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The Pest Management Newsletter:

News from the Agriculture and Agri-Food Canada Pest Management Centre

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Canada

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About the Pest Management Centre

Agriculture and Agri-Food Canada (AAFC) established the Pest Management Centre (PMC) in 2003 to implement the Pesticide Risk Reduction Program (PRRP) and Minor Use Pesticide Program (MUPP). The PRRP focuses on the development of risk reduction strategies for the Canadian agriculture and agri-food sector, while the MUPP responds to the needs of Canadian minor crop growers for increased access to new minor uses of pesticides. The PMC operates from its headquarters in Ottawa and at nine research centres (Kentville, Nova Scotia; Bouctouche, New Brunswick; Saint-Jean-sur-Richelieu, Quebec; Vineland, Ontario; Delhi, Ontario; Harrow, Ontario; Scott, Saskatchewan; Summerland, British Columbia; and Agassiz, British Columbia) where field, greenhouse and growth chamber trials are conducted.

For more information about the PMC, please visit our website at www.agr.gc.ca/prrmup

Contact information

For more information about any of the items in this issue of the newsletter, please contact the PMC via email at pmc.cla.info@agr.gc.ca or call 613-694-2457.

Confronting an Old Enemy

If you happen to notice honey-coloured dots sprouting from the moist earth of a bean field, you might mistake them for some kind of inoffensive mushroom. But they're not mushrooms and they're far from inoffensive. They're a telltale sign of white mold infection, the scourge of carrot, canola and dry bean growers across Canada.

A fungus called *Sclerotinia sclerotiorum* is the culprit behind the mold, which inflicts substantial damage on these important crops every year and places severe curbs on their sustainable production. "Almost every bean field in southern Alberta has the fungus," says Alberta Agriculture and Rural Development's Dr. Ron Howard, who has been involved in white mold research for many years. "In severe cases it can infect 60 to 70 percent of a crop and cut the yield in half, which can be devastating for a grower."

Apothecia of the pathogenic fungus *Sclerotinia sclerotiorum*

Fungicides fall short

There are three traditional ways of managing the disease: spraying the plants with fungicides when they're flowering; crop rotation away from susceptible crops to break the disease cycle; and, when they are available, using resistant cultivars of crops like dry bean. These approaches work best when used together, but unfortunately there is a diminishing number of fungicides available, a situation caused by the withdrawal of some products from the market and the phasing out of others. Industry, government and growers have consequently been looking for alternative controls for Sclerotinia rot in carrot, canola and dry bean crops. Ideally, such controls would be compatible with an integrated pest management strategy against the disease and would contribute to lowering pesticide risk.

The need for new approaches was abundantly clear by 2003, and it was at this point that the Pesticide Risk Reduction Program (PRRP) entered the picture. The PRRP is a joint program of the Pest Management Centre (PMC) and the Pest Management Regulatory Agency (PMRA), and white mold control fell neatly under its mandate to design pesticide risk reduction strategies while improving growers' access to safer controls for specific crops.

Coordinated by and partially funded through the PRRP, the various stakeholders, researchers and government specialists continued their efforts to address the problem. They focused on the three priority crops — dry beans, carrots, and canola — that have been targeted within the broader risk-reduction strategy for white mold. In 2006, the Dry Bean White Mold Working Group and the Carrot White Mold Working Group were set up under PRRP leadership, and, at the same time, the Canola Council of Canada established its own Canola Working Group as part of a larger pest-management approach for this particular crop.

Clearing the way for Contans

One potential new control for the mold was the biopesticide Contans® WG, which European and U.S. growers had been using for several years. Its active ingredient is the fungus *Coniothyrium minitans*; when

worked into the soil, this organism parasitizes and kills the soil-borne, overwintering bodies of the *Sclerotinia* fungus. However, Contans was not yet approved for use in Canada, so in 2006 the PRRP began funding the assessment of the product for white mold control and helped the company develop the data package required for registration. As a result, in June 2007 the PRRP submitted the Contans package to the PMRA for regulatory review.

Progress since then has been brisk, especially with carrots. Preliminary field trial results, highlighting the benefits of Contans for this crop, have been presented to carrot growers, and publication of the related extension literature is on the way. On the dry bean and canola front, the PRRP and its partners in industry and the provinces have been equally busy. "We've begun major demonstration trials with beans and canola in southern Alberta," says Dr. Howard. "They're the biggest trials of Contans ever done in Canada, and will be carried out over the next three years. Among other things, they'll demonstrate the best ways for growers to use the product — whether they should apply Contans the autumn before they plant a susceptible crop, for example, or whether it works better if they apply it to a currently infested field."

Such speedy progress means that Contans should be commercially available to Canadian growers of carrots, beans and canola in early 2009, in plenty of time for the growing season. The product will likely be registered for several other crops at the same time, giving up to 11 new uses for this adaptable biopesticide.

Carrots: Just a trim, please!

Biopesticides aren't the only controls under investigation. A new but surprisingly simple one is the carrot trimmer, a tractor-drawn implement developed with PRRP support by Agriculture and Agri-Food Canada's (AAFC) scientists at Harrington Research Farm in Prince Edward Island. The machine laterally trims the canopy leaves of several rows of carrots at a time, increasing airflow between the rows and leading to decreased soil moisture and higher air temperatures around the plants. This change in the canopy environment discourages the growth of Sclerotinia rot and reduces the need for fungicides while leaving yield unaffected. AAFC scientists in PEI and the PRRP have been working hard to tell farmers about the trimmer and, as a result, at least two commercial farms — one in Nova Scotia, the other in the U.S. — are already using it.

Knowing the enemy

Accurate, detailed information about white mold infection is a third anti-Sclerotinia weapon on which the PRRP has concentrated its efforts. To help growers spot the disease, estimate its severity and make informed control decisions, the Canola Council of Canada has produced the Canola Disease Identification and Sclerotinia Risk Assessment Card. The card was printed with PRRP funding and distributed during 2006–2007 to farmers, crop consultants and agri-dealers across the Prairies.

All these approaches to white mold control have a common purpose, which is to become part of an integrated, reduced-risk strategy for controlling the disease. There is no single answer to the pest, but Contans, carrot trimming and advanced educational materials, among other tools, will provide growers with powerful new weapons against this old and dangerous enemy.

Minor in Name but Not in Nature

As any grower of low-acreage, high-value crops will tell you, stopping a pest in its tracks can spell the difference between a good year and a bad one. Insects and disease can hack big chunks out of a small operation's bottom line almost overnight, so growers of these "minor crops" — fruits, herbs, vegetables, nursery stock and landscaping plants, to name a few — are always looking for better ways to keep the pests at bay.

Such crops are called "minor" not because they're of little value but because they're grown on small acreages, and they face the same pest management

challenges as major crops. Manufacturers worldwide have developed a broad range of minor-crop pest-control products, which are in common use outside Canada, but many of these controls have remained beyond the reach of our growers since they've never been registered here. This is because Canada's minor-crop operations don't have the collective acreage to constitute a large enough pesticide market, so manufacturers haven't found it cost-effective to pursue Canadian registrations for many potentially useful products.

MUPP to the rescue

The PMC's Minor Use Pesticide Program (MUPP) is helping to change all that. Through field trials carried out at its minor-use research sites, the MUPP generates data to support regulatory submissions to the PMRA, and by doing so encourages pesticide manufacturers to register their products for Canadian use.

The MUPP is built on a foundation of nine research sites across Canada, where its field research teams carry out a variety of tasks for the PMC. Each team consists of a test site manager, a principal investigator, a technical assistant, an archivist and, during the summer, student assistants. Together they conduct the field, greenhouse and growth-chamber trials that determine pesticide efficacy, crop tolerance to pesticides and, for food crops especially, the magnitude of pesticide residues. These teams, whose members must all have Good Laboratory Practice training and certification as required by the PMRA, conduct about 350 such trials every year.

Because they're strategically located in farming communities across the country, the team members are very much on the PMC's front lines, and participate regularly in local grower meetings, field days, seminars, tours and conferences. By sharing their experiences among themselves and with the rest of the PMC, they create an important forum for exchanging information and help keep the PMC's programs abreast of minor-crop issues in Canada.

How it works

The PMC holds a research planning meeting each January at which it assigns MUPP trials to the nine research sites according to climatic conditions, growing zones and the likelihood of pest occurrence. This allows the research teams plenty of time to plan and refine the trial designs and protocols in cooperation with the project coordinators and study directors involved. Each site is responsible for at least 25 trials.

The principal investigators conduct most of these trials in the sites' own experimental fields, although others may be carried out on land belonging to growers collaborating with the PMC. Such collaboration provides the growers with first-hand knowledge of the MUPP and gives the investigators an opportunity to work with them on the acreages where the pests are naturally active. This improves the likelihood of achieving successful trials, particularly in pesticide efficacy.

Unity in diversity

The research sites are located across all but one of Canada's growing zones. This diversity helps the PMC find places where the target pests are a particular problem, which is also where the MUPP trials will provide the most revealing data. This variety of available environments has allowed the PMC to conduct most of its MUPP trials in-house, on its own research sites.

Despite the wide geographic distribution of the sites, however, the research teams are in continuous touch with PMC headquarters staff. This regular communication is vital to the success of the trials, because it ensures that the research teams are involved in activities such as experimental design, pesticide application rates, the selection of equipment and, where necessary, the controlled introduction of the target pests to the trial site.

Since the MUPP began in 2002, its research teams have completed more than 1,300 trials and have contributed to new registrations that have made more than 395 additional minor uses of pesticides available

in Canada. Along the way, they've gained valuable experience with the various pests that affect Canadian growers, and it's abundantly clear that they're playing a pivotal role in the success of both the MUPP and the PMC — as you'll see in the next article, "Down in the Valley," about the busy MUPP research site in Kentville, Nova Scotia.

Down in the Valley

Located at the eastern end of Nova Scotia's lush Annapolis Valley, the town of Kentville has been an agricultural and business centre for almost two centuries — and for nearly half that time it's been home to an agricultural research station operated by the Government of Canada. Now called the Atlantic Food and Horticulture Research Centre (AFHRC), the station has 26 scientists and about 100 support staff, and is one of nine research sites that contribute to the PMC's MUPP. In this capacity, the research site conducts field and greenhouse trials to generate the data on pesticide residue, efficacy and crop tolerance that is required to support the registration of pest control products.

The minor use research team in Kentville is composed of a test site manager, a principal investigator, a technician and an archivist. Julia Reekie is the site manager and archivist and is responsible for overseeing program operations and maintaining site records. Principal investigator Heather Peill conducts the field trials, collects data and compiles reports, while research technician Rick Pineo assists with the trials and other research related work. During the summer, the team also hires students from universities and technical colleges to help with the heavy workload of the growing season.

Each Kentville project begins in January, when the team members attend the PMC's annual research planning meeting in Ottawa. During the meeting, the team helps select the 25 field trials they'll conduct over the coming months, which are carried out on the 188-hectare AFHRC site, on the nearby Sheffield Research Farm or on privately owned fields that growers have offered for specific projects. The Kentville AFHRC station is also equipped with greenhouses and controlled-environment growth cabinets, and some trials are conducted in these facilities.

Since 2003, the team has carried out trials related to 53 projects dealing with pest control for many of the region's major crops, which include lowbush blueberries (Nova Scotia's most valuable cash crop), highbush blueberries, apples, pears, strawberries,

Atlantic Food and Horticulture Research Centre

From left to right: Julia Reekie, Heather Peill and Rick Pineo

broccoli, carrots, onions, potatoes, cauliflower and spinach. Of these projects, 18 have dealt with weeds, 14 with disease and 21 with insects. Some trials have assessed the effectiveness of a pesticide for controlling pest outbreaks in a crop, others have ensured that the product is harmless to the crop being treated, and still others have measured the amount of pesticide remaining in the crop after harvest.

Like its eight sisters, Kentville's MUPP research site plays an indispensable role in adding new product uses to the anti-pest armoury of Canadian growers. In the capable hands of its research team, those rows of young green plants, neatly laid out under the blue Annapolis Valley sky, are much more than blueberries, carrots and cauliflower — they're a promise for the future.

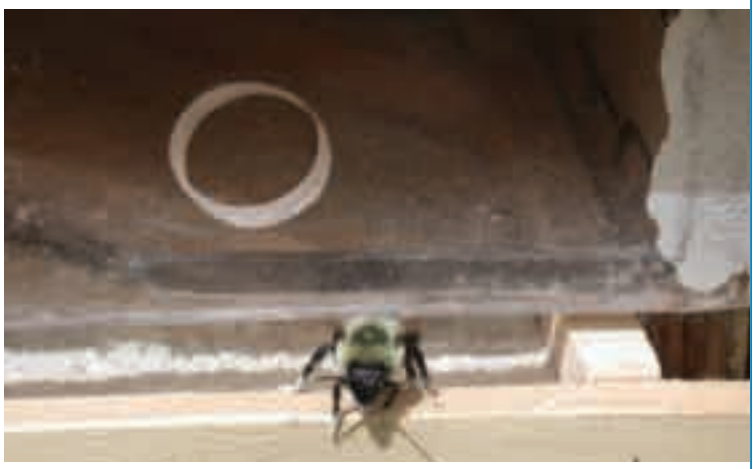
Bumblebee Air Delivery

Bumblebees, as everybody knows, have been perfectly equipped by millions of years of evolution to move pollen from flower to flower. Then why, one might ask, couldn't we arrange for them to work just a little harder and air-deliver some other substances as well? The bumblebees wouldn't care, and their extra labour might help the many greenhouse growers who use these peaceful little creatures to pollinate their crops.

The researchers who posed this question realized that bumblebees might make an ideal airborne delivery system for the microbial agents used in controlling greenhouse pests. First, the bumblebees would carry the agent only to the most vulnerable parts of the plant. Second, bees are proverbially energetic, which meant they'd deliver a continuous barrage of the agent to each plant, thus targeting a pest throughout its life cycle.

To find out how well the method might work, the PMC funded a pair of research projects that focused on two microbial agents used effectively with greenhouse tomatoes and sweet peppers. These agents were the bioinsecticide BotaniGard®22WP (*Beauveria bassiana*), which controls both whitefly in tomatoes and tarnished plant bug in sweet peppers, and the inoculum EndoFine® (*Clonostachys rosea*), which suppresses grey mold (*Botrytis cinerea*) in the same two crops.

To load the bees with their microbial cargo, the researchers attached wooden dispensers to the hives. As the bees left home via the dispensers they were dusted with the agent, which they then carried directly to the plants. The trial results revealed that bee health was maintained. *B. bassiana* delvered by bumblebees suppressed whitefly and tarnished plant bug by approximately 50 to 70 percent.



Bee leaving hive through biocontol dispenser

Further trials showed that the bees could successfully distribute two biocontrol agents at the same time. For grey mold control, *C. rosea* was added to *B. bassiana* in the dispensers; the combination suppressed grey mold by 55 percent and whitefly and tarnished plant bug by 65 percent. In all cases, pollination was as successful when bees carried the biocontrols with them as when they did not.

Using bees to apply these agents is an alternative, non-chemical method of pest control that can help greenhouse growers produce high-quality tomatoes and sweet peppers in a sustainable way. The approach is highly compatible with the integrated pest management programs commonly employed in greenhouses, and minimizes effects among other beneficial insects used in greenhouse operations. And the bumblebees would certainly approve, because they like healthy plants at least as much as the greenhouse growers do.

Entomological Society of Canada Annual Meeting

Representatives of the PMC attended the Joint Meeting of the Entomological Societies of Canada and Ontario at the Crowne Plaza Hotel in Ottawa on October 19–22, 2008.

With more than 300 participants from Canada and abroad, the meeting covered diverse topics in insect ecology, agriculture, forestry, systematics, biodiversity and conservation, with special emphasis on invasive species in Canadian agro ecosystems. The meeting also celebrated 60 years of collaboration between Canada and CAB International in the field of biological control.

For the PMC's PRRP, **Marilyn Dykstra** delivered a presentation on strategy development with examples of research projects in agricultural entomology funded by the Program. For the Pesticide Minor Use Program, **Shai Ben-Shalom** presented a poster highlighting the numerous roles of the PMC, from setting national priorities to submitting products for registration. The poster also demonstrated the process of data generation by presenting the results of a successful efficacy trial conducted on strawberries by **Serge LeBlanc** and his Minor Use Team in Bouctouche, New Brunswick. Other PMC employees also attended for part of the time, to hear about the latest entomological advances and to network with other professionals in the field of insect pest management.

West Coast Perspectives

Audrey Saparno is a project coordinator for the PMC's PRRP. In the summer of 2008, she spent several days at research sites in British Columbia and sent us the following highlights of her visit.

As a PMC project coordinator, I stay current with projects funded under our PRRP, usually through phone calls and electronic reports. But I gain a further hands-on understanding of project challenges and accomplishments when I meet the project leads at the locations where the research is actually conducted. That is why I was on the lower mainland of British Columbia this past summer, visiting three research sites and a commercial operation at Agassiz, Abbotsford and Langley, just east of Greater Vancouver.

Pacific Agri-Food Research Centre at Agassiz

At the Agassiz site of AAFC's Pacific Agri-Food Research Centre, Dr. Bob Vernon gave me an extensive overview of his current work to protect potato and wheat crops from wireworm. Current controls rely heavily on hazardous organophosphate pesticides that will eventually be withdrawn from use, so Dr. Vernon is developing alternative methods in anticipation of the phase-out. As he led me through the rows of potatoes and stands of wheat that were the subjects of his experiments, I was impressed by the enthusiasm that he and his team showed for these new controls.

In Abbotsford, Dr. Janice Elmhirst of Elmhirst Diagnostics gave me a tour of a raspberry fungicide screening trial and took me through two ornamental nurseries. The raspberry trial is a project funded by the PMC as part of its efforts to identify products that show potential for controlling priority pests. Preliminary results look promising and show progress in identifying alternative fungicides for Phytophthora root and crown rot. As the main scout for Van Belle's and Nats Nurseries, Dr. Elmhirst made a point of showing me the challenges of controlling pests and diseases in nursery establishments; this is a highly complicated business because of the need to keep diverse species healthy at all stages of growth, even in the nurseries' limited spaces.

In Langley, I met with Peter Isaacson and Dr. Deborah Henderson at Kwantlen University College. Both have been project leads for Pesticide Risk Reduction projects, and Peter has recently completed a project to demonstrate how growers in the nursery sector can incorporate newly available biopesticides into their integrated pest management systems. It was especially exciting to learn about the new research bioproduction facility the college is building, which will be in operation by the spring of 2009.

During my time in B.C., I was pleased to meet many project leads and to speak with commercial growers. Everyone expressed great pleasure at being able to show their work and facilities to a PMC staff member and, for my part, I gained a new and valuable perspective on the pest management issues that the PRRP addresses through its funding. The insights I gained on this visit have given me a better appreciation for the challenges faced by growers, as well as new knowledge I can apply in developing practical, reduced-risk pest management strategies.

NAFTA Technical Working Group on Pesticides Meeting with Stakeholders

The NAFTA Technical Working Group on Pesticides (TWG), made up of pesticide regulators from the governments of Mexico, Canada and the U.S., was established in 1996 to address trade irritants and coordinate regulatory approaches on pesticides. The TWG meets semi-annually to discuss pesticide issues in the NAFTA context.

Once each year, stakeholders are invited to meet with TWG representatives from the three countries, to hear about international efforts to harmonize regulations and to bring forward their areas of concern. Shirley Archambault of the PMC is a participant in this TWG, which includes representatives from the US-IR4 program as well.

At the November 2008 stakeholder meeting, a focus was placed for the first time on biopesticides and on the issues associated with their successful integration into Integrated Pest Management (IPM) systems. A breakout session involving researchers, crop protection companies, growers and government personnel, including PMC's Biopesticide Coordinator Tobias Längle, was held to generate ideas to improve the adoption of biopesticides on farms. Tours of farms that use biopesticides in both IPM and organic growing systems were conducted for the meeting participants.

The PMC and its partners from the PMRA, the U.S. IR-4 program and the U.S. Environmental Protection Agency announced a new initiative to conduct cooperative biopesticide demonstration trials in Canada and the U.S., beginning in 2009. This approach, which provides large-scale demonstrations to familiarize growers with biopesticides, was applauded by stakeholders who see grower uncertainty about how to use these new products as a key barrier to their more widespread adoption.

More information about the cooperative biopesticide trials will be provided in the next edition of the PMC Newsletter.

Regulatory Submissions and Registrations

The process of registering a new minor use pesticide begins with the PMC's Minor Use Pesticide Program, which prepares an information package based on data collected from field trials and laboratory analyses. The package is then submitted to Health Canada's PMRA to support the registration of the pesticide for a particular use. The PMRA reviews the package and decides whether the pesticide should be registered for this use in Canada. If registered, the product can then be employed by growers as specified on the label.

The PMC's PRRP also provides companies with assistance in submitting packages for registration of biopesticides, provided that these products address pesticide risk reduction priorities that have been identified in consultations with growers.

Submissions October 1, 2008 to January 31, 2009

Crop	Pest	Product	Active Ingredient	Project Number
Asparagus	Asparagus Beetle	Success 480 SC	spinosad	AAFC03-099
Asparagus	Asparagus Beetle	Entrust 80W	spinosad	AAFC03-112
Bean, dry	Mold, White *(Sclerotinia sclerotiorum)*	Allegro	fluazinam	AAFC07-043
Beet, garden	Broadleaf Weeds (BLW)	Upbeet	triflusulfuron-methyl	AAFC05-057
Bird's foot trefoil	Broadleaf Weeds (BLW)	Odyssey WDG Herbicide	imazethapyr imazamox	AAFC08-008
Blueberry, highbush	Labelled Weeds	Select EC Postemergence Herbicide	clethodim	AAFC04-071
Blueberry, highbush	Labelled Weeds	Centurion	clethodim	AAFC08-168
Blueberry, highbush & lowbush	Aphids	Assail 70WP	acetamiprid	AAFC03-037
Blueberry, highbush & lowbush	Blueberry Maggot	Assail 70WP	acetamiprid	AAFC04-046
Borage	Head rot *(Sclerotinia sclerotiorum)*	Proline 480 SC	prothioconazole	AAFC08-067
Caneberry	Two-Spotted Spider Mite (TSSM)	Acramite 50 WS	bifenazate	AAFC04-077
Caneberry	Raspberry Crown Borer	Altacor	chlorantraniliprole	AAFC06-043
Carrot	Labelled Weeds	Dual II Magnum Herbicide	S-metolachlor	AAFC04-068
Carrot	Carrot Rust Fly (CRF); Weevils; Cabbage looper	Matador 120 EC Insecticide	lambda-cyhalothrin	AAFC05-054
Carrot	Carrot Rust Fly (CRF); Weevils; Cabbage looper	Warrior	lambda-cyhalothrin	AAFC05-069
Carrot	Labelled Weeds	Dual Magnum Herbicide	S-metolachlor	AAFC09-062
Cherry	Oriental Fruit Moth (OFM); Leafroller; Peach Twig Borer	Rimon 10 EC	novaluron	AAFC08-166
Corn, sweet	Corn borer; Corn Earworm	Coragen	chlorantraniliprole	AAFC07-037
Mustard greens	Labelled Weeds	Dual II Magnum	S-metolachlor	AAFC04-069
Mustard greens	Labelled Weeds	Dual Magnum Herbicide	S-metolachlor	AAFC09-063
Ornamental (Poplar)	Labelled Weeds	Lorox L	linuron	AAFC09-035
Ornamental (Viburnum)	Viburnum leaf beetle	Actara 25WG	thiamethoxam	AAFC07-064
Peach	Oriental Fruit Moth (OFM); Leafroller; Peach Twig Borer	Rimon 10 EC	novaluron	AAFC05-059
Plum	Oriental Fruit Moth (OFM); Leafroller; Peach Twig Borer	Rimon 10 EC	novaluron	AAFC06-042
Prairie Carnation	Labelled Weeds	Centurion	clethodim	AAFC08-073
Prairie Carnation	Labelled Weeds	Select	clethodim	AAFC08-074
Tomato	Whiteflies	Rimon 10 EC	novaluron	AAFC04-073

Registrations October 1, 2008 to January 31, 2009

Crop	Pest	Product	Active Ingredient	Project Number
Crambe	Stem rot *(Sclerotinia sclerotiorum)*	Proline 480 SC	prothioconazole	AAFC08-068
Flax / Linseed	Stem rot *(Sclerotinia sclerotiorum)*	Proline 480 SC	prothioconazole	AAFC08-066
Rutabaga	Downy mildew *(Peronospora spp.)*	Aliette	fosetyl-al	AAFC06-013
Tomato, greenhouse	Mold, Grey *(Botrytis cinerea)*	Pristine	pyraclostrobin boscalid	AAFC03-071
Tomato, greenhouse	Powdery mildew *(Oidium lycopersici; Leveillula taurica; Erysiphe polygoni)*	Pristine	pyraclostrobin boscalid	AAFC04-032

What's New on the PMC Website?

If you're looking for information about recent developments in pest control, be sure to visit our website. Here's what's been happening since we published our last newsletter:

- We've made available a list of the 2008 Implementation Projects. These are a list of PRRP funded research projects which include objectives and descriptions.
- We've posted the final results of 25 PMC Implementation Projects. One such project, PRR06-360, concerned the establishment of a weather-based decision model for potato growers. Know as SPUDcast, it helps them determine when to apply fungicides for controlling late blight in potatoes.
- A new report, *Pesticide Use and Pest Management Practices of Canadian Apple Growers*, is now available. This paper is based on data collected in the Canadian Crop Protection Survey, which was conducted on behalf of the AAFC PRRP. Our website has both the Executive Summary and a link to the Complete Report.

To stay informed of updates on our website, be sure to subscribe to our E-mail notification service. These notifications will provide you with links to the new web material.

Minor Use Priority Setting Meeting

March 23–25, 2009

The 2009 Canadian Minor Use Pesticide Priority Setting Workshop will be held at the Hampton Inn Ottawa and Conference Centre, Ottawa, on March 23–25.

As in past years, each of the three days will focus on setting priorities for these disciplines:

- March 23: Weeds
- March 24: Entomology
- March 25: Pathology

Attendance is by invitation only. The Minor Use Technical Working Group will meet on March 26 and the PRRP will hold its annual meeting with its Technical Working Group on March 22.

2009 AAFC-PMC and IR-4 Joint Research Projects

This table lists the joint Canada / IR-4 projects selected for the 2009 field season.

The data from these projects will be accumulated in both countries, with submissions made to the respective pesticide regulatory agencies. In Canada, this is Health Canada's PMRA; in the U.S., it is the Environmental Protection Agency (EPA). This joint approach reduces the duplication of data-collecting activities and allows, when possible, the simultaneous registration in both countries of new uses for pest-control products. As a result, these products can be made more quickly available to Canadian and American growers who have the same crop and pest problems.

AAFC #	IR-4 #	Crop	Pest *	Product	Active Ingredient
Pathology					
09-041	10124	herb, basil	downy mildew	Revus	mandipropamid
Weeds					
09-042	10224	broccoli	labeled weeds	Chateau WDG	flumioxazin
09-043	6877	cherry	annual grasses	Select	clethodim
09-044	6877	cherry	annual grasses	Centurion	clethodim
09-045	10249	caneberries	labeled weeds	Chateau WDG	flumioxazin
Entomology					
09-046	10107	onion, dry bulb	thrips	Cyazypyr	cyantraniliprole
09-054	10107	onion, green	thrips	Cyazypyr	cyantraniliprole
09-047	4068	onion, green	leafminers, thrips	Agri-Mek	abamectin
09-048	10204	onion, green	Lepidoptera	Coragen	chlorantraniliprole
09-021	10122	pepper (GH)	thrips, psyllids, whitefly	Cyazypyr	cyantraniliprole
09-022	10104	tomato (GH)	aphids, thrips, leps, psyllid & whitefly	Cyazypyr	cyantraniliprole
09-023	10237	cucumber (GH)	tarnished plant bug, whiteflies, thrips, leps	Pedestal	novaluron
09-030	10194	blueberry	aphids, scale insects	Movento	spirotetramat
09-050	10198	cranberry	cranberry tipworm	Movento	spirotetramat
09-051	10048	cranberry	blackheaded fireworm, fruitworms, sparganothis fruitworm	Cyazypyr	cyantraniliprole
09-052	7241	herb, basil	lep. Larvae	Intrepid	methoxyfenozide
09-028	10243	artichoke	artichoke aphid, green peach aphid, black bean aphid	Movento	spirotetramat
09-061	10000	tomato, field	pest not applicable (global residue study)	Revus Top and Endigo	(mandipropamid + difenoconazole) and (thiamethoxam + lambda-cyhalothrin)

* AAFC is targeting one or more of the following pests as listed in each project.

Calendar of Events

Canadian Horticultural Council meeting
March 3–6, 2009
Calgary, Alberta

2009 Canadian Minor Use Pesticide Priority Setting Workshop
March 23–25, 2009
Hampton Inn Ottawa & Conference Centre
Ottawa, Ontario

6th International IPM Symposium
March 24–26, 2009
Portland, Oregon

Biopesticide Industry Alliance Meeting
April 23–24, 2009
Washington, DC

People on the Move

Ken Campbell has retired after 23 years of dedicated service with the AAFC. Ken was with the PMC at its inception and then stepped into the research branch for two years; in 2005, he returned to the PMC to fill his current role as special advisor. He also was PMC's acting Executive Director from October 2008 to January 2009. Ken brought a vast wealth of private- and public-sector experience to the PMC. We will miss you, Ken, and we all wish you the very best for the future. Marcos Alvarez is acting as Executive Director of the PMC until a permanent replacement is found.

Within the MUPP, Ting Xie and Kendra Clark have joined as Quality Assurance (QA) Auditors and Shuhua Liu has accepted the position of Study Director.

Ting has a background in analytical chemistry and environmental science. She comes to us from the pharmaceutical industry, where she has been a QA auditor reviewing Good Laboratory Practices work for more than five years.

Kendra also comes from the pharmaceutical industry, where she worked as a QA auditor/ compliance associate for over five years. She has a biology background and experience as a crop consultant in the agriculture industry.

Shuhua Liu holds a doctoral degree in biology and weed science, and a master's degree in plant science. Before joining the PMC, he worked with Health Canada's PMRA as a senior scientific evaluator and has many years of experience in pesticide research and regulation.

On the PRRP side, Tim MacDonald has returned from parental leave for his second child.