Experiences in Expanding Grower Access to NRCS programs for IPM in the North Central Region

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Harnessing Marketplace Power to Improve Health, Economics and Environment

- 501(c) 3 non-profit.

Programs:
- North Central NRCS & IPM Working Group
- North Central School IPM Working Group
- Green Shield Certified and IPM STAR
- Pesticide Risk Mitigation Engine
- BMP CHALLENGE
- Apple IPM program
- NRCS TSP services

http://www.ipminstitute.org
Goal: Increase grower awareness and access to NRCS conservation programs for IPM, including IPM Conservation Activity Plans (CAPs), Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP).

Accomplishments:

- Created new IPM options in: IN, OH, IA and MN and efforts under way in IL, FL and KS.
- Educate, train NRCS, and IPM professionals, Technical Service Providers (TSPs).
- Recruit, train more IPM-qualified Technical Service Providers TSPs; acquire, share data on TSP payment rates with NRCS.

Funded to date by three USDA National Institute of Food and Agriculture IPM Centers.

Over 130 members from NRCS, University Extension, crop advisors and others.
NEW: The North Central NRCS & IPM Working Group is now integrated with the National IPM CAPs Working Group. The newly merged group convenes via conference call on the first Friday of every month. View the member directory. Visit the National IPM CAPs Working Group website.

Our work group's goal is to encourage adoption of Integrated Pest Management (IPM) through participation in conservation programs administered through the Natural Resources Conservation Service (NRCS) in the North Central region. The group is multi-state and multi-disciplinary to include university extension, state offices of NRCS, state lead agencies, EPA, and industry.

Our first efforts will identify and prioritize regional IPM and NRCS needs, and build a strong working partnership between existing IPM infrastructure and NRCS. Review NRCS & IPM Working Group priorities finalized by the group in 2010. An effective partnership will greatly improve our ability to address goals and priorities from the National IPM Roadmap, the NC IPM Center and USDA Secretary Johanns’ 2005 memo on market-based stewardship.

Our group will improve support for IPM practices and increase IPM implementation in the region by:

1. Facilitating communication through an initial two-day meeting (held Nov. 15-17, 2006) and follow-up conference calls, email and web pages dedicated to IPM and NRCS program linkages.

2. Assembling collaborations and resources to develop information for growers to identify IPM tools for addressing conservation

http://www.ipm.msu.edu
Integrated Pest Management
Core Concepts

What is IPM?
Integrated Pest Management (IPM) is a comprehensive approach to managing pests that relies on an array of practices that minimize impacts on the environment while providing safe, effective and economical pest control. In an IPM program, pesticides are used only when needed and applications are made with the goal of removing only the target organism.

NRCS & IPM
NRCS provides guidance on IPM to farmers based on criteria outlined in the 595 Integrated Pest Management Practice Standard. While not crop specific, the standard outlines the strategies necessary to develop IPM plans and implement IPM practices. The 595 IPM Practice Standard can be found in section four of the NRCS Field Office Technical Guide: [http://www.nrcs.usda.gov/technical/eeftg/](http://www.nrcs.usda.gov/technical/eeftg/).

An Integrated Approach
Many of the conservation practices promoted through NRCS programs are important to successful IPM. Conservation practices such as filter strips, field borders, irrigation management and mulching can be employed to minimize the transport of pesticides to surface or ground water. Establishment of pollinator habitat can attract and harbor beneficial insects and predators necessary for biological control of pests.

Implementing IPM practices can help effectively suppress the difficult to control Colorado potato beetle.

PAMS
PAMS: Prevention, Avoidance, Monitoring and Suppression are the core strategies used by NRCS in IPM.

Prevention
Cleaning equipment and gear when leaving an infested area, using pest-free seeds and transplants and scheduling irrigation to avoid situations that are conducive to disease development help prevent pests from becoming a problem.

Avoidance
Maintaining healthy and diverse plant communities, using pest resistant varieties, crop rotation and refuge management help avoid potential pest problems.

Monitoring
Pest scouting, degree-day modeling and weather forecasting to help target suppression strategies and avoid routine preventative treatments are essential to an IPM program.

Suppression
Judicious use of cultural, biological and chemical control methods that reduce or eliminate a pest population or its impacts while minimizing risks to non-target organisms is the desired approach to suppressing pests with IPM.

For additional information, see the North Central NRCS & IPM Working Group brochure entitled “The PAMS Approach.”

Core Concepts continued

An IPM Year
Pest pressure may fluctuate with the seasons, but the need to plan, prepare, implement and refine IPM is constant. The following practices are used in implementing PAMS strategies.

Soil Preparation: Growers give their plants a head start on avoiding pest problems by choosing the proper site, testing and amending the soil when necessary, rotating crops and providing sufficient organic matter.

Planting: Growers plant crops that tolerate common problem or alter planting time and spacing to discourage certain diseases and insects.

Forecasting: Weather data are consulted to predict if and when pest outbreaks will occur. Treatments can then be properly timed, preventing crop damage and saving sprays.

Pre-Treatment: Traps that attract insects are used so that growers can pinpoint when the pest has arrived and decide whether control is justified.

Monitoring: Growers inspect representative areas of the fields regularly to determine whether pests are approaching a damaging level.

Thresholds: Before treating, growers wait until pest populations reach a scientifically determined level that could cause economic damage. Until that threshold is reached, the cost of yield and quality loss will be less than the cost for control.

Cultural Controls: The pest's environment is then disrupted by turning under crop residues, sterilizing greenhouse tools and harvesting early.

Biological Controls: It is necessary for growers to conserve the many beneficial natural enemies already at work. They import and use additional biologicals where effective.

Chemical Controls: Growers select the most effective and appropriate pesticides and properly calibrate sprayers. They then verify that weather conditions will permit good coverage without undue drift.

Want more information?
North Central NRCS & IPM Working Group, North Central Fruit IPM Tool
[http://www.nrcs.ipm.msu.edu/](http://www.nrcs.ipm.msu.edu/)

North Central IPM Center, Fruit Educational Resources
[http://www.ncipmce.org/fruit/resources.cfm](http://www.ncipmce.org/fruit/resources.cfm)
Environmental Quality Incentives Program (EQIP) 595 Integrated Pest Management Standard: cost-share payments and technical assistance for growers to implement IPM.

IPM Conservation Activity Plans (CAPs) provides an opportunity for growers and crop advisors to identify, prioritize and address resource concerns impacted by pests and pest management activities.

Conservation Stewardship Program provides cost-share and technical assistance for growers to implement conservation practices while maintaining practices already in place. Growers who practice IPM receive credit, increasing their chances of earning a CSP contract.
Growers Need IPM Planning Resources

- Resource Protection
  - Mitigate impacts on water resources, mammals, birds, and pollinators.

- Regulatory Changes
  - 1996 Food Quality Protection Act
    - Phase out of many broad-spectrum products.
    - EPA emphasis on reduced-risk pesticides.

- Consumer/Supply Chain demands
  - Sysco, Wal-Mart and McDonalds IPM programs
  - Midwest Food Alliance

- Pesticide Resistance
  - Insecticides, fungicides and herbicides
Who Can Benefit from IPM Planning?

Missouri:

- 108,000 farms;
- 29,100,000 acres of farmland;
- 16,405,595 acres in food or feedstock production.
- IPM has a home in all production systems.

Herbicides applied on 7,835,461 acres of cropland in 2007.

Insecticides applied on 2,410,404 acres of cropland in 2007.

2008 Farm Bill Funds for EQIP

- Total Farm Bill is $288 billion over five years
- EQIP receives approximately $1.5 billion annually and total funds between 2008-2012 = $7.3 billion or 2.5% of total Farm Bill Funds.¹
- Contract Obligations September 2010 $2.5 billion².
- Contract Acres 46,145,449².
- Number of Contracts 92,725².
- New Farm Bill to be introduced in 2012.

Sources
2. NRCS EQIP, retrieved online 12-21-10 http://www.nrcs.usda.gov/programs/eqip/index.html#intro
Environmental Quality Incentives Program (EQIP)

- EQIP supports grower adoption of conservation practices:
  - Integrated Pest Management (IPM), Nutrient Management, Cover Cropping, etc.

- Contract between grower and NRCS:
  - Cost-Share up to 75% of costs;
  - Technical Support;
  - Length of contracts one to ten years.
Current EQIP 595 Options for MO

- **595 Precision application:**
  - $9.50/acre;

- **595 Herbaceous species control:**
  - $22.90/acre;

- **595 Organic:**
  - $7/acre: two options from organic production worksheet;
  - $12/acre: three options from organic production worksheet.
EQIP: Where are we in MO?
MO 595 Participation ‘07 to 2010

- Number of EQIP contracts for the 595 practice standard, by crop from 2007-2010.
- 319, 200.9 acres impacted 07 -2010 for 595.
- 2,129 new contracts awarded between 07-2010
History of NRCS & IPM Collaborations

- Less than 2% of EQIP dollars spent on IPM; yet 94% of fish, 94% of surface water and 33% of ground water samples contaminated with pesticides.
  - More IPM Please, Natural Resources Defense Council 2007
  - 2006 U.S. Geological Survey

- Michigan first to develop comprehensive EQIP option for IPM and specialty crops in the North Central region.
Objective to facilitate knowledge sharing to create better conservation programs:

- Increase state NRCS appreciation for costs of IPM for specialty crops;
- State NRCS not always aware of what other states are doing regionally and nationally.
- Increase Extension awareness of conservation programs which support adoption of IPM and other BMP’s through the NRCS.
Key Elements to Successful 595 Programs

- Determine eligible practices:
  - Which IPM practices protect or enhance key resource concerns?
- Identify IPM practice costs:
  - Helps NRCS determine appropriate cost-share rates
- Identify, train Technical Service Providers to assist land owner with planning and implementation.
EQIP IPM Initiative in Minnesota

- February 2010 meeting: NRCS, Minnesota Department of Ag, MAGA, Minnesota Fruit and Vegetable Growers Association, growers and working group members.
  - Discussed importance of tree fruit industry in MN;
  - Reviewed benefits of IPM to address resource concerns;
  - Reviewed IPM practices and costs.

- October 2010 NRCS launches 595 option for tree fruit.
  - Level one: $230/acre: scouting monitoring;
  - Level two: $359/acre: mating disruption;
595 Orchards: Other Midwest States

- **Indiana:**
  - $60/acre;
  - $3,000 payment cap.

- **Iowa:**
  - Level one: $250/acre;
  - Level two: $300/acre;
  - Level three: $400/acre.

- **Michigan:**
  - $24/acre.

- **Ohio:**
  - $227/acre.

- **Wisconsin:**
  - $185/acre.

Note: Payment rates for organic and historically underserved and/or limited resource producers may be higher in some states.
595 Vegetables: Other Midwest States

- Indiana:
  - $45/acre

- Iowa:
  - Level one: $250/acre;
  - Level two: $300/acre;
  - Level three: $400/acre.

- Kansas:
  - $13.78/acre.

- Michigan:
  - $24/acre.

- Ohio:
  - $121/acre.

Note: Payment rates for organic and historically underserved and/or limited resource producers may be higher in some states.
What’s on the horizon?

- NRCS programs can change annually.
- Regional changes to NRCS EQIP programs.
- Identifying regional IPM needs
- What is the role of NRCS and Extension to help growers meet IPM goals?
Thank You...Questions?

- Special thanks to:
  - North Central, North Eastern and Southern IPM Centers
  - Jamie Pinero, Lincoln University
  - Paul Duffner, MO NRCS
  - Certified Crop Advisor Program and National Alliance of Independent Crop Consultants

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