

**MID-ATLANTIC INFORMATION NETWORK FOR PESTICIDES
AND ALTERNATIVE STRATEGIES - WV (WVInPAS)**

**State Network Projects
Crop Profiles
Pest Management Strategic Plans
Grant Proposal**

Literature Review, Previous Work and Related Experience

1. West Virginia Network Project Overview

The Mid-Atlantic Information Network for Pesticides and Alternative Strategies - WV (WVInPAS) has coordinated its activities with Mid-Atlantic partners New Jersey, Maryland, Delaware, and New York (Attachment E). To facilitate communication across state lines, the New Jersey Network Project Director set up a listserv as "MAInPAS Partners" in March 2002. Members have used this listserv to transmit meeting minutes; announce and coordinate pesticide surveys, crop profiles, and pest management strategic plans (PMSP's); as well as announce the release of state newsletters such as West Virginia's "Look What's Out There". Coordination has also included the set up of a home page for MAInPAS at:

<http://www.pestmanagement.rutgers.edu/NJinPAS/PesticideRegistration/MAINPASHome.htm>.

MAInPAS Project Leaders have met three times to update each other on progress and upcoming projects of their respective information networks. The first meeting was at the NE PMC Annual Meeting in Baltimore, MD in March, 2002. At that time, members of MAInPAS discussed cooperation across state lines. The second meeting was after the NE TriAgency Meeting in July, 2002 in Portland, ME. Each state gave a progress report. Project Leaders made plans for creating regional Pest Management Strategic Plan for important agricultural commodities. A third meeting was held at the National Pesticide Applicator Certification and Training Workshop in Honolulu, Hawaii, August 2003. In attendance were: George Good (New York), George Hamilton (New Jersey), Amy Brown (Maryland), John Baniecki (West Virginia), and Susan King (Delaware). Each state gave a progress report with updates on Crop Profiles and PMSP's. The West Virginia Project Director announced the meeting scheduled for the Apple PMSP. The DEInPAS Project Director announced the Spinach PMSP Workshop scheduled for January, 2004. Discussion was held on future RFA's and coordination across state lines. It was decided that the NJinPAS Project Director would continue to lead the MAInPAS. There is need for continued networking among the MAInPAS Project Directors to share resources across state lines. The activities described in this proposal will advance that networking.

2. West Virginia Network Project Activities

A. Information Source for Federal/ West Virginia Agencies

Links have been established between federal/ West Virginia agencies and agricultural researchers, extension specialists, and other stakeholders so that information on pest management practices can be made available to federal/ West Virginia agencies in a timely manner in response to issues raised by the Food Quality Protection Act (FQPA) or other regulatory decisions. Requests for information on pesticide use in West Virginia have been routed by the WVInPAS Project Director to extension staff for the following pesticides: Aatrex, daconil 2787, counter, Telone, cyfluthrin, bifenthrin, esfenvalerate, tralomethrin, and deltamethrin. Responses from extension staff have been provided to federal agencies by the project director. Direct links to West Virginia University Extension professionals and the West Virginia Department of Agriculture can be found at: <http://www.wvu.edu/~agexten/ipm/contacts.htm> (Attachment F), <http://www.state.wv.us/redirect/agriculture.htm>

Because of Pesticide re-registration and new registration requirements under FQPA, there continues to be a need for US/EPA and the West Virginia Department of Agriculture to obtain information on pesticide use and needs within West Virginia. The activities described in this proposal will facilitate information transfer and permit informed regulatory decision making.

B. Pesticide Use Surveys

Pesticide use surveys have been conducted on eleven commodities in West Virginia. The surveys were funded, in part, by USDA grants and the NE-PMC. Surveys were conducted in cooperation with West Virginia University Extension agents and specialists and the West Virginia Agricultural Statistics. Data was collected on acres planted, acres harvested, acres treated, type of pesticide used, active ingredient, formulation, quantity applied, time applied, production cost, major diseases, insects, weeds, and alternative control strategies.

Pesticide Use Survey conducted on West Virginia commodities

Alfalfa	FY 99	Potatoes	FY 02
Apples	FY 03	Peaches	FY 00
Beef	FY 99	Strawberries	FY 00
Corn (sweet)	FY 00	Tobacco	FY 99
Dairy	FY 99	Tomatoes	FY 01
Field Corn	FY 03		

Dr. John F. Baniecki, provided guidance and review of a research survey that has been conducted of corn producers, which identify current trends in

management practices, insects, fungal, and weed problems, and educational needs so that instructional materials can be designed to meet clientele needs. This study provides information that might be useful to researchers and extension personnel in developing and designing educational programs concerning pest management for corn farmers. The research summary report is posted on the West Virginia Information Network for Pesticides and Alternative Strategies Website.

<http://www.wvu.edu/~agexten/ipm/pestprog/NAPIAP/corngrow.htm>

C. Social, Economic, and Environmental Impacts

In collaboration with West Virginia University Davis College of Agricultural and Consumer Sciences, a project was conducted to examine the economic and environmental impacts of organophosphates use on apples. Economic and environmental impacts were evaluated by computing the economic injury level (EIL) and environmental economic injury levels (EEIL) for pests on processing apple orchards treated with organophosphates (azinphosmethyl, chlorpyrifos, dimethoate, esfenvalerate malathion, methyl parathion, and phosmet) (Attachment D).

D. West Virginia Crop Profiles

Eleven Crop Profiles have been written for West Virginia commodities. Extension Specialists for insects, diseases, and weeds contributed sections to each Profile. The WVInPAS Director compiled the information, wrote introductory material, and transmitted the Profiles to the NE IPM Center for publication on the web. All Profiles have been funded, in part, by federal funds. Profiles written in the past three years were funded by the NE IPM Center. Prior profiles were funded by NAPIAP and the Pest Management Alternatives Program-USDA, Cooperative State, Research, Education and Extension Service with cooperative efforts of the West Virginia Liaison Representative office. Profiles were funded as follows:

Development of Beef Cattle Profile in West Virginia, 1999. USDA Pest Management Alternatives Program. \$4,000.

Development of Crop Profile for Peaches in West Virginia. 1999. USDA Pest Management Alternatives Program. \$4,000

Published Profiles

Alfalfa <http://pestdata.ncsu.edu/cropprofiles/docs/wvalfalfa.html> 06/99

Apple <http://pestdata.ncsu.edu/cropprofiles/docs/wvapples.html> 06/03

Beef <http://www.wvu.edu/~agexten/ipm/pestprog/NAPIAP/beefcat.htm> 9/00

Corn (sweet) <http://pestdata.ncsu.edu/cropprofiles/docs/wvcorn-sweet.html> 9/00

Dairy <http://pestdata.ncsu.edu/cropprofiles/docs/wvdairy.html> 6/99

Peaches <http://www.wvu.edu/~agexten/ipm/pestprog/NAPIAP/Peach.PDF>
9/00
Potatoes <http://pestdata.ncsu.edu/cropprofiles/docs/WVpotatoes.html>
6/03
Strawberries <http://pestdata.ncsu.edu/cropprofiles/docs/wvstrawberries.html>
11/00
Tobacco <http://pestdata.ncsu.edu/cropprofiles/docs/wvtobacco.html>
03/99
Tomatoes <http://www.wvu.edu/~agexten/ipm/pestprog/NAPIAP/tomatoes.pdf>
02/02

The Crop Profile for field corn is scheduled for completion 3/2004. Because of Pesticide re-registration and new registration requirements under FQPA, there continues to be a need for US/EPA to obtain information on pesticide use and needs within West Virginia. The activities described in this proposal will facilitate information transfer and permit informed regulatory decision making.

E. Pest Management Strategic Plans (PMSP)

The Apple PMSP was developed during a workshop held in Kearneysville, W. Va. on June 24-25, 2003(Attachment B). The working group represented several states in the Mid-Atlantic region (New Jersey, Virginia, Pennsylvania, and West Virginia). The working group was made up of apple growers, processors, crop consultants, organic farming representative, an IR-4 representative, a USDA-ARS representative, Director of the Northeast Pest Management Center, the state IPM coordinator, a state regulatory staff, and extension specialists. The Apple PMSP will completed and posted on the NE IPM Center web site in March, 2004.

Because of Pesticide re-registration and new registration requirements under FQPA, there continues to be a need for US/EPA to obtain information on pesticide use within West Virginia. The PMSP's describe the impact of pest control losses and present priorities for research, extension, and regulation. The activities described in this proposal will facilitate information transfer and permit informed regulatory decision making.

F. Communication to West Virginia Stakeholders

The West Virginia Pest Management Home Page (Attachment F), <http://www.wvu.edu/~agexten/ipm/index.htm> has a link to <http://www.wvu.edu/~agexten/ipm/pestprog/NAPIAP/index.htm>. that contains the "Look What's Out There" Newsletter: <http://www.wvu.edu/~agexten/pubnwsltr/newslett.htm#Look> (Attachment F). Archives are provided for January, 2001 to the present. Short news articles from

EPA, USDA, and the Pesticide Industry are printed in this newsletter to promote informed regulatory decisions on registered pesticides. Hard copies of the newsletter are distributed by mail to the pesticide-user community in West Virginia. E-mail announcements of new postings also are sent to agriculture Extension agents and Specialists in the state. Look What's Out There issues were posted on a monthly basis for 2003 (Refer to the web site). Editors of state association newsletters use the information from the newsletter. Extension agents are encouraged to use this information in presentations and one-on-one communications with clientele. The West Virginia Pest Management Home Page also has links to newsletters that include information on: crop management, vegetables, fruit and small fruit, home garden and pesticides. Also, there are links to the chemical industry, associations and organizations, professional societies, universities, USDA/EPA sites, and the West Virginia Poison Control Center.

The web site for WVinPAS (Attachment F) is posted at: <http://www.wvu.edu/~agexten/ipm/pestprog/NAPIAP/index.htm>. In addition, the West Virginia Pest Management web site provides links to several federal and state partners at: <http://www.wvu.edu/~agexten/ipm/index.htm> (Attachment F). Because of Pesticide re-registration and new registration requirements under FQPA, it is critical for West Virginia stakeholders to be aware of changes in registrations and use patterns for the pest control products they use in their work. We have referred stakeholders, Extension agents and Specialists to <http://www.kellysolutions.com/> web site for information on pesticide registration in West Virginia. The activities described in this proposal will facilitate information transfer and allow pesticide users to give input into regulatory decision making.

G. Advisory Committee:

The WVinPAS Advisory Committee was restructured in 2002 to include new members. Members included vegetable and fruit growers, Extension agents, Extension specialists, University Researchers, Vocational agriculture teachers, state regulatory staff, EPA region III staff, Member of the State Government Program "Sierra Club", Consultant, and state IPM coordinator.

In October and December 2002, advisory committee members were contacted to provide comments on selection of crop profiles and pest management strategic plans for important agricultural commodities in the state. Also, they were asked to provide information and comments on issues dealing with pest management, which includes the use of pesticides (Attachment C).

The advisory committee suggested the development of potato and field corn crop profiles for the state. An apple pest management strategic plan was also suggested to be developed for the Mid-Atlantic region. The advisory committee members made comments on important current issues dealing with pesticide

use. For example, one of the pressing issue dealing with pesticide use was the newly developed 50% formic acid fumigator for control of Varroa mites in bee hives. This material will have to go through section 3 registration with EPA. One member expressed concern for the lack of nematicides labeled on “bearing” fruit trees in West Virginia. Other concerns were the lack of environmentally safe nematicides generally, and the use of and chronic health effects of common lawn care herbicides such as 2,4-D, which Canada now has banned. A grower expressed the need for alternatives for methyl bromide for managing root rot. A concern was the additional restrictions on OP use in tree fruits without replacement of alternatives that are as efficacious and economical for key pests. Glyphosate resistant horseweed is likely to be detected in West Virginia (Attachment C). There is a need to have a strategy in place to deal with this pest in orchards and field crops. Atrazine is being reviewed by EPA, an alternative is needed. One member was concerned about the possible removal of genetically modified organisms for pest management. A suggestion was made to establish a regional advisory committee. Grower contact is needed for the establishment of and adding new names to an e-mail list for notification of new postings of “Look What’s Out There.”

Input from stakeholders is critical to the effective functioning of the WVinPAS project. Each segment of the pesticide user community approaches pest management from a different viewpoint. The advisory committee is a valuable medium for voicing these viewpoints. We have witnessed this from the comments made by members of the advisory committee. The activities described in this proposal will make it possible to gather and analyze differing viewpoints that will shape the direction of the WVinPAS Program.

West Virginia Network Project- Objectives and Procedures:

1. Information Source for Federal/West Virginia Agencies

Objective: Serve as the primary information source for federal and West Virginia regulatory agencies and other agencies regarding use and usage of all IPM tactics, including pesticides, in all IPM settings in the state. Respond in a timely fashion to requests for information from these agencies.

Procedure: The project director will forward requests for information to the appropriate discipline specialist noting the date for which the information is needed. A reply will be made to the requesting agency with the response. Commodity meetings and pesticide-user meetings will be attended to stay abreast of pest control measures used in the state. Coordination will be maintained with the West Virginia IPM program, the Pesticide Safety Education Program, IR- 4 Project, and the West Virginia Department of Agriculture. The web site listing direct links to West Virginia Extension professionals will be maintained at:

<http://www.wvu.edu/~agexten/ipm/contacts.htm> (Attachment F) making this site known to other agencies.

2. Liaison

Objective: Serve as a liaison among the Northeastern IPM Center, West Virginia University, and other key agencies in state. Provide information such as release of RFAs and meeting dates in a timely fashion to all appropriate contacts. Solicit and facilitate applications from qualified individuals or groups in West Virginia for funds available from the NE IPM Center. Participate in all subcontracts between the Northeastern IPM Center and other entities of West Virginia University in order to minimize total indirect costs for the Center. Pass funds from the Northeastern IPM Center to any programs or individuals of West Virginia University that have contracts with the Center.

Procedure: The project director will meet with members of MAinPAS at the Annual NE TriAgency Meeting to be held in Dewey Beach, DE on October 12-14, 2004. Cooperation across state lines and sharing of resources will be discussed. Announcements of RFA's and meeting dates will be added in our Newsletter. The newsletter mailing list will be updated annually to ensure that this information is reaching the appropriate individuals and agencies. Specific individuals will be contacted when funds become available offering our assistance in the preparation of grant proposals. The project director will communicate with West Virginia University Office of Sponsored Programs to ensure that grants are consolidated and funds are transmitted to Principle Investigators who hold NE IPM Center IPM Partnership grants.

Objective: Maintain a project web site.

Procedure: The web site will be maintained and updated <http://www.wvu.edu/~agexten/ipm/pestprog/NAPIAP/index.htm>The site will:

1. Address regional priorities established by the NE IPM Center.
2. Be compatible with regional and national IPM Center sites.
3. Include contact information for WVinPAS.
4. Include a project description for WVinPAS.
5. Include links to annual progress reports for WVinPAS.
6. Comply with Section 508 of the Rehabilitation Act Amendments to the Workforce Investment Act of 1998.
7. Include links to the NE IPM Center and other appropriate entities.
8. Prominently display, near the heading, the phrase, "The West Virginia component of the Northeastern IPM Center." The words "Northeastern IPM Center" will be hyperlinked to the Center web site.
9. Include the statement: "This site is supported, in part, with funding from the Northeastern IPM Center."
10. Include the date of the most recent update.

11. Conform to all format and content standards to be developed by the NE IPM Center.

Objective: Interact with all Northeastern IPM Center IPM Working Groups (IWGs) in gathering information, such as IPM elements and resources, and in developing research and extension priorities. Respond in a timely fashion to requests for information or other assistance from IWGs.

Procedure: The project director will respond to requests for information. Requests for information will be forwarded to the appropriate discipline specialist noting the date for which the information is needed. The project director will reply back to the IWG with the response. Commodity meetings and pesticide-user meetings will be attended to stay abreast of pest control measures used in the state. Coordination will be maintained with the West Virginia IPM program, the Pesticide Safety Education Program, IR- 4 Project, and the West Virginia Department of Agriculture.

Objective: Periodically review the membership of the IWGs to insure that West Virginia is adequately represented on the IWGs and that the IWGs are addressing issues important to West Virginia. Facilitate the effective engagement of stakeholders in West Virginia with appropriate IWGs and other components of Northeastern IPM Center.

Procedure: The project director will ask the WVInPAS Advisory Committee to review IWGs' membership lists, activities, and reports annually. The Advisory Committee will be charged with making recommendations to insure that West Virginia is adequately represented on IWG's and that issues important to the state are being addressed. The project director will solicit opinions from committee members on the value of each IWG and include this information in the annual progress report. Stakeholders will be informed when an IWG activity would be of interest to them. In turn, the project director will notify an IWG of stakeholders in West Virginia who would be interested in their activities.

3. Communication to West Virginia Stakeholders

Objective: Provide Communication to West Virginia Stakeholders.

Procedure: Pesticide information will be posted to the "Look What's Out There" Newsletter linked to the West Virginia Pest Management Web site. Announcement of such information and the URL will be sent electronically to a mailing list. Growers and Extension agents will be contacted to add their names to a mailing list. Key members of commodity groups will be added to the e-mail list for notification of new postings of our newsletter.

4. Advisory Committee

Objective: Utilize an advisory committee consisting of a diverse group of stakeholders interested in IPM that will exchange comments and interact on important issues as necessary. The committee will include the West Virginia IPM Coordinator, a representative of the West Virginia Department of Agriculture, the West Virginia Pesticide Safety Education Program Coordinator, appropriate research and extension faculty, a representative from West Virginia State University, IPM users such as growers and crop consultants, and representation from environmental and consumer advocacy groups.

Procedure: The advisory committee members will be contacted by e-mail or direct mail, keeping them abreast of program activities and communicate current pest management issues, and requesting their review comments and suggestions. An initial contact with members of the advisory committee will be made in June, 2004 and a request for their review and input will be made in September, 2004. The committee will include the West Virginia IPM Coordinator, Rakesh Chandran; staff of the West Virginia Department of Agriculture Pesticide Section, Grant Bishop and Peggy Powell; the West Virginia Pesticide Safety Education Program Coordinator Liaison, John F. Baniecki; the Extension Specialist for Weeds and IR-4, Rakesh Chandran; the Extension Specialist for Plant Pathology, Alan Biggs; the Extension Specialist for Entomology, Henry Hogmire; IPM users such as growers and crop consultants, Extension agents, and the Director of the organic farm project, James Kotcon, representing environmental groups.

Commodities for Crop Profiles and Pest Management Strategic Plans will be reviewed. IWGs' membership lists, activities, and reports will be reviewed. The Advisory Committee will be asked to make recommendations to insure that West Virginia is adequately represented on IWG's and that issues important to the state are being addressed. The project director will solicit opinions from committee members on the value of each IWG. The project director will ask for names of West Virginia stakeholders who would be interested in IWG activities. The Committee will assist in evaluation of WVinPAS.

Crop Profiles and PMSP's- Objectives and Procedures:

5. Crop Profiles

Objective: Update one Crop Profile on a West Virginia commodity at risk.

Procedures: The WVinPAS Advisory Committee recommended the peach commodity as a possible candidate for updating a Crop Profile. West Virginia ranks 15th among states in peach production. This commodity is on the FQPA list of Kid's Foods and should be given the highest priority. This Profile will be submitted to the NE IPM Center by October, 2004.

6. Pest Management Strategic Plans (PMSP)

Objective: Write a Regional Pest Management Strategic Plan on a West Virginia commodity at risk.

Procedure: Extension Specialists Alan Biggs-plant pathology, Henry Hogmire-entomology, Rakesh Chandran-weeds, Bill Grafton-wildlife and Jim Kotcon-nematology would be the appropriate section leaders for development of a strategic plan for peaches in West Virginia. Growers, crop consultants, Specialists, state network project leaders, NE IPM Center staff, regulatory staff, IR-4 staff, and environmental advocacy group members will be invited to participate in the development of the regional pest management strategic plan for peaches.

The West Virginia project director will invite NJinPAS, MDinPAS, PAinPAS, DEinPAS and VAinPAS to participate in writing a regional peach PMSP. Arrangements will be made for a peach workshop to be held in Kearneysville, W.Va. during the off season, 2004. A written draft of the peach pest management strategic plan will be routed to all workshop participants for review and suggested comments. Revisions and comments will be incorporated from the workshop and the final draft routed to all workshop participants for approval before submitting the final copy to the NE IPM Center by February 05.

Probable Duration: 12 months

Evaluation Plans: As this project develops, the advisory committee will monitor progress and evaluate success. Success will be determined by completion of Crop Profiles, PMSP's, transmission of information to stakeholders, and response to federal partners for information requests.

Time Line:

March, 04	Submit Field corn crop profile
March, 04	Complete Regional PMSP-Apple
June, 04	Solicit Advisory Committee members
July, 04	Review web pages for revisions
July, 04	Regional peach PMSP Workshop (Tentative)
August	Study IWG's activities and reports
Sept., 04	Request review from Advisory Committee
Oct., 04	Attend NE TriAgency Annual Meeting
Oct., 04	Submit updated peach crop profile
December, 04	Draft peach PMSP written
February, 05	Peach PMSP submitted
March, 05	Write WVinPAS annual report

Cooperation and Institutional Units Involved:

West Virginia University Cooperative Extension Service

WVU Division of Plant and Soil Science, Entomology and Plant Pathology

WVU Division of Forestry and Wildlife Management

Key Personnel:

Extension specialists Alan Biggs-plant pathology, Henry Hogmire-entomology, Rakesh Chandran-weeds, Bill Grafton-wildlife and Jim Kotcon-nematology from West Virginia University will be involved in updating the peach Crop Profile and writing a regional peach PMSP's. They will serve on the WVinPAS Advisory Committee.