North American Success Model

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Pest Management Centre (PMC)
IUPAC – Minor Use Symposium
Melbourne, July 8, 2010
Presentation Outline

- **Introduction/Context**
  - Responding to Grower needs
  - Agriculture Policy Framework / Growing Forward

- **Elements of Good model**

- **Partnerships**
  - IR-4, PMRA, Growers, Registrants, AAFC Scientists

- **Harmonization**
  - Global
  - Canada / US
  - NAFTA

- **Update on PMC**
  - Minor Use Program (MUP)
  - Risk Reduction Program (RRP)
  - Governance
  - Communication

- **The Way Forward**
Canada – a diverse agronomic economy

- 220,000 farms

-$42 Billion Industry – 1 in 8 jobs related to the sector

- 7,500 fruit and vegetable operations
  - Average of $225,000 annual operating revenue

- 3,500 greenhouse operations
  - Average of $950,000 annual operating revenue
### Responding to Grower Need
Increases Grower Competitiveness

<table>
<thead>
<tr>
<th>DRIVERS</th>
<th>CHALLENGES</th>
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<tr>
<td>Gaps in need</td>
<td>Products not available in Canada</td>
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<td>Availability</td>
<td>Canada’s use is less than 3% of Global Market — of that, less than 2% is for minor uses</td>
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<tr>
<td>Health concerns</td>
<td>Assist in reducing risks to environment, health — resulting in safer food</td>
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<tr>
<td>Competitiveness</td>
<td>Lack of tools causes lower yield, quality, price, reputation</td>
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<tr>
<td>Trade Irritants</td>
<td>Non-harmonized MRL’s</td>
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<td>Transparency</td>
<td>Growers set Priorities — increased decision making role</td>
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NEEDS + POLICY = SOLUTIONS

Growers approach Federal Government
-brings IR-4 model, potential partnerships, (registrants
Provinces, AAFC Research Branch, PMRA)

Pest Management Solutions for
Growers

Creates PMC-PMRA led
MUP and PRR Programs
- build partnerships
- working within Canada’s unique regulatory processes

Government evaluation, recognition
of needs
- mandate, terms and conditions,
outcomes, performance review
- Provides multi-departmental, multi-year funding

- build partnerships
- working within Canada’s unique regulatory processes
Growing Forward
New Federal/Provincial/Territorial Agreement Brings Stability to the Sector

• The Agricultural Policy Framework (APF) Implementation Agreements with provinces and territories expired in March 2008. The APF is replaced by Growing Forward, a 5 year multilateral framework agreement.

• The Framework Agreement paves the way for new programs that support the Growing Forward vision, in addition to outlining three common policy outcomes:
  – A Competitive and Innovative Sector
  – A Sector that Contributes to Society’s Priorities
  – A Sector that is Proactive in Managing Risks
Elements of a Successful Model

- **Grassroots/business motivate change:**
  - Leadership from private sector to educate, and demonstrate need

- **Policy Decision:**
  - Decision-makers - recognition of public policy need to resolve issue
  - Demonstrate the public benefits increased Government role.

- **Budget:**
  - adequate spending authorities to prioritize, initialize and implement grower-selected solutions.
  - budget is targeted for Minor Use work and regulatory body for evaluation and regulatory decision. (example; PMC and PMRA)

- **Professional Staff**
  - Placement of highly specialized, highly skilled & highly motivated personnel.

- **Identify and utilize partnerships expertise:**
  - Maximize public and non-public sector potential, achieve stakeholder buy-in

- **Tangible Results – linked to Government Strategic Outcomes**
  - Achieving realistic targets, continual re-evaluation of better ways to achieve results

- **Governance / Accountability to stakeholders, taxpayers, AND, partners**
  - Joint Management Committee (example PMC/PMRA/TB)
  - Advisory Committee, Technical Working Groups

- **Outreach** activities/regular dialogue with growers
Mission:
The PMC uses scientific knowledge and expertise to improve pest management practices for the benefit of all Canadians and the environment. We respond to grower needs by providing specific pest management solutions that foster competitiveness, sustainable crop production and environmental stewardship.

The Minor Use Pesticides Program works with grower organizations and provinces to identify crop/pest priorities, and partners with AAFC Research Branch, the US IR-4 minor use program, registrant companies and Health Canada’s PMRA to conduct field trials to develop data supporting new minor use pesticide registrations.

The Pesticide Risk Reduction Program works with partners in PMRA, AAFC Research Branch, Environment Canada, and grower associations to develop pesticide risk reduction strategies. Strategy adoption is facilitated through projects to develop and demonstrate reduced risk pest management tools and IPM systems.

Crop Protection Tools, Knowledge and Support for Adoption

Canadian Growers
Using new, reduced-risk pest management products, tools and practices to enhance competitiveness and sustainability

For more information visit the PMC website at www.agr.gc.ca/prrmup
## PMC’s Partners

<table>
<thead>
<tr>
<th></th>
<th>Responsibilities</th>
<th>Roles</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growers</td>
<td>Demonstrate needs</td>
<td>Choose priorities</td>
<td>New tools</td>
</tr>
<tr>
<td>PMRA</td>
<td>Federal Regulator – submission review, enforcement and monitoring.</td>
<td>Review regulatory proposals and make decisions taking in account harmonization.</td>
<td>Fulfills federal mandate - Greater efficiencies.</td>
</tr>
<tr>
<td>AAFC Research Branch</td>
<td>Conduct research on grower-selected MU solutions to specific pest problems</td>
<td>Conducting of field trials, compilation of data supporting new MU submissions</td>
<td>Contributes to Branch science and innovation strategy</td>
</tr>
<tr>
<td>Provinces</td>
<td>Also conducts field trials and drafts submissions on behalf of growers.</td>
<td>Advocate Provincial grower needs.</td>
<td>Obtain new Crop Protection tools for their growers.</td>
</tr>
<tr>
<td>Registrants</td>
<td>R&amp;D on new crop protection tools and technologies</td>
<td>Agree to label expansion and new use submissions</td>
<td>Market new uses of products.</td>
</tr>
<tr>
<td>IR-4 Project</td>
<td>Facilitates registration of sustainable pest management technology for specialty crops and minor uses.</td>
<td>Develop necessary data to facilitate registration of crop protection tools for specialty crop growers and work with PMC to facilitate North American registrations.</td>
<td>US growers get national registration and access to Canadian markets as MRL is set and equal 9</td>
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## PMC’s Roles

**Provide pest management solutions for growers**

- Work with stakeholders to identify key pest management issues
- Generate data and regulatory submissions for new minor uses
- Implement projects which will enhance environmental stewardship

## PMRA Roles

**Federal regulator and registrar of pesticides**

- Develops, delivers and enforces federal pesticide policies and guidelines
- Evaluates pesticide registration proposals
- Promotes sustainable pest management

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Working to increase Global and North American Harmonization
The IR-4 Project

- Established in 1963 - Over 11,000 Food crop use registrations
- A true partnership between the federal government, state agricultural experimental stations, growers & commodity groups, the crop protection industry and the regulatory agencies

Current objectives:

- Food Crops Program (minor use tolerances & registrations, crop grouping, and international MRL’s/activities)
- Ornamental Horticulture Program
- Biopesticide and Organic Support Program (includes biotechnology)
- Public Health Pesticides
Canada - US Partnership Model

**PMC**
- AAFC funded including MU Program for PMRA
- Consultations with Prov. Minor Use Coordinators, Grower Groups and Manufacturers
- Priority Setting Workshop (March)
- Planning Meeting (January)
- Field Trials at 9 GLP AAFC Research Centers and private contractors and Universities
- Located in 4 Regions
  - Western (2)
  - Prairies (1)
  - Central (4)
  - Atlantic (2)
- Creation of AAFC-PMC lab

**IR-4**
- USDA and Industry Funding
- Consultations with Regional Field Coordinators, Grower Groups and Manufacturers
- Food Use Workshop (September)
- Ornamental Workshop (October)
- Research Planning Meeting (October)
- Field Research Centers (Land Grant Universities - 4); State Field Research Centres/Food Use – 23; USDA-ARS field research Centres -7; private contractors
- Located in 4 Regions
  - Northeast (NY)
  - North Central (MI)
  - Western (CA)
  - Southern (FL)
- Regional Labs and Satellite Labs
Key PMC and IR-4 Sites

- PMC & IR-4 HQ
- PMC Field sites
- ARS field research centers/
- State field research centers – Food use

Hawaii
Harmonization

- PMC works closely with the U.S.D.A. IR-4 Project to maximize harmonized pesticide tolerances for the U.S. and Canada.

- Cooperation with IR-4 through joint projects leads to significant resource savings
  - Reduction on the number of field trials conducted & lab analysis trials and shorter time frame for submission and registration by using the Joint Review stream.
  - Regulatory decisions for new uses at approximately the same time – benefiting growers on both sides of the border
  - Harmonized tolerances/Maximum Residue Limits (MRLs) helps remove trade barriers.

- Use of crop groupings which allow registration on more crops within a group.

- 65 new uses registered from the joint PMC/IR-4 projects
## PMC Average Cost per Project

<table>
<thead>
<tr>
<th></th>
<th>AAFC</th>
<th>AAFC/IR-4</th>
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<tbody>
<tr>
<td><strong>Projects</strong></td>
<td>18 projects</td>
<td>7 projects (4 IR-4 led, 3 PMC led)</td>
</tr>
<tr>
<td><strong>Residue Trials</strong></td>
<td>64</td>
<td>16</td>
</tr>
<tr>
<td><strong>Cost for Field portion</strong></td>
<td>$608,000</td>
<td>$152,000</td>
</tr>
<tr>
<td><strong>Cost for Lab portion</strong></td>
<td>$468,000</td>
<td>PMC - $78,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IR-4 - $104,000</td>
</tr>
<tr>
<td><strong>Cost per Project</strong></td>
<td>$60,000</td>
<td>$33,000</td>
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Harmonization

• Global Harmonization
  – Participation in the Global Residue Study
  – Field grown tomatoes; four active ingredients
  – 27 locations including 2 sites in Canada (BC & ON)
  – Uniform application equipment
  – EPA analyzing all residue samples
GLOBAL RESIDUE STUDY

22 Countries - 27 Trials

- 18 sample sets in US
- 9 to be completed
Harmonization

• **PMC’s participation in NAFTA TWG on Pesticides**
  
  – Addresses trade issues, national regulatory and scientific capacity, as well as governmental review burden.

  – To date, 7 pesticide products have NAFTA labels, giving unrestricted movement across borders and at least 10 others are under review. At least 10 other products are under review.
NAFTA Crop Group Initiative

- Objective:
  - Development and approval of new crop groups by EPA and PMRA – harmonization
  - CODEX Approval
    - Bulb Vegetable group – approved
    - Small Berries and Fruit – approved
    - Edible Fungi – approved
    - Oilseed group – to be codified 6/10
    - Citrus Fruit group – to be codified 6/10
    - Fruiting Vegetables – to be codified 6/10
    - Pome Fruit group – to be codified 6/10
    - Stone Fruit group – preliminary approval
    - Tree Nut group – preliminary approval
    - Tropical Fruit group – pending submission – July 2010
    - Herb and Spice group – under review
### PMC Programs – Minor Use Program

**Objective:** to improve access to minor uses of pesticides and prevent trade barriers with countries where these products are already available

<table>
<thead>
<tr>
<th>Activities</th>
<th>Outputs</th>
<th>Immediate Outcome</th>
<th>Intermediate Outcomes</th>
<th>End Outcome</th>
<th>AAFC Strategic Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify and prioritize pest management needs</td>
<td>List of Pest management priority projects selected</td>
<td>New minor uses of pesticides available to growers through a dedicated minor use review process by PMRA)</td>
<td>Improved pesticide resistance management</td>
<td>Improved competitive parity of Agriculture and Agri-Food sector with regard to pest management</td>
<td>A competitive agriculture, agri-food and agri-based products sector that proactively manages risk</td>
</tr>
<tr>
<td>Conduct literature searches, data generation, regulatory and</td>
<td>Regulatory data packages and decisions for new minor uses of pesticides</td>
<td></td>
<td>Improved crop protection practices</td>
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<tr>
<td>Compile data, draft final reports and assemble regulatory submissions</td>
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<tr>
<td>Reviewing minor use Regulatory submissions</td>
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Minor Use Program

Accomplishments (2003-2011)

- 683 Projects (including the 44 priority projects selected for the 2011 field season)
- 275 submissions to PMRA/Registrants
- 165 registrations to date
- More than 540 new labeled uses
- Reorganized based on disciplines
- Increase Minor Use Program staff positions from 25 to 38 positions
Information gathering

- CROP PROFILE
- STAKEHOLDER CONSULTATION
- PESTICIDE RISK ASSESSMENT
- IDENTIFY PRIORITIES

Outcome

- GROWER ADOPTION OF REDUCED RISK APPROACHES
- INNOVATIVE AND ENVIRONMENTALLY SUSTAINABLE AGRICULTURE

Projects

- REGULATORY SUPPORT FOR RR SOLUTIONS
- DEVELOPMENT OF TOOLS AND PRACTICES
- DEMONSTRATIONS, WORKSHOPS, PUBLICATIONS

Develop Strategies

- WORKING GROUP (WG) DISCUSSIONS
- STRATEGY DOCUMENT
- IMPLEMENTATION OF ACTION ITEMS

Pesticide Risk Reduction Program
Accomplishments (2003-2011)

- Biopesticides Initiative - 18 biopesticide product submissions to PMRA; 114 new uses registered for 13 products.
- 30 Crop Profiles created, vetted and published, utilized by growers, registrants, PMRA and CFIA.
- 15 pesticide risk reduction strategies for priority issues developed or in development.
- 163 projects to develop or implement reduced risk solutions funded.
- Staff capacity: 7 positions
- First Biopesticide Priority Selection Workshop in 2010
Governance - PMC’s JMC and Advisory Groups

- **Joint Management Committee with PMRA**
  - Funding provided by AAFC to HC’s Pest Management Regulatory Agency (PMRA) based on approved work plans and performance indicators related to minor uses, tech gap and global joint reviews.

- **PMC Advisory Committee**
  - Provides broad, strategic-level and independent external advice to the Executive Director of the PMC.
  - Consists of grower groups, registrants, produce marketing (importers/exporters), consumers and food product manufacturers.

- **Minor Use Pesticides and Pesticide Risk Reduction TWGs**
  - Members include representation from growers, the provinces, registrants, academia and other specialists.

- **Looks to improve regulatory process to improve efficiency**
Communications

- Website
  - By monthly updates
  - WEB SITE: WWW.AGR.GC.CA/PRRMUP

- Newsletter
  - Quarterly updates
  - Distributed through List Server and grower organizations

- List Serv
  - Each time a Minor Use project is registered / labelled
  - Each time a Risk Reduction fact sheet is completed / published or a Risk Reduction project is completed
  - PMC-CLA-L-subscribe-request@www.agr.ca

How’s the Weather?

Sunny, warm and promising in British Columbia’s Okanagan region, which could likely put a damper on early crop development. “The cherry bloom usually comes in April,” says Karen Firdell, a PMG principal investigator at the Pacific Agri-Food Research Centre, Summerland, BC. “But this year it was in early May. The forsythia in our cherry and apple blossoming program had only just seen this happen once in more than 20 years. So while we’ve had crops similar to the one, they’ve been very rare.”

Later in the season, unfortunately, the weather improved. “This was especially important for the Okanagan’s cherry growers, whose crop is the basis of a highly perishable export industry. The problem for these growers during the 2009 harvest was a shortage of hailstones, which were less frequent than usual in the Okanagan Valley this year. Without hail injury, the overall harvest was close to historic levels.”

The Pest Management
Newsletter

PMC-CLA-L-subscribe-request@www.agr.ca

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Canada
The Way Forward

• Be available to countries who wish to establish MU programs like in the US (IR-4) and in Canada (PMC)

• Increase number of joint projects with IR-4 and other country MU programs

• Enhance relations with Registrants to encourage partnership early in the development process of new actives for minor uses / specialty crops

• Work with other countries and standards setting bodies (EPA, PMRA, EFSA, OECD, CODEX) to establish global harmonized MRLs and to work towards acceptance of global data (eg. data generated by organizations like IR-4 and PMC)