

NEWSLETTER OF THE WESTERN INTEGRATED PEST MANAGEMENT CENTER

October 2007

Regional Workshop on Conservation Biological Control Leads to New Work Group Proposal

By Paul Jepson

It has been known for decades that producers may enhance pest suppression on their farms by conserving natural enemy populations and improve pollination by conserving native bees. In common with all ecologically-based management strategies, however, these conservation practices are far easier said than done. The best options for any particular farm must address the resource needs of the most effective natural enemy and pollinator assemblages for the cropping patterns and key pests in that specific location. Simple recipes for insectary plantings or habitat restoration are very unlikely to meet these rather specific needs, and many IPM researchers and extension faculty know that time, patience, planning, and on-farm experimentation are required to achieve positive results.

The buzz words of biodiversity and conservation now permeate the IPM literature and have been woven into farm support programs of the Natural Resources Conservation Service (NRCS) and into certification programs, including the National Organic Program. So, where does a producer go for science-based information and support for conservation biological control (CBC) and pollinator enhancement? In many states in the western region, research and extension faculty, crop consultants, and non-profit organizations have specialized expertise and knowledge to offer, but this is spread thinly across our vast region, leaving some large areas



A group of neighboring farmers helps to install a beetle bank at Whistling Duck Farm, in southern Oregon, at a Farmscaping for Beneficials Program farm walk.

without support. Where that expertise exists, however, it is among the best in the world, and many programs have the potential for impact well beyond their traditional geographic boundaries.

The Oregon IPM program, housed within the Integrated Plant Protection Center (IPPC) at OSU, initiated its own conservation biological control program, "Farmscaping for Beneficials," in 2003, coordinated by Gwendolyn Ellen. Gwendolyn, a former producer with deep roots in the nonprofit world, recognized from the outset that a

successful regional program could only happen if we were to integrate the talents of individuals from many organizations across our region.

On May 23rd in Portland Oregon, Gwendolyn led a WIPMC-sponsored workshop to establish a Western IPM Center Conservation Biological Control Work Group. The 30-person workshop included representation from universities in California, Washington State, Oregon, and Idaho, and other organizations including crop consultants, ATTRA-National Sustainable Agriculture Information Service, USDA Agricultural Research Service, NRCS, Small Planet Foods, and the Xerces Society. Significantly, it also included two producers. Over the course of a very successful day, this group developed its mission and a plan for its future program (Box 1).

As a key element of IPM, biological control is nonetheless often rather overlooked. By forming this work group, and building a regional presence over time, we may serve to redress this imbalance in western IPM programs and provide practical and useful information to the producers that are now actively seeking to promote ecologically-based pest management practices on their farms.

Paul Jepson is Director of the IPPC and Professor, Department of Environmental and Molecular Toxicology, Oregon State University, jepsonp@science.oregonstate.edu.

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Box 1

Mission of the WIPMC CBC Work Group

To foster collaborative approaches to communication, research, and outreach in order to preserve and enhance crop pollination by native pollinators and management of pests by predators, parasitoids, and pathogens in forest, rangeland, farms, and gardens in the western region.

Objectives

To foster collaborative research in conservation biological control and native pollinator conservation among researchers, farmers, conservationists, and land managers by the following methods:

- 1. Conduct stakeholder and researcher needs assessments.
- 2. Create a database/list server appropriate to the needs of the CBC work group.
- 3. Hold a symposium specifically to share research methods and project designs.
- 4. Prepare collaborative grant proposals.

Further details can be obtained from Gwendolyn Ellen (<code>gwendolyn@science.oregonstate.edu</code>), Coordinator of the Farmscaping for Beneficials Program in the IPPC at OSU, <code>http://ipmnet.org/</code>.

Director's Comments

As you read this issue of *The Western Front*, the Western IPM Center should have released the RFA for the Regional IPM Grants program. We expect to have approximately \$650,000 to fund research, research and extension, and extension only projects. The deadline for applications is December 7, 2007. The RFA for Western IPM Issues grants was released on August 23, with a due date for applications on October 26, 2007. The Center has approximately \$200,000 for this program. Please check our website, *www.wripmc.org*, for details.

For those of you who have been funded through the Western IPM Center over the past few years, I would like to thank you for your support and promptness in sending us progress and final reports. We have seen significant progress in IPM research and extension. Several projects, with not a lot of funding, have convinced producers to change the way they grow crops. Some sugarbeet growers in Idaho have adopted the use of green manures, thanks to research by Dennis Searle and the Amalgamated Sugar Company LLC. Water quality in Oregon and Washington has been positively impacted by the iSNAP program at Oregon State University. Partial funding for this project was provided by the WIPMC (see article in this issue). Dr. Juan Alvarez, University of Idaho, was funded to evaluate alternative tactics for wireworm control in potatoes. He was able to show that the pesticide fipronil (a non-organophosphate) is effective. Further, Dr. Alvarez evaluated timing of pesticide applications and found that later treatments were more effective. Fipronil recently received a tolerance on potatoes and should be available to potato growers soon.

The U.S. Department of Housing and Urban Development (HUD) is working with the Regional IPM Centers to develop an IPM curriculum and training for public housing managers and superintendents. The Centers will be working with local experts to put together the myriad of materials needed to conduct four initial workshops around the country. These "train-the-trainer" workshops will be designed to ultimately educate renters on IPM and reduce pesticide use in public housing. Additionally, educational materials will be developed in subsequent years for residents to view and read prior to moving into a unit. This cooperative arrangement is one of several that the Regional IPM Centers have entered into. The others include EPA field/ classroom training about specialty crops; soybean rust and aphid sentinel plots; and legume disease sentinel plots. These projects are expanding our contact bases, resources, and visibility and better serving the needs of our stakeholders.

All the Regional IPM Centers participated in two meetings with industry and government agencies in Arlington, VA, in August. The first day's meeting, "Food Industry Stewardship: Industry/Public Agency Summit," was organized by the IPM Institute of North America and co-sponsored by the US EPA Office of Pesticide Programs, Biopesticides and Pollution Prevention Division, Environmental Stewardship Branch. The second day's meeting, "Communications in IPM—Food Production Industry: Opportunities and Challenges," was sponsored by the National Science Foundation Center for Integrated Pest Management and hosted by USEPA. These meetings are discussed further in this issue.

Rick Melnicoe



Montana

IPM Coordinator/Assistant Professor of Entomology Position

The search to fill Sue Blodgett's position is under way, and the recruitment committee is happy with the applicant pool for this IPM Coordinator/Assistant Professor of Entomology position. Interviewing of shortlisted candidates began in late September.

New PAT Coordinator

Cecil Tharp, the new Pesticide Applicator Training (PAT) coordinator has come up to speed, filling Reeves Petroff's position. Follow the development of his program at http://www.pesticides.montana.edu/. One of Cecil's big projects is to improve the coordination of resources between the Montana Department of Agriculture and Montana State University (MSU) Cooperative Extension.

IPM Contact Database

Our Heirlogic Online "IPM Contact Database" is being put to use planning our annual Pest Management Training Tour to PAT Region 5 (scheduled for October) and the Crop Pest Management School (to be held in January). Testing of the database with these projects will lead to its application

for PAT purposes, including session attendance tracking and recertification credit reports.

Museum IPM

A steady trickle of museum IPM pests is coming into the MSU Schutter Diagnostic Lab as a result of the distribution of the MSU Museum IPM kit. A presentation about using IPM techniques to manage museum pests was made at the annual Museums Association of Montana conference in Missoula in March and was a popular topic. One of the things the presentation specifically addressed was how museum IPM applies to managing pest control contracts.

SARE Program Management Committee Meeting

A meeting of the Sustainable Agriculture Research and Education (SARE) Program Management Committee was successful. The tour and social activities were well attended by SARE representatives, producers, and MSU researchers. We hope the feedback from the interaction between producers and committee members was productive.

For further information, contact Will Lanier, Montana Integrated Pest Management Center, Montana State University, wlanier@montana.edu.

Two More PMSPs Completed: Potato (Revised) and Forages

The Western IPM Center has completed two more Pest Management Strategic Plans (PMSPs): a revised potato PMSP for Alaska, Idaho, Oregon, and Washington, and a PMSP for non-rangeland forages (excluding alfalfa) in the western states.

PMSPs address pest management needs and priorities for individual crops in specific states or regions as well as nonagricultural settings, such as schools.

The Western IPM Center serves as the clearinghouse for all regional PMSPs. Once a PMSP is approved it is posted on the National IPM Center's website at http:// pestdata.ncsu.edu/pmsp/.

Completed:

Revised Potato (Alaska, Idaho, Oregon, and Washington): Posted on the national website in July.

Non-Rangeland Forages (Excluding Alfalfa) in the Western States: Posted on the national website in late September.



Golf course in Hawaii, location of turf PMSP workshop in May.

Pending:

Papaya (Hawaii): Has been reviewed and workgroup comments are being incorporated into the final draft.

IPM in Schools (United States): Workshop was held in October, 2006, in Henderson, NV. Draft document for review is being developed.

Grass Seed (Idaho, Oregon, and Washington): Workshop was held in February in Corvallis. Draft document for review is being developed.

Sweet Cherry (Western States): Draft PMSP in development stage. A second oneday workshop is planned for late fall 2007.

Coffee (Hawaii): Workshop was held in April in Hawaii. A draft document for review is being developed.

Turf (Pacific Islands): Workshop was held in May in Hawaii.

Cotton, Revised (California): Workshop was held in May in Fresno, CA.

Cotton (Arizona and California Desert): Workshop was held in May in Phoenix, AZ. A draft document for review is being developed.

PMSP Brochure Available Online

A new PMSP brochure is available in PDF format on the Western IPM Center's website. The brochure highlights impacts of both the PMSP process and the final product and answers questions about what PMSPs are, how they are developed, and what they are for. Visit the Center's website at http://www.wripmc.org. (Limited hard copies are available upon request.)

Summit on Clean Water through Residential IPM Sparks Outreach Ideas

The "Green-Blue Summit: Clean Water through Residential Integrated Pest Management," (http://northeastipm.org/ greenbluesummit.cfm), held near Philadelphia on July 18–19, 2007, brought together more than 100 professionals interested in the connections between integrated pest management (IPM) and water quality in turf and structural settings. Presentations focused on water quality risks posed by pest management practices in residential landscapes and structures, and on educating the public about minimizing these risks.

Participants from private industry, government, land grant universities, and nonprofit organizations collaborated in workshops to identify key issues and develop strategies for educating consumers. Participants in the summit brainstormed project ideas, developing messages that would help to educate residents and suggesting creative ways of disseminating these messages (see Green-Blue Summit project ideas at http:// neipmc.org/greenblue/project ideas.htm). WIPMC Associate Director Linda Herbst attended the summit and found it very enlightening, especially with regard to structural pest management.

Elizabeth Myers, Writer/Editor, Northeastern IPM Center, ebm24@cornell.edu.

State Brief

Idaho

USDA-CSREES Grant for OnePlan IPM Planner

Ronda Hirnyck and Steve Reddy received a National Extension IPM Special Projects Program grant from USDA-CSREES for the OnePlan IPM Planner. The project begins in October and has a two year duration. This project initially began with seed money provided by the Western IPM Center through an "Addressing Western IPM Issues" grant in 2006. Ronda is the University of Idaho Pesticide Coordinator and the contact for the Western IPM Center's Idaho Information Network. Steve is a county educator in Washington County, Idaho. They will be working with the Idaho Association of Soil Conservation Districts and the state Natural Resources Conservation Service (NRCS) to develop a planning tool for producers that encourages the use of IPM strategies and tactics to help protect natural resources of concern. The planner will also serve as a recordkeeping tool for producers working with NRCS conservation plans and USEPA's Worker Protection

For more information, contact Ronda Hirnyck, Extension Pesticide Coordinator, University of Idaho-Boise, rhirnyck@uidaho.edu.

iSNAP Water Quality Education Project Impact Evaluation

The iSNAP Project

In the Northwest, the variable and unpredictable weather, as well as increasing regulatory concern regarding pesticides in surface waters, add to the complexity faced by producers. To address this challenge, the Integrated Soil Nutrient and Pest (iSNAP) Water Quality Education Project team members develop locally-relevant, skills-based approaches to IPM education to assist producers in achieving site-specific production and resource protection goals.

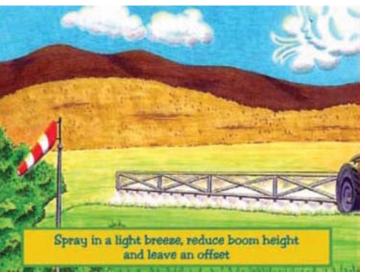
With support from the Western IPM Center, the Oregon State University Integrated Plant Protection Center, and USDA's Risk Management Agency, producer workshops were held in 2006-2007 in Oregon and Washington. Presenters included Paul Jepson, Oregon State University Integrated Plant Protection Center, and Sandy Halstead, USEPA (based in Prosser, WA). Using a suite of decision-support tools including customized weather data, producers now have more effective solutions to optimize pest management practices that prevent unacceptable levels of pest damage while posing the least possible risk to people, property, and natural resources.

Another recent output of the iSNAP Project is a concise, imaged-based fact sheet addressing the weather drivers of pesticide drift in English and Spanish (available at http://www. ipmnet.org).

iSNAP partnering organizations include USEPA, Oregon State University and Washington State University countybased Cooperative Extension, the Oregon Department of Environmental Quality, the Natural Resources Conservation Service (NRCS), Soil and Water Conservation Districts, the Washington Department of Ecology, the Washington State Department of Agriculture, and the Confederated Tribes and Bands of the Yakama Nation.

iSNAP Impact Evaluation

The purpose of a recent impact evaluation of the iSNAP Project was to determine how efficacious the iSNAP workshops were in impacting participant behavior. Twenty-nine producers attended the two February 2006 "Using Weather and Climate Information in Pest Management Decision Making" workshops in Oregon and Washington. Five months later a follow-up survey was sent by mail, and a response rate of 79 percent was achieved, with 23 completed surveys returned. Overall, the findings showed that the workshops were successful in supporting sustained



iSNAP recently published "Pesticide Drift Management," an illustrated fact sheet written by Paul Jepson with artwork by Nancy Babayco. Download the fact sheet in English or Spanish at http://www.ipmnet.org.

changes in participant actions. Completed surveys from the 23 responding producers documented that since the workshops:

- Almost three-quarters had considered sensitive sites before applying pesticides.
- Over half had used or intended to use online weather forecasts to make a pesticide application decision for the coming week.
- Eighty-seven percent of the participants had adjusted their spray equipment to reduce drift.
- Almost two-thirds intended to or were considering contacting NRCS about cost-share or other support
- One-third had installed buffers, one-third were considering it, and one-third did not intend to install vegetative buffers on their farms.

Educational programs were most often and consistently cited as the best means of increasing the likelihood that these producers would implement more IPM practices on their farms.

Mary Staben, iSNAP Program Coordinator, Oregon State University Integrated Plant Protection Center, (541) 737-2683, mary.staben@oregonstate.edu.

Western IPM Center Funding Update

This year, for the first time, proposals for Western IPM Center-funded grants must be submitted in electronic format through the Center's new Web-based proposal management system. The new system will streamline the Center's proposal submission, review, and reporting processes.

Work Groups & Information Networks

August 24 was the deadline for proposals for the Western IPM Center's Work Group and Information Network grants.

The 14 proposals received (seven for Work Groups and seven for Information Networks) were sent to reviewers in early September.

Addressing Western IPM Issues

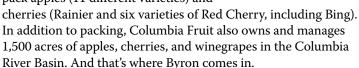
The "Addressing Western IPM Issues" request for proposals was posted on August 23, with a submission deadline of October 26. Funding of approximately \$200,000 is available for this competitive subcontracts program. Visit the Center's funding page for details, http://www.wripmc.org/Research.

PROFILE

Byron Phillips

IPM Consuntant, Columbia Fruit Packers, Inc.

Byron Phillips has served on the Western IPM Center's Steering and Advisory committees since 2005 as the tree fruits and crop consultant representative. Byron brings to the Center decades of pest management field experience and a grower's perspective on IPM needs as well as a passion for and commitment to research. Since 1990, Byron has worked for Wenatchee, Washington-based Columbia Fruit Packers, Inc., where he first served as a horticulturist and then, for the last seven years, as the company's IPM Consultant. Columbia Fruit is a privately-owned, mid-sized fruit packing company that will celebrate its 60th anniversary in 2008. They pack apples (11 different varieties) and



As the IPM consultant for all of Columbia Fruit's orchards and vineyards, Byron is on the road a lot, driving more than 1,000 miles every week. He visits every ranch at least once a week, and does all of the IPM field scouting himself, as well as running phenology models and advising onsite ranch managers about what to spray and when. Byron personally developed and implemented the current gamut of pest

management strategies used on the company's tree fruits.

On an average day, Byron gets up and logs on to his computer to check the weather forecast and to run phenology models to see where various pests may be in their development that day. Byron then drives to his first orchard of the day and walks through different blocks doing his own field scouting. After the scouting, he visits the ranch's weather station to cross-check and confirm the phenology models, comparing what the weather stations and models say against the predator-prey activities he's seen as he's scouting. Based on his analysis of all of this, he writes pest

management recommendations and talks to the ranch manager about them.

The chief pests Byron currently deals with include codling moth, which is the number one pest in the company's apple orchards and drives all of their IPM strategies in apples. As the company has removed the use of organophosphates (OPs), however, an emerging pest in apples is the woolly apple aphid. The cherry fruit fly drives the company's IPM strategies for cherries.



Byron Phillips

"It's fascinating to sit at the table with other members who represent the broad diversity of agricultural systems and political and philosophical viewpoints that exist in the Western Region. all with the common goal of advancing IPM."

Byron says that one of the biggest pest management issues currently facing the tree fruit industry is export tolerances for OP replacements. There are many new products that were fast-tracked as OP replacements and do not yet have export tolerances. Byron sits on the Science Advisory Committee of the Northwest Horticultural Council. The NHC has been seeking input from its members on which products, markets, and commodities are most critical and then contacting the registrants to try to persuade them to get tolerances.

Asked to name his favorite thing about his job, Byron said, "I love pest management, entomology, biological control, and phenology models, and my

work is never the same from one day to the next." He added, "And the nice thing about my company is they give me a lot of autonomy to do my own research." Byron has more than 50 research plots located across Columbia Fruit's ranches. Last year he ran 30 different plant growth hormone plots and 30-40 woolly aphid plots. He says, "That's a fairly typical year." Byron's passion for research is the chief reason he currently serves on at least seven committees, commissions, and boards. He reviews 200-250 research proposals a year.

Byron is very proud that from 2004–2006, Columbia Fruit

reduced their OP use by 68% (and their azinphosmethyl use by 73%). The company is headed for a no-OP pest management program, and all of the products they now use are sustainable.

Byron finds serving on the Western IPM Center's Steering and Advisory Committees very rewarding. He says, "It's fascinating to sit at the table with other members who represent the broad diversity of agricultural systems and political and philosophical viewpoints that exist in the Western Region, all with the common goal of advancing IPM. I always come away with a renewed sense of energy and excitement about the future of IPM."

Byron has two degrees from Wenatchee Valley College, including an Associate in Applied

Arts degree in Agriculture. He was born in Seattle but grew up in Montana around cattle and wheat. In high school he rode bulls competitively, and now he loves to fly fish in his spare time. He is a certified United States Swimming Referee and runs swim meets. Byron and his wife, Debby, recently celebrated their 29th anniversary. They have two daughters, the younger of whom is beginning her senior year at Pfeiffer College in North Carolina, where she attends on a swimming scholarship. Contact Byron at byron@columbiafruit.com.

Oregon's Integrated Plant Protection Center Seeks to Improve Agricultural Sustainability and Food Security

By Paul Jepson

The ultimate goals of the Integrated Plant Protection Center (IPPC) program in Oregon are to improve agricultural sustainability and food security in Oregon, the Pacific Northwest, and beyond. In doing so, we will also contribute significantly to meeting the goals of the National Roadmap for IPM. Between 2002 and 2006, the top priority of the State IPM Coordinator for Oregon has been to establish a program that has the capacity to make significant progress toward meeting these goals.

The IPPC has established a core facility that continues to deliver certification programs for pesticide applicators; develops and delivers



Spray application technology and drift management outreach has been a key aspect of the IPPC outreach program in the past five years.

tools, services, research, and education programs that enable IPM adoption; establishes and maintains communication networks within and among IPM stakeholders; builds Pest Management Strategic Plans for Pacific Northwest commodities; channels significant resources beyond IPPC that enable research and outreach; and creates participatory research programs with producers.

The growth of the IPPC from six to 13 staff has been enabled by an expanded portfolio of competitive grants that has grown from 14% of our budget in 2002 to 43% in 2006. In 2006, IPPC returned \$8.87 in external funding for every dollar

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State Brief

Arizona

Gray Leaf Spot

Gray leaf spot (GLS) was recently diagnosed by the University of Arizona Turfgrass Disease Diagnostics Lab in the perennial ryegrass fairways on a golf course in northern Arizona. This is the first report of this devastating disease in Arizona, though it had previously been observed in Nevada, California, and Colorado. Incited by the fungus Pyricularia grisea, GLS can cause significant and rapid damage when warm day and night temperatures are coupled with extended high humidity, promoting periods of prolonged leaf wetness. Cultural control measures include the use of disease-resistant perennial ryegrass varieties, avoiding excess nitrogen, reducing traffic, and lowering the height of cut. Several fungicides have been shown to be very effective for controlling this disease; however, precautions must be taken to avoid development of fungicide resistance. For more information contact Gabriel Towers, (602) 470-8086, ext. 834, gtowers@cals.arizona.edu, or Kai Umeda, (602) 470-8086, ext. 314, kumeda@cals.arizona.edu.

Western Region School IPM Implementation and Assessment Work Group

The Western Region School IPM Implementation and Assessment Work Group was established with Western IPM Center funding in 2006 to encourage collaboration among universities, state agencies, federal agencies, industry, and advocacy groups working to encourage and enhance successful implementation of IPM in schools in the western region. The level of interest and engagement of diverse state partners in this work group has exceeded all of our expectations. From our initial membership of 15 contacts from seven states on the grant application, we have expanded to 30 participants from nine states throughout the western region (AZ, CA, CO, MT, NV, OR, UT, WA, and WY). In our first year, we completed an inventory of available school IPM contacts and resources in the West. The

group met in Portland, September 24-25, to discuss state programs and resources and identify regional objectives and priorities. For more information contact Dr. Dawn Gouge, (520) 381-2223, dhgouge@ag.arizona.edu. Additional state contacts include Carrie Foss (Washington), Tim Stock (Oregon), William Lanier (Montana), Alexandre V. Latchininsky (Wyoming), and Assefa Gebre-Amlak (Colorado).

The Crop Insect Losses and Impact Assessment Work Group

The Crop Insect Losses and Impact Assessment Work Group was established with Western IPM Center funding in 2003 to facilitate the collection of accurate, "real world" data on crop insect losses through a face-to-face survey process. Crops surveyed include cotton, melons, and lettuce in Arizona and the low desert regions of California. In 2006–2007, we held seven interactive workshops involving 107 stakeholders in three states, including a pilot cotton insect losses session in Lubbock, TX. The data collected include metrics on insecticide use patterns, costs, targets, and frequency, and crop losses due to various stressors of yield and quality, and will provide an objective basis for assessing change in our systems. Recently updated cotton insect losses data are available online at http://ag.arizona.edu/crops/cotton/insects/cil/cil.html.

Lygus in Arizona Cotton

A recent article published by the University of Arizona used cotton insect losses survey data and a statewide pesticide use reporting (PUR) database to quantify the economic impact of *Lygus* spp. in low desert upland cotton production in Arizona. Read the full article at http://cals.arizona.edu/pubs/crops/az1437/az14374a.

For further information, contact Al Fournier, IPM Program Manager and Associate Director, Arizona Pest Management Center, fournier@ cals.arizona.edu.

Two Sustainability Meetings Held: "Food Industry Stewardship: Industry/Public Agency Summit" and "Communications in IPM—Food Production Industry: Opportunities and Challenges"

The purpose of two national meetings held in Arlington, VA, on August 1-2, 2007, was to bring industry and government agencies together to discuss recent trends toward sustainability in the food production, processing, and distribution industries.

Day One: Food Industry Stewardship: Industry/Public Agency Summit

The objective of the first day's meeting was for companies and government agencies to share information on current initiatives. Many companies are now requiring, or considering requiring, their suppliers to produce their products in more sustainable ways. Most notable are initiatives from Gerber, Wal-Mart, McDonalds, SYSCO, and others.

What was clear from these meetings is that a lot of companies are very serious about sustainability, but no one has a clear, universally accepted definition of "sustainability." The term "Integrated Pest Management" is not commonly used in these programs, yet it is the cornerstone of each. What companies might require of suppliers varies from company to company. SYSCO allows reciprocity of certifiers, but it is still a wide open field of confusion and cost for many producers.

Of interest is that several large companies have appointed a high-level person to lead their sustainability initiatives. These companies believe it is the corporation's social responsibility to have such programs. Not all companies are touting this to the end buyer, but it is often seen in annual reports and on corporate websites.

Public knowledge of sustainability (and IPM) is rather low. Fully engaged consumers represent less than 20% of the American public. These consumers understand relatively well what sustainability means. The remainder of Americans do not truly understand the term, but when told what some components are, think it is a good idea. Few consumers actually go out of their way to spend more on "sustainably" produced products. Europeans tend to be more aware of these issues than Americans. Awareness campaigns being developed such as "buyipm.org" may increase public knowledge and appreciation for IPM through simple messages.

Meeting participants broke out into small groups to address the questions:

- How can we improve efficiency and impacts by increasing communication and collaboration?
- Where do we have opportunities to reduce duplication of effort by producers, processors, distributors, and retailers?
- How can we improve impacts by targeting areas of greatest need/potential?
- How can we improve impacts through measurement and reporting?
- How can public agencies provide support and incentives?
- What's the potential for preferential purchasing of welldocumented sustainable goods and services by public agencies?

- Can we develop common messages to consumers to improve the accuracy and scope of consumer perceptions about sustainable agriculture and food systems?
- How can we move "green" pest management for food-related facilities forward?
- What tools do we need in order to improve pesticide product selection to minimize impacts on health and environment?
- How do we enhance synergies with existing programs including USDA Organic, Food Alliance, Protected Harvest, etc.?
- What's our potential to collaborate with international trading partners?
- What are near-term potentials for addressing food safety concerns in conjunction with sustainability/stewardship efforts?

As might be expected, there was not complete agreement on the answers to all the questions, and the attendees felt there is a long way to go.

This meeting was organized by the IPM Institute of North America and co-sponsored by the US EPA Office of Pesticide Programs, Biopesticides and Pollution Prevention Division, Environmental Stewardship Branch, Tom Brennan, Chief.

Day Two: Communications in IPM—Food Production Industry: Opportunities and Challenges

A smaller group attended this meeting. The goals were to identify challenges, identify opportunities to address these challenges, share information on current and potential initiatives in government and private industry, and explore ways for better communication and collaboration.

Perspectives of the previous day's meeting from public agencies, industry, processors, and a consumer research organization were presented. Not everyone was (is) in agreement on where the food production industry is, where it is going, or how to get there.

Discussion of standards took up much of the rest of the day. The attendees heard from United States- and European-based companies. No single standard for sustainability exists. In fact, there are many standards world-wide. One attendee mentioned that his company had tried to find the common elements of many of these programs. To most everyone's surprise, only about 7% of these elements were common. This fact will make developing a single standard quite difficult.

It was obvious to all that there is a long way to go for common elements, consumer understanding, and how much government participation should occur. No one seemed to want to put anything into regulations.

The second day was sponsored by the National Science Foundation Center for Integrated Pest Management and hosted by US EPA.

Further meetings are planned, and we will report outcomes as they occur.

Rick Melnicoe

of support that it received from Oregon Oregon State University (OSU) and the federal IPM allocation. We awarded \$502,346 in grants and contracts beyond the IPPC between 2002 and 2006, with a further \$319,146 already in hand for this purpose in 2007 and 2008.

The new WIPMC-supported IPPC website, http://ipmnet.org/, attracted approximately 36,000 visits per month to its new content over the first few months of operation in 2006. It also provides access to long-standing Web services, including 1) IPMnet NEWS, http://ipmnet.org/ipmnews/main_page.html, which now reaches over 5,000 subscribers in at least 149 countries; 2) pest and crop models, http://ippc2.orst.edu/wea/, which have expanded from 3-state to 48-state coverage; and 3) the online Pacific Northwest IPM Handbooks, http://ipmnet.org/ipm_handbooks.htm, which attracted more than 744,000 visits in 2006.

We have also developed new programs, including "Farmscaping for Beneficials," http://ipmnet.org/beetlebank/farmscaping_for_beneficials.html; iSNAP (the Integrated Soil, Nutrient, and Pest Water Quality Education Program), http://isnap.oregonstate.edu/; a program of research in West Africa in partnership with the United Nations Food and Agriculture Organization, supported by the Global Environment Facility; and an IPM Coordinator outreach program, delivered by the Director, that has contributed 94 presentations, farm walks, or workshops in the last five years.

All of the above has relied upon a large network of collaborators, and our future development as a Center will depend upon continued networking and engagement within OSU, supported by our participation in the programs of the Western IPM Center.

Paul Jepson is Director of the IPPC and Professor, Department of Environmental and Molecular Toxicology, Oregon State University, jepsonp@science.oregonstate.edu.

Center Funding for Curly Top Virus Work Group Yields Additional Grant

The Western IPM Center awarded \$10,000 in 2004 to principal investigator Rebecca Creamer, New Mexico State University, to convene the "Curly Top Virus Biology, Transmission, Ecology, and Management Work Group" to assess the status of beet curly top virus and set priorities for research. The work group included university, government, extension, and commodity-based individuals. Rebecca recently expressed her appreciation for the funding, saying, "I found the funding extremely helpful in bringing together interested, like-minded individuals. The contacts and viewpoints from different states and different disciplines have advanced not only our willingness to work together, but the approach to carrying out the science. This was an excellent means of encouraging interdisciplinary research and understanding."

Rebecca and colleague, Greg Walker, University of California, Riverside, recently received a two-year, \$80,000 grant from the Southwest Consortium on Plant Genetics and Water Resources for their project entitled, "Mechanism of Resistance to Curly Top Virus and its Beet Leafhopper Vector in Tomatoes."

Contact Rebecca Creamer at creamer@taipan.nmsu.edu.

Mark Your Calendar

2007 October

- 2007 American Society of Landscape Architects (ASLA) Annual Meeting & EXPO, Oct. 5–9, San Francisco, CA. www.asla.org/nonmembers/ meetings.html
- IR-4 Ornamental Horticulture Workshop, Oct. 10–11, Cherry Hill, NJ. http://www.ir4.rutgers.edu/ Ornamental/OrnamentalWorkshop/index.html
- 2007 Environmental Sensing Symposium, Oct. 25–26, Boise State University, Boise, ID. http://institute.inra.org/ess/
- 2007 Annual International Research Conference on Methyl Bromide, Alternatives and Emissions Reductions, Oct. 28–31, San Diego, CA. http:// mbao.org/

December

- 55th Entomological Society of America Annual Meeting, Dec. 9–12, San Diego, CA. http://www. entsoc.org/
- 2007 National Soybean Rust Symposium, Dec. 12–14, Louisville, KY. http://www.apsnet.org/ online/SBR/

2008 January

- Hops Pest Management Strategic Plan, Jan. 22, Portland, OR.
- Western Plant Diagnostic Network Annual Meeting, Jan. 7–9, Phoenix, AZ.

March

• SARE 20th Anniversary Conference, March 25–27, Kansas City, MO. www.sare.org/2008conference

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

Center Scope

The Western IPM Center 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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