. IPM Education
   a. General public awareness
   b. Commercial professionals
   c. School and community administrators
2. Develop an industry standard for IPM
3. Leverage funds for change agents to initiate IPM implementation projects in communities

Noxious and Invasive Weed Management

1. Funding for all phases of weed management (pest plant detection, management, restoration, etc.)
2. Develop a statewide mapping and distribution database
3. Submit the "State of Arizona Strategic Plan" for statewide management of pest plants
4. Conduct research on pest plant biology, ecology, identification, and treatment statewide
5. Increase public awareness of, and provide education about, pest plants
6. Develop statewide early detection, rapid response process
7. Improve communication and coordination among state, local, and federal groups to facilitate partnerships (private, NGOs, agencies)

Urban Horticulture IPM

1. Create tools for public education
2. Conduct targeted research on various high-priority pests
3. Determine IPM thresholds for various high-priority pests
4. Develop IPM recognition/ certification program for golf courses and nurseries
5. Provide IPM education for golf course superintendents
6. Conduct review of turf and ornamental pesticide product availability
7. Conduct research on nontarget effects of pesticides
8. Educate municipalities on the use of IPM
9. Develop standard for "earth-friendly" products

For more information contact Dr. Al Fournier (***fournier@ag.arizona.edu***) or Dr. Peter Ellsworth (***peterell@cals.arizona.edu***) at the University of Arizona.

State Brief

ALASKA

Alaska

Alaska Cooperative Extension Monitors Pests

Preventing the establishment of invasive plant species in Alaska is an important issue. Alaska Cooperative Extension, the state and federal forest services, the Alaska Division of Agriculture, USDA Natural Resources Conservation Service, local Soil and Water Conservation Districts, and other groups are working collaboratively to detect, monitor, and eradicate invasive pests. Late blight disease of potatoes was a serious concern in Alaska this year due to its widespread occurrence last year. Despite weather conditions that were conducive to recurrence, no late blight has been reported as we begin the last month of the growing season. Hopefully, continued field scouting and application of protectant fungicides will preclude another serious outbreak.

*Peter Bierman, Land Resources Agent, University of Alaska Fairbanks Cooperative Extension Service, and Alaska Coordinator, USDA Sustainable Agriculture Research and Education (SARE) program, Western Region, Palmer, AL. E-mail: **ffpmb@uaf.edu**.*

Full Belly Farm's Paul Muller Wins National Sustainable Agriculture Award

Paul Muller of Full Belly Farm is the Western Region winner of the 2006 Patrick Madden Award for Sustainable Agriculture. The award, presented every two years by the U.S. Department of Agriculture's Sustainable Agriculture Research and Education (SARE) program, recognizes exemplary farmers around the United States who raise food or fiber in ways that are profitable, environmentally sound, and good for people and communities. Full Belly Farm is a 200-acre certified organic fruit, flower, nut, herb, and vegetable farm located in the Capay Valley town of Guinda, an hour northwest of Sacramento.

Paul is one of four partners who own and operate Full Belly, live on the farm with their families, and oversee 25 to 30 employees. Regional Coordinator for the Western Region SARE, Phil Rasmussen, says Full Belly's "environmental stewardship, including alternative energy sources, coupled with savvy marketing and economic sustainability, typifies what we are trying to encourage and showcase."

Full Belly's system includes:

- growing and marketing more than 80 crops
- providing year-round employment for farm labor
- using cover crops that fix nitrogen and provide organic matter for the soil
- developing innovative marketing strategies (wholesale and retail)
- planting habitat areas for beneficial insects and wildlife

This set of strategies allows the farm to integrate farm production with longer-term environmental goals.

Neil Michel/Axiom

Paul Muller of Full Belly Farm

Full Belly sells to 20 restaurants in the Bay Area, at farmer's markets, and through an 800-member Community Supported Agriculture project in which members receive boxes of fresh Full Belly produce delivered weekly to neighborhood pickup locations in the Bay Area and Sacramento region. The farm also conducts outreach activities, including educational tours, school group visits, and yearlong, on-farm apprenticeships. Besides produce and flowers, Full Belly has a flock of chickens, a herd of sheep, and several cows. They sell organic wool yarn, organic roving (for spinning), and organic sheepskins, all from Full Belly sheep.

Sources: Full Belly Farm Web site, ***www.fullbellyfarm.com***; *USDA Sustainable Agriculture Research and Education (SARE) program press release,* ***http://www.sare.org/publications/press.htm.***

Mesa Public School District Earns IPM STAR Award

The Mesa Public School District recently earned the "IPM STAR" certification award from the IPM Institute of North America in acknowledgement of their outstanding Integrated Pest Management program. The award was presented during the Arizona Pest Management Center Summit on June 6, in Maricopa, Arizona.

Mesa Public Schools is the largest school system in Arizona and the seventh largest in the United States, with about 74,000 students. Their IPM program focuses on pest prevention, sanitation, and monitoring and has minimized pest problems while greatly reducing the need for pesticide applications in and around schools. The program coordinator, Ed Stallard, works with pest management contractor Ecolab to implement the program. Both Mesa Public Schools and Ecolab are active participants in the Arizona School IPM Coalition, a statewide working group headed by Dawn Gouge, urban entomologist for the University of Arizona. As part of the coalition, they are now mentoring other school systems in Arizona on how to implement their own IPM programs.

Ed Stallard receives the IPM STAR Award on behalf of the Mesa Public Schools

The "IPM STAR" is a national IPM recognition program for schools and childcare facilities based on a comprehensive set of standards and a detailed site assessment developed by the IPM Institute of North America in partnership with the US EPA Pesticide Environmental Stewardship Program (***www.ipminstitute.org/school.htm***).

IPM standards for schools were developed based on agricultural IPM assessment models and were reviewed by more than 40 IPM experts, school administrators, and environmental advocates from across the nation. To be certified, schools must meet all legal pest management requirements of their state, have an IPM policy, and pass a rigorous on-site evaluation conducted by an IPM professional. For more information, contact Tom Green at the IPM Institute of North America at ***ipmworks@ipminstitute.org***.

Special Issues —*from page 1*

gain knowledge, tools, and incentives to incorporate activities into their curricula that improve water quality and reduce pollution. The workshop presents practical techniques based on IPM principles for reducing the use of pesticides and common hazardous household products. Teachers will learn about the dangers to human and watershed health that result from using conventional pesticides, as well as those that result from the inappropriate disposal of hazardous household materials including cleaning supplies, paints, automotive fluids, and computers.

New Emerging Pest in the Pacific Northwest: The Potato Tuber Moth—Biology and Biological Options for Management

Silvia I. Rondon, Oregon State University, Corvallis, OR

The potato tuber moth (PTM) *Phthorimaea operculella* (Zeller) (Lepidoptera: Gelechiidae) is one of the most important constraints on potato productivity worldwide. It was first detected in Oregon in 2002**.** In 2003 several fields were completely lost to PTM, resulting in an economic loss of approximately $2 million. This economic loss has increased substantially in 2004 and 2005 due to increased PTM densities in areas already infested, range expansion, increased damage, and the increased cost of control measures. This project will build on the investigators' work in examining biological and ecological parameters of the rapidly expanding population of PTM in the northwestern United States. The specific objectives are to: (1) determine PTM overwintering stage(s), locations, and length and determine hosts used for oviposition, overwintering, and feeding; (2) assess parasitoids and predators; and (3) communicate with industry extensively about this pest. Traps, plant debris, and the soil surface will be examined periodically for evidence of PTM, parasitoids, and predators throughout problem areas in Oregon and Washington. Project results will establish the basis for a long-term, sustainable PTM pest management program in this area, and findings will be delivered to growers, extension agents, and crop consultants for immediate use.

2004 Arizona Cotton Production Pesticide Use

Paul B. Baker, University of Arizona, Tucson, AZ

In this project, investigators will obtain the Arizona cotton production pesticide use data for 2004 from the Arizona Department of Agriculture and the National Agricultural Data Service, prepare the data, and distribute it to the Arid Southwest IPM network for multistate stakeholder workgroup analysis. Investigators will also make the data available to university scientists, Native American tribal affiliates, and the general public. Outcomes will include a detailed analysis of the liquid and solid pesticide applications and their active ingredients. This analysis will serve to update the cotton profile and the papers previously written at the University of Arizona Pesticide Information and Training Office. Investigators will post this information on the Arizona Pest Management Center web site (http://ag.arizona.edu/pito/az_pmc/) next to the current cotton crop profiles and papers, making the information available worldwide. The project team will collaborate directly with University of Arizona cotton researchers to respond to their specific uses of the data within the field of integrated pest management. These data can also be used to examine the adoption of IPM practices.

State Brief

Arizona

USDA Funds Lygus Research and Extension Project Led by University of Arizona

Peter Ellsworth, entomologist and IPM specialist with the University of Arizona, led a team that has recently been awarded a 4-year, $2.5 million grant to develop and implement multistate, multicrop strategies for reducing damage caused by lygus bugs. The grant is titled "Developing and implementing field and landscape level reduced-risk management strategies for lygus in Western cropping systems." The funds from USDA-RAMP (Risk Avoidance and Mitigation Program) will support scientists at several institutions including the University of Arizona; Texas A&M University; the University of California, Davis, and the UC Statewide IPM Program; New Mexico State University; and USDA. Principle investigators on this project include:

- University of Arizona: Peter Ellsworth, Yves Carriere, John Palumbo, and Al Fournier
- University of California, Davis: Peter Goodell, Larry Godfrey, and Jay Rosenheim
- New Mexico State University: Scott Bundy
- Texas A&M University: Megha Parajulee
- USDA-ARS Arid Lands Agricultural Research Center, Maricopa, AZ: Steve Naranjo, Jackie Blackmer, and James Hagler
- USDA-ARS, Shafter, CA: Jay Bancroft

For more information contact Peter Ellsworth at ***peterell@cals.arizona.edu*****.**

Jack Kelly Clark

Lygus bug

Western Region IPM Grants: Seven Projects Funded

USDA/CSREES has awarded funding for seven projects through the Western Region IPM Grants Program. WIPMC forwarded proposals for these projects to USDA/CSREES earlier this year with recommendations for funding. The Regional IPM Competitive Grants Program is administered annually by the land grant university system's four regions (North Central, Northeastern, Southern, and Western), in partnership with USDA/CSREES.

Environment-Friendly Strategies for Management of Mealybugs, Ants, Ampeloviruses, and Mealybug Wilt of Pineapple

Project Director: *John S. Hu, University of Hawaii, Honolulu, HI*
Co-Project Director: *Diane M. Sether, University of Hawaii, Honolulu, HI*

Economic Analysis of Host-Based Poultry Ectoparasite Control

Project Director: *Bradley Mullens, University of California, Riverside, Riverside, CA*

Effect of Primary Tillage Sequence, Insecticides, and Weed Seed Placement on Seed Predator Conservation, Efficacy, and Weed Emergence

Project Director: *R. Edward Peachey, Oregon State University, Corvallis, OR*
Co-Project Directors: *Dan McGrath, Oregon State University Extension Service, Albany, OR; Carol Mallory Smith, Oregon State University, Corvallis, OR; Rick Boydston, USDA Agricultural Research Service, Prosser, WA*

Assessment and Implementation of Insecticidal Nematodes: An Alternative for Control of Urban Pests

Project Director: *S. Patricia Stock, University of Arizona, Tucson, AZ*
Co-Project Director: *Dawn H. Gouge, University of Arizona, Tucson, AZ*

Integration of a Modified Strain of BlightBan® A506 with Conventional Fire Blight Management

Project Director: *Virginia O. Stockwell, Oregon State University, Corvallis, OR*
Co-Project Directors: *Kenneth B. Johnson, Oregon State University, Corvallis, OR; Joyce E. Loper, USDA Agricultural Research Service, Horticultural Crops Research Laboratory, Corvallis, OR*

Wheat Seed Quality Effects on Competitive Ability with Wild Oat

Project Director: *Robert Stougaard, Montana State University, Bozeman, MT*
Co-Project Directors: *Qingwu Xue, Montana State University, Bozeman, MT; Joe Yenish, Washington State University, Pullman, WA; John Burns, Washington State University, Pullman, WA*

Development of an Electronic, Multi-Entry Key for Diagnosing Arthropod, Disease, and Abiotic Problems of Small Grains

Project Director: *Ned Tisserat, Colorado State University, Fort Collins, CO*
Co-Project Directors: *Ronda Koski, Colorado State University, Fort Collins, CO; William Lanier, Montana State University, Bozeman, MT*

V. Philip Rasmussen


Mackley Portraiture

V. Philip Rasmussen (Phil), a member of the WIPMC's Advisory and Steering Committees since 2001, is a professor of soil management in the Plants, Soils, and Biometeorology Department at Utah State University (USU). Phil also coordinates USDA's Western Region Sustainable Agriculture Research and Education (SARE) program, and as part of that assignment, he is the assistant director of both the Utah Agricultural Experiment Station and the USU Cooperative Extension Service.

Phil has spent his career striving for the wise and judicious use and conservation of natural resources while emphasizing agricultural productivity, earning him the nickname "No-till Phil." He spent the early part of his career establishing no-till research plots across the intermountain West, encouraging the use of innovative and sustainable technology. Phil's penchant for technology led him to work as the state extension computer specialist at a time when microcomputers were just beginning to be widely used in natural resource and agricultural management. In 1999, he became the nation's first NASA-sponsored geospatial extension specialist, using modern technology for precision agriculture to ensure that resources were used in an environmentally friendly way.

Phil has published more than two hundred articles and book chapters covering the fields of agronomic computer applications; soil physics, management, and conservation; and sustainable agricultural techniques. He received a B.S. in soil science with a physics minor and an M.S. in soil science and biometeorology from USU, and his Ph.D. in soil physics and microclimatology from Kansas State University. In 1990 Phil received USU's E.G. Peterson award, the university's highest extension honor, and in 2005 he was awarded the prestigious "Sustained Achievement Award" by the Renewable Natural Resources Foundation.

Phil's wife, Linda, graduated from USU with a degree in physics. "Linda is the sole reason I passed my advanced mathematics classes," he says. She also tutored their five children: Angela 31, a musician and songwriter; Bryan, 29, a professor of mechanical engineering at Texas A&M University; Jennifer, 27, who recently graduated from USU; Neal, 25, majoring in genetics at USU; and Katie, 21, a junior at a local college, whose goal is to "keep her father from becoming a stodgy old professor."

State Briefs

Oregon

New IPM Web Site for Oregon State University

A Western IPM Center grant has supported the development of a new IPM web site for Oregon State University. The web address for this site is ***http://ipmnet.org/***.

It features links to state, regional, and national IPM resources and provides access to a number of tools and services that are delivered by the Integrated Plant Protection Center (IPPC), some of which are regional or national in scope. The Oregon State University Extension Service has also published the Integrated Pest Management Resource Guide by Paul Jepson, Linda Brewer, and Susan Jepson (Publication #EM 8898; June 2006, 44 pages). This guide highlights the national IPM Roadmap and can be seen at the Oregon State University Extension web site at: ***http://extension.oregonstate.edu/catalog/pdf/em/em8898.pdf***.

Paul Jepson, Professor, Department of Environmental and Molecular Toxicology, and Director, Integrated Plant Protection Center, Oregon State University, Corvallis, OR. E-mail: ***jepsonp@science. oregonstate.edu*****.**

Washington State

Poplar Industry Helps Lay Groundwork for IPM in Washington State

The poplar industry was among the first in Washington state to complete a crop profile document. This detailed discussion of production and pest management practices, released in 1999, helped lay a foundation for the development of IPM in this crop in the years that followed. Research funds were received from the Washington State Commission on Pesticide Registration to develop an IPM program in poplars (2001-2002) and to investigate mating disruption for control of lepidopteran pests (2003). Target pests including cottonwood leaf beetle, aphids, mites, and grasshoppers have been dealt with as direct results of this research, spearheaded by WSU entomologists John Brown and Doug Walsh and PhD students Neal Kittelson and Gene Hannon. Special Local Needs permits were sought and granted for endosulfan, imidacloprid, and diflubenzuron, selectively targeting eriophyid mites, cottonwood leaf beetles, and grasshoppers, respectively. A mating disruption lure was registered for use in hybrid poplars in 2003. Use of this new aerosol has led to a reduction in use of higher-risk chlorpyrifos (Lorsban®) use on poplars. In all, this work has reduced chlorpyrifos use by 54,000 pounds and endosulfan use by 4,000 pounds annually.

From *IPM in Washington State: A 5-Year Report, Douglas B. Walsh, Washington State IPM Coordinator, Washington State University, Irrigated Agriculture Research and Extension Center, Prosser, WA. E-mail:* ***dwalsh@wsu.edu***.

Mark Your Calendar

2006

October

- IR-4 Ornamental Horticulture Workshop, Oct. 10–12, Denver, CO. Contact Cheryl Ferrazoli at (732) 932-9575, extension 601. ***http://ir4.rutgers.edu/Ornamental/OrnamentalWorkshop/index.html***
- Pacific Northwest Grass Seed PMSP, Oct. 19–20, Corvallis, OR.
- An IPM in School Tour and the National IPM in School PMSP Workshop, Oct. 23–25, Las Vegas, NV.

November

- Thirteenth Annual International Research Conference on Methyl Bromide Alternatives and Emissions Reduction, Nov. 6–9, Orlando, FL. ***http://www.mbao.org/***
- Biological Pest Control Agents: Communicating with the Regulated Community, Nov. 7–9, Washington, DC. Contact Chris A. Wozniak, USDA-CSREES, (202) 401-6020 or ***cwozniak@csrees.usda.gov***.
- Integrated Pest and Nutrient Management Options: Practices and Tools to Protect Water Quality and Crop Yields, Nov. 8–9, Corvallis, OR. ***http://isnap.oregonstate.edu/workshops/iSNAP_Nutrient_and_Pest_Management_Workshop.htm***
- The annual meetings of American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA), Nov. 12–16, Indianapolis, IN. ***http://www.acsmeetings.org/***
- National Soybean Rust Symposium, Nov. 29–Dec. 1, St. Louis, MO. ***http://www.apsnet.org/online/sbr/***

December

- 4th International Bemisia Workshop and International Whitefly Genomics Workshop, Dec. 3–8, Duck Key, FL. ***http://conference.ifas.ufl.edu/bemisia***
- Entomological Society of America Annual Meeting, Dec. 10–13, Indianapolis, IN. ***http://www.entsoc.org/annual_meeting/current_meeting/index.htm***

2007

January

- National Plant Diagnostic Network Meeting, Jan. 28–31, Orlando, FL.

May

- International Master Gardener Conference, May 2–5, Little Rock, AR. ***http://mg2007.uaex.edu/***
- 2007 Urban Extension Conference, May 7–10, Kansas City, MO. ***http://extension.missouri.edu/urbanconf/***

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

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.

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