2016 Curriculum vitae

NAME: Peter J. Jentsch
DEPARTMENT/UNIT: Entomology
TITLE: Superintendent Cornell's Hudson Valley Lab
Senior Extension Associate / Entomologist

CAMPUS ADDRESS: Cornell's Hudson Valley Lab
P.O. BOX 727
Highland, NY 12528
PHONE: 845-691-7151
EMAIL: pjj5@cornell.edu
WEB PAGE: http://blogs.cornell.edu/jentsch/

BACKGROUND

EDUCATION

Year	Degree	Major	Institution
2005	M.S.	Entomology	University of Nebraska-Lincoln
1982	B.A.	Education	S.U.N.Y. at New Paltz, New Paltz, NY
1978	A.A.S.	Natural Resources Conservation	S.U.N.Y. at Morrisville, Morrisville, NY

POSITION RANKS (year achieved)

Laboratory Superintendent (Nov. 2013)
Senior Extension Associate / Entomologist (August, 2010)
Extension Associate / Entomologist (June 01, 2006)
Research Support Specialist II (1998)
Research Support Specialist I (1990)
Technician (1986)

PRIMARY DEPARTMENTAL/ Unit PROGRAM AREA: Entomology (Geneva)

AREAS OF EXPERTISE (key words)

Integrated Pest Management Of Tree Fruits
Chemical Control Of Insect Pests
Biological Control Of Mite On Tree Fruits
Organic / Bio-Pesticide Insect Pest Management
Agricultural Invasive Insect Species Monitoring And Management

PROFESSIONAL EXPERIENCE

Year	Experience
1985-1989.1	Research technician; Plant Pathology and Entomology for Cornell HVRL
1982-1989	Farm Manager; Feather Farm, High Falls, NY
1989-2006	Research Support Specialist, Cornell University's HVL, Highland, NY
2006-Present	Senior Extension Associate, Cornell University's HVL, Highland, NY
2013-Present	Superintendent, Hudson Valley Research Laboratory, Highland, NY

Overview:

I presently oversee the Hudson Valley Research Laboratory (HVRL) as superintendent. Working with our 11-member board of directors I assist in developing yearly schedules for maintenance and operations, developing partnerships with producers, agricultural interest groups and foundations for funding to support the laboratory and research farm. I direct the entomology program for Cornell University's College of Agriculture and Life Science in Highland, NY. My position requires time allotments of 40% administrative duties and entomological research and 60% extension in the areas of tree fruit (80%), vegetable (10%) and grape (10%) education. My areas of expertise lay primarily in fruit insect pest management. As department coordinator I develop projects for studies of direct concern to the agricultural community, specifically invasive and native pest complex, employing both organic and conventional production systems, while submitting grant project funding requests for technical and programmatic support. I direct full time and contract technical and support staff, volunteer and internship programs. My education in forestry, ornamental plant science, agriculture, work experience in the mechanical arts and project development and administration coupled with my passion to serve the agricultural community have provided me with the tools for a successful career.

Broad studies on pest and beneficial insect groups studies in a wide range of cropping systems include internal and surfacing feeding lepidopteran across multiple commodities, thrips, bulb mite, Coleoptera including plum curculio, miridae predominately plant bug, psyllidae exclusively pear psylla, Dipteran in Tephritidae (*Rhagoletis pomonella*) and Drosophilidae (*D. suzukii* (SWD), Hemiptera in the family Pentitomidae including the native and invasive brown marmorated stink bug, *Halyomorpha halys* (BMSB), and other agricultural pest and beneficial insect species. A 20-acre research farm provides experimental plot design for over 100 experiments on tree and small , stone and pome fruit, with rearing facilities to maintain insect pest colonies for complementing field studies with laboratory bioassay work.

Pre-sampling of populations in tree fruit adult populations are included at the onset of the experimental process when possible. Use of vacuum sampling for flying insects such as pear psylla or leafhopper species, foliar samples for aphid and mite are conducted prior to treatment, with establishment of plot randomization based on insect distribution.

Experimental field treatments have been employed using a variety of deployment methods. These include tractor mounted air assist concentrate sprays, high pressure high volume, backpack micro-dropplet air assist as well as small plot corn tassel and ear sprays using CO2 backpack applicators.

Laboratory bioassay have been conducted on foliar and subterranean mite, codling moth, European corn borer, invasive insect pests including BMSB and SWD. Serial dilutions using micro-droplet applications directed to life forms, residual exposure of field applied insecticides and fresh spray using airbrush applications to host plants with assessments over time for response are on-going as the needs arise.

Field evaluations of production practices include water quality assessments, sprayer calibration including speed, nozzle selection and spray pattern distribution, rate and canopy determinations and production selection based on pest presence, life stage, weather and developmental modeling predictions.

Reporting of analyzed data and written observations of outcomes is completed annually to industry and grower groups, with quarterly reporting to granting agencies. Extension outreach

includes public and digital presentations to producer and stakeholder groups, written, audio embedded presentations and video information dissemination. **Grant Support**

Pending Grants:

(Agnello, A., Hajek, A. Young, S.I.., Jentsch , P) 9/1/2016 to 8/31/2021 10%
USDA SCRI $571,595
Management of Brown Marmorated Stink Bug in US Specialty Crops

(Agnello, A., Shields, E., Jentsch , P) 04/01/16 to 3/31/18 10 %
NYFVI 101,152.00
Optimizing Use of Native Persistent Nematodes for Biological Control of Plum Curculio in Organic and Conventional Apple Production

(Jentsch , P., Robinson, T.) 04/01/16 to 3/31/17 8 %
NYS Ag & Mkts $63,000
Columbia County Invasive Insect Pest Monitoring, Research and Extension Outreach

Received Grants:

(Jentsch , P., Lampasona, T., Rosenberger, D., Donahue, D., Cox, K.,) 15%
NYS Ag & Mkts ARDP $24,740
Development of Horticultural, Disease and Insect Pest Management Strategies to Address Severe Late Season Tall Spindle Tree Collapse in NYS Orchard Systems

(Jentsch , P., Lampasona, T.) 09/15/15 to 4/01/16 < 2 %
Consulting (Agrilytica / USDA Risk Assessment) $8,250

(Jentsch , P., Robinson, T.) 04/01/16 to 3/31/17 8 %
NYS Ag & Mkts ARDP $79,000
Horticultural Programming For The Eastern NY Tree Fruit Industry

(Jentsch , P., Lampasona, T.) 02/12/16 to 4/15/17 15 %
Northeast SARE ONE16-263 $14,977
A Behaviorally-Based Approach To Managing The Invasive Brown Marmorated Stink Bug, Halyomorpha halys

(Jentsch , P., Lampasona, T.) 04/01/15 to 3/31/17 15 %
NYFVI $99,614
Increasing the Efficacy and Economic Viability of Trap and Kill Systems for Invasive Agricultural Pests in NY Fruit and Vegetable Production

(Jentsch , P., Robinson, T.) 04/01/15 to 3/31/16 8 %
NYS Ag & Mkts ARDP $64,000
Horticultural Programming For The Eastern NY Tree Fruit Industry

(Jentsch , P., Lampasona, T.) 04/01/14 to 3/31/15 15 %
NYS Ag & Mkts ARDP $24,000
Development of Pest Management Thresholds and Management Strategies for the Invasive Brown Mamorated Stink Bug, Halyomorpha halys (Stal): (Pentatomidae) in Commercial Tree Fruit in the Hudson Valley of NY

(Jentsch , P., Lampasona, T.) 09/15/14 to 12/01/15 < 5 %
Consulting $1,100
Studies to Reduce Infestation of Product by Spotted Lantern Fly in Quarantine Areas of PA.

(Jentsch , P., Lampasona, T.) 01/01/14 to 12/01/15 < 5 %
Consulting $7,400
Studies Determining Risk Factors Associated With BMSB in Food Product Contamination

(Jentsch , P., Lampasona, T.) 04/01/14 to 3/31/15 10 %
NYFVI $15,000
Developing Biological Control, Reduced Risk Insecticide Use and Attract and Kill Management Strategies for the Invasive Spotted Wing Drosophila

(Jentsch , P., Robinson, T.) 04/01/14 to 3/31/15 15 %
NYS Ag & Mkts ARDP $118,000
Horticultural Programming For The Eastern NY Tree Fruit Industry

(Jentsch , P., Lampasona, T.) 04/01/14 to 3/31/15 15 %
NYS Ag & Mkts CCE Columbia County $64,740
Monitoring and Management Strategies for the Invasive Spotted Wing Drosophila and Brown Marmorated Stink Bug in the Hudson Valley of NY.

(Jentsch , Peter;) 03/01/14 to 11/30/15 40 %
Agricultural Company Gifts/Grants $35,000
Field Insecticide Trials with Apple, Pear, Small Fruit

(Jentsch , P., Lampasona, T.) 04/01/14 to 3/31/15 15 %
NYS Ag & Mkts ARDP $14,900
Tree Host Survey, Monitoring and Management Strategies for the Invasive Brown Marmorated Stink Bug, Halyomorpha halys (Stål): (Pentatomidae), Along Borders of NY Tree Fruit

(Jentsch , Peter;) 01/01/14 to 12/31/15 20 %
Hatch FFF $20,000
Biology and Management of the Spotted Wing Drosophila in Hudson Valley Small Fruit

USDA-NIFA SCRI
Coordinated Agricultural Project (Leskey, T.) 01/01/14 to 12/31/15 20 %
Biology, Ecology, and Management of Brown Marmorated Stink Bug in Orchard Crops, Small Fruit, Grapes, Vegetables, and Ornamentals

(Loeb, G., Jentsch, P.) 01/01/14 to 12/31/15 20 %
NYFVI $290,000
Biology and Management of Spotted Wing Drosophila & Other Production Practices in New York Berry Crops

(Loeb, G; Jentsch , Peter) 03/01/13 to 12/31/15 50 %
NYFVI $170,000
Biology and management of spotted wing drosophila for NY Berry Crops

(Jentsch , Peter;) 03/01/13 to 11/30/13 50 %
Agricultural Company Gifts/Grants $35,000
Field Insecticide Trials with Apple, Pear, Small Fruit

(Jentsch , P., Fargione, M.) 04/01/13 to 3/31/14 15 %
NYS Ag & Mkts ARDP $14,400
Tree Host Survey, Monitoring and Management Strategies for the Invasive Brown Marmorated Stink Bug, Halyomorpha halys (Stål): (Pentatomidae), Along Borders of NY Tree Fruit

(Rusinek, T., Shelton, T, Jentsch , P.) 02/14/12 to 2/13/113 2 %
Is fresh market sweet corn in reduced-till systems at greater risk to Lepidoptera pests?
NESARE $14,995

(Jentsch , Peter;) 03/01/11 to 11/30/14 30 %
NYS SCRI $78,897
Biology, Distribution, and Pest Status of the Brown Marmorated Stink Bug in Agronomic, Fruit, Vegetable Crops, and Urban Areas

(Jentsch , Peter;) 10/01/11 to 09/30/14 20 %
Hatch FFF $42,000
Monitoring, Damage Assessment and Program Evaluation for Management of Brown Marmorated Stink Bug in the Hudson Valley

(Jentsch , Peter;) 03/01/11 to 11/30/11 70 %
Agricultural Company Gifts/Grants $32,000
Field Insecticide Trials with Apple and Pear

(Jentsch , P., Fargione, M.) 04/01/11 to 3/31/12 15 %
NYS Ag & Mkts ARDP $18,400
Developing Management Strategies for the Invasive Brown Marmorated Stink Bug, Halyomorpha halys (Stål): (Pentatomidae), in Long Island, Hudson & Champlain Valley Tree Fruit Industry

(Jentsch , Peter, Rosenberger, D., Hoying , S.) 03/01/11 to 11/30/12 10 %
NESARE $14,770
Determining the Potential for Organic Material Use In Northeast Commercial Pear Production

Rejected

(Jentsch, P.) 4/1/16 - 3/31/17
NYS Ag & Mkts ARDP $16,580
Reinforcing High Density Apple Production:
Addressing Insufficient Tall Spindle Support Systems in New York

(Agnello, A., Shields, E., Jentsch , P) 04/01/15 to 3/31/17 10 %
NYFVI 101,152.00
Optimizing Use of Native Persistent Nematodes for Biological Control of Plum Curculio in Organic and Conventional Apple Production

(Jentsch , P., Fargione, M.) 04/01/12 to 3/31/14
NE-IPM $14,400
Tree Host Survey, Monitoring and Management Strategies for the Invasive Brown Marmorated Stink Bug, Halyomorpha halys (Stål): (Pentatomidae), Along Borders of NY Tree Fruit.

(Jentsch, P. and Fargione, M.) 1/24/11 - 1/23/12
Toward Sustainability Foundation $9,500
Educating NY Apple Growers in Organic Production Techniques.

(Jentsch, P.) 4/1/10 - 3/31/11
NYS Ag & Mkts ARDP $14,477
Determining The Economic Viability Of Pesticide Load Reductions Using Disease Resistant PRI Apple Varieties.

(Jentsch , Peter; Rosenberger, D.) 4/1/09 - 3/31/11
NEIPM $41,881.00
Northeast Pear Production: Integrating Horticultural Oil and Kaolin Clay To Manage Pear Insect and Disease In Organic, IPM and Conventional Pear Production Systems.

(Taylor, D., Jentsch, P.) 4/1/09 - 3/31/10
NYS Ag & Mkts ORDP $16,000
Onion Seed Treatments and Coatings for Efficient Early Season Pest Management

2009-10-297 (Rosenberger , David) 10/1/2009 - 09/30/2012
FFF Initiative $109,929
Developing a Model Organic Orchard for Research & Extension Education

Extension Publications and Presentations (last five years)

	2015	2014	2013	2012	2011	Median
# Extension Publications	19	59	10	9	5	20.4
# Extension Presentations	18	19	19	22	16	17.2
Total contact hours	611	636.5	647	1522	548.5	735.4

Relevant Extension/Outreach Publications

Nailing Scale: SJS and White Pernicula Scale Management. Scaffolds Fruit Journal 25(2). On-line. http://www.scaffolds.entomology.cornell.edu/2016/SCAFFOLDS-3-28-16.pdf

Managing San Jose scale to prevent fruit loss in 2016.
March 7, 2016 http://blogs.cornell.edu/jentsch/2016/03/

What's New For 2016? Fewer New Insecticides On The Horizon; Continued Insecticide Losses.
March 18, 2016 http://blogs.cornell.edu/jentsch/2016/03/

Green Tip: Beginning to show in NY2. 3.11.16
March 12, 2016 http://blogs.cornell.edu/jentsch/2016/03/

Hudson Valley Stone Fruit: '16 Spring Bud Status
March 12, 2016 http://blogs.cornell.edu/jentsch/2016/03/

Psylla on the Wing. March 11th, 2016
March 11, 2016 http://blogs.cornell.edu/jentsch/2016/03/

Managing San Jose scale to prevent fruit loss in 2016.
March 7, 2016 http://blogs.cornell.edu/jentsch/2016/03/

Grape Bud Cold-Hardiness Update. Bud losses in Cab Franc observed.
March 7, 2016 http://blogs.cornell.edu/jentsch/2016/03/

Dr. Srdjan Acimovic, candidate for the Plant Pathologist position at the HVRL, presenting on January 26th at 2:00 PM. January 22, 2016 http://blogs.cornell.edu/jentsch/2016/01/

Bud Freezing Temperature Monitoring for 2015-2016 Underway
January 22, 2016 http://blogs.cornell.edu/jentsch/2016/01/

Jentsch 2016. Leafhopper and ECB damage increasing: Maintain terminal growth of newly planted trees. June 16th https://blogs.cornell.edu/jentsch/2015/06/16/leafhopper-and-ecb-damage-increasing-maintain-terminal-growth-of-newly-planted-trees/ Jentsch 2015. A New Threshold-Based Management Tool for Brown Marmorated Stink Bug in NY. New York Fruit Quarterly . Volume 23, Number 3, Fall 2015

---

http://www.nyshs.org/pdf/NYFQ%202015.CMC/NYFQ%20Fall%202015.CMC/Jentsch%20Pages%20from%20NYFQ%20Book%20Fall%202015-4.pdf

Jentsch 2015. Leafhopper and ECB damage increasing: Maintain terminal growth of newly planted trees. June 16th https://blogs.cornell.edu/jentsch/2015/06/16/leafhopper-and-ecb-damage-increasing-maintain-terminal-growth-of-newly-planted-trees/

Jentsch 2015. Leafroller Management: Finding the (re) application window. June 16th https://blogs.cornell.edu/jentsch/2015/06/16/leafroller-management-finding-the-re-application-window/

Jentsch 2015. If You're In The Open…Get Covered…..CM, SJS & PLH Mgt…..OBLR June 14th.!. June 10th https://blogs.cornell.edu/jentsch/2015/06/10/if-youre-in-the-open-get-covered-cm-sjs-plh-mgt/

Jentsch 2015. Curculio migration continues as codling moth eggs develop. Stayed covered!. May 25th. https://blogs.cornell.edu/jentsch/2015/05/25/curculio-migration-continues-as-codling-moth-eggs-develop-stayed-covered/

Jentsch 2015. Black Stem Borer found in 'Pink Lady' apple, Highland NY. May 24th. https://blogs.cornell.edu/jentsch/2015/05/24/black-stem-borer-found-in-pink-lady-apple-highland-ny/

Jentsch 2015. Drought Forecast: Stink bug on the rise. May 14th. https://blogs.cornell.edu/jentsch/2015/05/14/drought-forecast-stink-bug-on-the-rise/

Jentsch 2015. Plum Curculio Damage on Cherry & Pear Increasing. May 11th. https://blogs.cornell.edu/jentsch/2015/05/11/plum-curculio-damage-on-cherry-pear-11-may/

Jentsch 2015. PC management in apricot: Earlier than in apple! May 7th. https://blogs.cornell.edu/jentsch/2015/05/07/pc-management-in-apricot-earlier-than-in-apple/#respond

Jentsch 2015. Pink: To Spray or Not To Spray (GFW): (Scouting Report) April 30th https://blogs.cornell.edu/jentsch/2015/04/30/pink-spray-or-not-to-spray-fruit-worm-complex/

Jentsch 2015. Pink: To Spray or Not To Spray (TPB): (Scouting Report) April 27th https://blogs.cornell.edu/jentsch/2015/04/27/pink-spray-or-not-to-spray-tpb/

Jentsch 2015. Dogwood Borer and Scale, Not to be Taken Lightly: (Scouting Report) April 24th https://blogs.cornell.edu/jentsch/2015/04/24/dogwood-borer-and-scale-not-to-be-taken-lightly/

Jentsch 2015. Tree Fruit Management @ ½" Green: (Scouting Report) April 20th https://blogs.cornell.edu/jentsch/2015/04/06/pear-psylla-hunt-finds-first-eggs/

Jentsch 2015. Pear Psylla Hunt Finds First Eggs: April 6th https://blogs.cornell.edu/jentsch/2015/04/06/pear-psylla-hunt-finds-first-eggs/

Jentsch P. J. 2015. Bifenthrin Sec. 18 Again Approved Against BMSB In Hudson Valley Scaffolds Fruit Journal 24(20). On-line. http://www.scaffolds.entomology.cornell.edu/2015/SCAFFOLDS%208-10-15.pdf

Jentsch P. J. 2015. Brown Marmorated Stink Bug: Field Confusion. Scaffolds Fruit Journal 24(19). On-line. http://www.scaffolds.entomology.cornell.edu/2015/SCAFFOLDS%208-3-15.pdf

Jentsch P. J. 2015. San Jose Scale Emergence. Scaffolds Fruit Journal 24(11). On-line. http://www.scaffolds.entomology.cornell.edu/2015/SCAFFOLDS%206-8-15.pdf

Jentsch P. J. 2015. Pre-bloom Problems. Scaffolds Fruit Journal 24(4). On-line. http://www.scaffolds.entomology.cornell.edu/2015/SCAFFOLDS%204-20-15.pdf

Jentsch P. J. 2015. Pear Psylla Hunt Finds First Eggs In The Hudson Valley. Scaffolds Fruit Journal 24(3). On-line. http://www.scaffolds.entomology.cornell.edu/2015/SCAFFOLDS%204-13-15.pdf

Jentsch 2014. BMSB Harvest Update: Damage to Red Delicious at Harvest: October 2nd, 2014 http://blogs.cornell.edu/jentsch/2014/10/02/bmsb-harvest-update-damage-to-red-delicious-at-harvest-october-2nd-2014/

Jentsch 2014. BMSB Trapping Update: Flucuating Temperatures = Sporatic Trap Captures. http://blogs.cornell.edu/jentsch/2014/10/08/bmsb-trapping-update-flucuating-temperatures-sporatic-trap-captures/

Jentsch 2014. BMSB Update: Increasing Damage to Pink Lady Apple Observed In Columbia County. http://blogs.cornell.edu/jentsch/2014/10/14/bmsb-update-increasng-damage-to-pink-lady-apple-observed-in-columbia-county/

Jentsch P. J. 2014. Hudson Valley Pest Management Updates. Reducing The Impact From 17-Year Cicada In Tree Fruit. Scaffolds Fruit Journal 23(2). On-line. http://www.scaffolds.entomology.cornell.edu/2014/index.html

Jentsch P. J. 2014. Hudson Valley Pest Management Updates. Plan For Early Scale Management. Scaffolds Fruit Journal 23(2). On-line. http://www.scaffolds.entomology.cornell.edu/2014/index.html

Jentsch P. J. 2014. BMSB Trap & Scouting Update: BMSB Trap Numbers Continue to Drop. Site Specific Management Required: September 30th http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. BMSB Trap & Scouting Update; BMSB Managed Orchard Trap Numbers Drop Dramatically, Yet Continued Management Is Required: September 19th, http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. BMSB Trap & Scouting Update: BMSB Trap Numbers Continue to Drop. Site Specific Management Required: September 30th, 2014 http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. BMSB Trap & Scouting Update; BMSB Managed Orchard Trap Numbers Drop Dramatically, Yet Continued Management Is Required: September 19th, 2014 http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. BMSB Update: Assessing Fruit Damage at Harvest. Is it Hail, Bitter Pit, Apple Maggot or Stink Bug? http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. Cornell in the News: CBS2 Report on Spotted Wing Drosophila http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. BMSB Trap & Scouting Update; All Trap Sites Above Threshold For Management: September 11th http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. Sweet Corn Report, September 9th http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. Workshop Invitation: Establishing A Successful High Density Organic Orchard Cropping System. Hoying, Rosenberger, Cook & Jentsch @ HVRL http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. BMSB Trap & Scouting Update: September 5th http://blogs.cornell.edu/jentsch/2014/09/

Jentsch P. J. 2014. Spotted Wing Drosophila Update: August 29th. http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. BMSB Trap & Scouting Update: August 28th http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. Sweet Corn Report, August 27th http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. Extensive damage from BMSB Observed On Peach in Highland, NY: August 25th http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. BMSB Update: August 20. Confirmed Late Season Feeding to Apple, Peach and Pepper http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. Mite Management Using Reduced Risk Pest Management Programs and Biological Control. http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. DEC Approves Special Local Needs (SLN) registration for Envidor 2 SC Available. http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. Late Bite: Summer OBLR Emergence OFM, ECB, DWB and BMSB; August 18th http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. Brown Marmorated Stink Bug: August 15th Update. http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. Apple Maggot: When Control Is No Longer Needed. August 14th. http://blogs.cornell.edu/jentsch/2014/08/

Jentsch P. J. 2014. Sweet Corn Report: July 31st http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Brown Marmorated Stink Bug: July 30th Trap Site Data Update
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Spotted Wing Drosophila (SWD) Update: July 30th. SWD Fruit Injury to 'Prelude' Raspberry in Southern Dutchess County
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Spotted Wing Drosophila (SWD) Update: July 28th. SWD Adults in Dutchess County
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Spotted Wing Drosophila (SWD) Update: July 25th. SWD in Hudson Valley Raspberry and Blueberry
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Brown Marmorated Stink Bug: July 24th Trap Site Data Update
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Brown Marmorated Stink Bug: Update July 19th. Intensify Scouting Efforts.
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Apple Maggot at Treatment Threshold at the Hudson Valley Lab. July 18.
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Codling Moth 2nd Generation Management This Week.
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Sweet Corn Report: July 15th 2014
http://blogs.cornell.edu/jentsch/2014/07/

Jentsch P. J. 2014. Obliquebanded Leafroller and Tufted Apple Bud Moth Management This Week in the Mid-Hudson Valley.
http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. San Jose Scale Damage Increasing on Hudson Valley Apple
http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. Fruit with Frass. Assessing 1st Generation Codling Moth Injury
http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. Brown Marmorated Stink Bug Trapping in the Hudson Valley: June 19th
http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. Controlling Potato Leafhopper To Reduce Fireblight and Maintain Growth on Young Apple Trees
http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. Time To Weigh In Hard On Scale This Week!
http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. OBLR Update: First Egg Hatch Predicted For June 20th http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. Brown Marmorated Stink Bug Update (BMSB): Eggs And Nymphs Found On Bartlett Pears. http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. Plum Curculio Migration Nearing Its End: Regional PC Model Update. http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. When Obliquebanded Leafroller (OBLR) Fly: OBLR Management at 1st Hatch. http://blogs.cornell.edu/jentsch/2014/06/

Jentsch P. J. 2014. Brown Marmorated Stink Bug In NYS: Urban & Agricultural Assesment. http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. Early Pear Psylla Management: 1st of 2 pre-bloom application trial results. http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. Insect Degree Day Models for Management As of May 24th. http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. Mite management without oil at PF-1C http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. Delicious and Ginger Gold at 80% PF http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. When Petals Fall: Insect pest management decision-making at PF. http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. Bloom: Preserving the King. http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. Logistics of tarnished plant bug management. http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. First Flight: Considerations for Early 'Worm' Management to NY Apple. http://blogs.cornell.edu/jentsch/2014/05/

Jentsch P. J. 2014. Hudson Valley Insect Management at Tight Cluster: April 28, 2014 http://blogs.cornell.edu/jentsch/2014/04/

Jentsch P. J. 2014. Scouting Report for 21 April. http://blogs.cornell.edu/jentsch/2014/04/

Jentsch P. J. 2014. Scouting Report for 14 April. http://blogs.cornell.edu/jentsch/2014/04/

Jentsch P. J. 2014. Hudson Valley Pest Management Updates. Reducing The Impact From 17-Year Cicada In Tree Fruit. Scaffolds Fruit Journal 23(2). On-line. http://www.scaffolds.entomology.cornell.edu/2014/index.html

Jentsch P. J. 2014. Hudson Valley Pest Management Updates. Plan For Early Scale Management. Scaffolds Fruit Journal 23(2). On-line. http://www.scaffolds.entomology.cornell.edu/2014/index.html

Jentsch P. J. 2013. NYS Insecticide Materials and Efficacy to Manage the Asian Invasive Brown Marmorated Stink Bug (http://hudsonvf.cce.cornell.edu/bmsb1.html).

Jentsch P. J. 2013. Assessing the Invasiveness of the Asian Brown Marmorated Stink Bug in NY. Fruit Quarterly, Volume 21 No. 3. On-line: http://www.nyshs.org/pdf/2008-Volume-16/Vol-16-No-3/Hudson-Valley-Stink-Bug-Management.pdf

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. BMSB Update. Scaffolds Fruit Journal 22(21). On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. Mite Mgt. Scaffolds Fruit Journal 22(18). 3-5 On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. IPM Update. Scaffolds Fruit Journal 22(14). On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. IPM Update. Scaffolds Fruit Journal 22(13). On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. 17-year Cicada Mgt. Scaffolds Fruit Journal 22(12). On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. IPM Update. Scaffolds Fruit Journal 22(8). On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. Pre-bloom IPM on Apple. Scaffolds Fruit Journal 22(6). On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

Jentsch P. J. 2013. Hudson Valley Pest Management Updates. Pre-bloom IPM on Pear. Scaffolds Fruit Journal 22(6). On-line. http://www.scaffolds.entomology.cornell.edu/2013/index.html

PMEP Distance Learning Center: On-Line DEC Pesticide Recertification Module for categories 2, 3a, 9, 10, 7a, 1a, 21, 22, 23, 24, and 25. http://coursem.cce.cornell.edu/catalog.php?item=10

Brown marmorated stink bug in the Hudson Valley: Appellation Cornell Newsletter Issue 12 November 2012 http://grapesandwine.cals.cornell.edu/cals/grapesandwine/appellation-cornell/

Jentsch P. J. 2012. Hudson Valley Pest Management Updates. Scaffolds Fruit Journal 21(24). On-line. http://www.scaffolds.entomology.cornell.edu/2012/index.html

Jentsch P. J. 2012. Hudson Valley Pest Management Updates. Scaffolds Fruit Journal 21(22). On-line. http://www.scaffolds.entomology.cornell.edu/2012/index.html

Jentsch P. J. 2012. Stink Bug Management in the Hudson Valley.
Scaffolds Fruit Journal 21(17). On-line.
http://www.scaffolds.entomology.cornell.edu/2012/index.html

Jentsch, P. 2012. Weighing in on Scale.
Scaffolds Fruit Journal 21(12). On-line:
http://www.scaffolds.entomology.cornell.edu/2012/index.html

Jentsch P. J. 2012. Hudson Valley Insect Pest Management. Scaffolds Fruit Journal 21(13,19,22-24). On-line. http://www.scaffolds.entomology.cornell.edu/2012/index.html

Jentsch, P. 2012. Hudson Valley Pre-bloom Pear Psylla Management. Scaffolds Fruit Journal 21(3). On-line. http://www.scaffolds.entomology.cornell.edu/2012/index.html

Jentsch P. J. 2012. The Unpredictable Brown Marmorated Stink Bug in New York State. Fruit Quarterly, 20 (1). On-line: http://www.nyshs.org

Jentsch P. J. 2011. Stink Bug Management in the Hudson Valley.
Scaffolds Fruit Journal 20(1). On-line.
http://www.scaffolds.entomology.cornell.edu/2011/110321.pdf

Jentsch, P. 2011. Strategies for Pear Psylla Management During the Pre-bloom Period. Scaffolds Fruit Journal 20(3). On-line: http://www.scaffolds.entomology.cornell.edu/2011/110404.pdf

Jentsch, P. 2011. Weighing in on Scale.
Scaffolds Fruit Journal 20(5). On-line:
http://www.scaffolds.entomology.cornell.edu/2011/110418.pdf

Jentsch, P. 2011. Plum Out of Time.
Scaffolds Fruit Journal 20(11). On-line:
http://www.scaffolds.entomology.cornell.edu/2011/110531.pdf

Jentsch, P. 2011. NY Brown Marmorated Sink Bug Survey.
Scaffolds Fruit Journal 20(16). On-line:
http://www.scaffolds.entomology.cornell.edu/2011/110705.pdf

Lehner T. Richard 2010 New Stink Bug Plagues Eastern Growers (quoted). Good Fruit Grower, October. On-line. http://www.goodfruit.com/Good-Fruit-Grower/

Rosenberger, D.A., Jentsch, P.J., and Rugh, A.L. 2010. Slowing the Spread of Fireblight During Summer. Fruit Quarterly, 18 (2). On-line:
http://www.nysaes.cornell.edu/ent/scaffolds/2009/090629.pdf

Jentsch P. J. 2010. Stink Bug Management in the Hudson Valley. Scaffolds Fruit Journal 19(16). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2010/100712.pdf

Jentsch, P. 2010. Hudson Valley Pre-bloom Pear Psylla Management. Scaffolds Fruit Journal 19(2). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2010/100329.pdf

Jentsch P. J. 2009. Assessing Azinphos-methyl Resistance in New York State Codling Moth Populations. Fruit Quarterly, Volume 17 (3). On-line: http://www.nyshs.org/fq/09Fall/NYFQFall-2009.pdf

Rosenberger, D.A., Jentsch, P.J., Meyer, F.W., and Rugh, A.L. 2008. Effects of oil sprays on development of Fabraea leaf spot in pears. Plant Disease Management Reports (online). The American Phytopathological Society, St. Paul, MN. (In Press).

Jentsch P. J. 2009. Stink Bug Management in the Hudson Valley. Scaffolds Fruit Journal 18(18). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090720.pdf

Jentsch P. J. 2009. Beetles Summer Tour. Scaffolds Fruit Journal 18(17). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090713.pdf

Jentsch P. J. 2009. Hudson Valley Insect Pest Management. Scaffolds Fruit Journal 18(16). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090706.pdf

Jentsch P. J. 2009. Hudson Valley Insect Pest Management. Scaffolds Fruit Journal 18(15). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090629.pdf

Jentsch P. J. 2009. Hudson Valley Insect Pest Management. Scaffolds Fruit Journal 18(14). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090622.pdf

Jentsch P. J. 2009. Hudson Valley Insect Pest Management. Scaffolds Fruit Journal 18(13). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090615.pdf

Jentsch P. J. 2009. Hudson Valley Insect Pest Management. Scaffolds Fruit Journal 18(12). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090608.pdf

Jentsch P. J. 2009. Hudson Valley Insect Pest Management. Scaffolds Fruit Journal 18(11). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090601.pdf

Jentsch P. J. 2009. Oriental Fruit moth in the Hudson Valley. Scaffolds Fruit Journal 18(11). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090504.pdf

Jentsch P. J. 2009. Strategies for Pear Psylla Management During the Pre-bloom to Petal Fall Period. Scaffolds Fruit Journal 18(11). On-line. http://www.nysaes.cornell.edu/ent/scaffolds/2009/090504.pdf

Jentsch P. J. 2008. Hudson Valley Stink Bug Management. Fruit Quarterly, 17 (15). On-line: http://www.nyshs.org/pdf/2008-Volume-16/Vol-16-No-3/Hudson-Valley-Stink-Bug-Management.pdf

Jentsch, P. 2008. Thinking Organically: Insect Pest Management. Scaffolds Fruit Journal 17(2). On-line. http://www.nysaes.cornell.edu/ent/scafolds/2008/080331.html

Jentsch, P., Hoying, S. 2008. Troubling Thrips: Hudson Valley Sweet Cherry Damage. Scaffolds Fruit Journal 17(7). On-line http://www.nysaes.cornell.edu/ent/scafolds/2008/080505.html .

Jentsch, P. 2008. What About Those Leps?? The Short Answer...We No Longer Have A Short Answer. Scaffolds Fruit Journal 17(8). On-line http://www.nysaes.cornell.edu/ent/scafolds/2008/080512.html

Jentsch, P. 2008. Hudson Valley Obliquebanded Leafroller Update. Scaffolds Fruit Journal 17(17). On-line: http://www.nysaes.cornell.edu/ent/scafolds/2008/080714.html.

Rosenberger, D.A., Jentsch, P.J., and Meyer, F.W. 2007. Impact of organic pest control on productivity of 15 apple cultivars. Proc. 83st Cumberland-Shenandoah Fruitworkers Meetings, 15-16 Nov. 2007, Winchester, VA. (In Press).

Jentsch P. J. 2007 It Was the Best of Years in Regards to Grape Insect Pest Management in the Hudson Valley of NY. Hudson Valley Grape Newsletter 1 (3). October 1.

Jentsch P. J. 2007. Obliquebanded Leafroller Management for Apple Production: Investigating Strategies for Resistance Management with Emerging Insecticide Tools. Fruit Quarterly, 15 (3). On-line: http://www.nyshs.org/fq/07summer/2007FallFQ.pdf

Jentsch P. J. 2007. Pear Psylla Management Strategies: Investigating the Use of Kaolin Clay and Summer Oil For Commercial and Organic Pest Management in NY Pear Production. Fruit Quarterly, 15 (2). On-line: http://www.nyshs.org/fq/07summer/2007SummerFQ.pdf

Jentsch P. J. 2007. Summer Management of the Obliquebanded Leafroller: Much Obliqued. Scaffolds Fruit Journal 15 (14); 3-4 http://www.nysaes.cornell.edu/ent/scaffolds/2007/070618.pdf

Rosenberger, D. and Jentsch, P. 2007. Controlling Fabraea fruit and leaf spot on pears. Scaffolds Fruit Journal 15(10)7-9. On-line: http://www.nysaes.cornell.edu/ent/scaffolds/2007/070521.pdf .

Jentsch P. J. 2007. Living With The OP Transition Or Transforming To A Non-OP Insect Pest Management Program From Petal Fall To First Cover. Scaffolds Fruit Journal 16 (8); 10-11 http://www.nysaes.cornell.edu/ent/scaffolds/2007/070507.pdf

Jentsch P. J. 2007 Who's Eating My Grapes: Hudson Valley Insect Pest Management. Hudson Valley Grape Newsletter 1 (2). July 1.

Jentsch P. J. 2007 Hudson Valley Psylla Management Options From Pre-Bloom To Petal Fall Scaffolds Fruit Journal 16 (3); 3-5 http://www.nysaes.cornell.edu/ent/scaffolds/2007/070402.pdf

Jentsch P. J. 2007 Transitioning to Lower Risk in Hudson Valley Grape Berry Moth Management. Hudson Valley Grape Newsletter 1 (1). January 15.

Jentsch P. J. Straub, R. W. 2006. Investigating a Non-OP Approach to Insect Pest Management on Apple. Fruit Quarterly, 14 (4). http://www.nyshs.org/pdf/2006-Volume-14/Vol-14-No-4/Investigating-a-Non-OP-Approach-to-Insect-Pest-Management-on-Apple.pdf

Other Relevant Research Activities: Publications:

Research Summaries at the Hudson Valley Research Laboratory:

Research and Extension Activities at Hudson Valley Research Laboratory for 2013 – 2015 https://blogs.cornell.edu/jentsch/files/2015/11/16-HVRL-Report.Red_.Sz_.-1tqpf9e.pdf

Research and Extension Activities at Hudson Valley Research Laboratory for 2011 – 2012 http://blogs.cornell.edu/plantpathhvl/files/2013/11/HVL-Biennial-report-for-2011-12-1jpqdrt.pdf

Research and Extension Activities at Hudson Valley Research Laboratory for 2009 – 2010 http://www.hudsonvalleyresearchlab.org/wp-content/uploads/2014/06/11-02-09.10-full-color-HVLbiennialreport-rvsd.pdf

Editorial reviews:

Canadian Entomologist : Cooper et al. 2009. Temporal Color Trap Preference of Pear Psylla.

Grant reviewer:

Toward Sustainability Foundation : Cornell University, Ithaca, NY 2010.

Refereed Journals:

Leskey, Tracy C. et. al. 2015. Attraction of the invasive *Halyomorpha halys* Stål (Hemiptera: Pentatomidae) to traps baited with pheromonal and kairomonal stimuli across the United States. Environmental Entomology, 44(3), 746-756.

Rosenberger, D.A., Jentsch, P.J., Meyer, F.W., and Rugh, A.L. 2008. Effects of oil sprays on development of Fabraea leaf spot in pears. Plant Disease Management Reports (online). The American Phytopathological Society, St. Paul, MN. (In Press).

Book Chapters:

Jentsch, P. J.. 2014. Leafhopper Complex in Eastern New York. Compendium of Apple and Pear Diseases. American Phytopathological Society, St. Paul, MN. 3 pages with images.

Technical Reports:

Jentsch, P. J. 2015. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2015. On-line. (http://blogs.cornell.edu/jentsch/files/2013/10/15-Final-Field-Report-v4z466.pdf)

Jentsch, P. J.. 2014. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2014. On-line.

Jentsch, P. J.. 2013. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2013. On-line.

Jentsch, P. J.. 2012. Preliminary Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2012.

Jentsch, P. J.. 2011. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2011.

Jentsch, P. J.. 2010. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2010.

Jentsch, P. J.. 2009. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2009.

P. Jentsch and F. Zeoli 2009. Codling Moth Control With Voliam Flexi And Voliam Xpress. Arth. Mgmt. Tests (In Press)

Jentsch, P. J.. 2008. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2008. PP 1-45

Jentsch, P. J.. 2007. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2007. PP 1-52

Straub, R. W. and Jentsch, P. J.. 2000-2006. Results of Insecticide and Acaricide Studies in Eastern New York. Cornell University's Hudson Valley Laboratory Pub. # HV2000-2005.

Images

Bill Cary, The Indianapolis Star April 3, 2015. It's stink bug season: Here's how to get rid of them. USA Today
Adult BMSB

In: Compendium of Apple and Pear Diseases and Pests, 2nd edition, T.B. Sutton, H. S. Aldwinckle, A.M. Agnello, and J.F. Walgenbach, eds. 2014. APS Press, St. Paul, MN. 218 p.
Pg. 177, Fig. 287: Potato leafhopper adult.
Pg. 177, Fig. 288: Potato leafhopper nymph.
Pg. 178, Fig. 289: Marginal leaf yellowing caused by potato leafhopper feeding.
Pg. 178, Fig. 290: White apple leafhopper adult.
Pg. 178, Fig. 291: White apple leafhopper nymph.
Pg. 179, Fig. 292: Extensive leaf stippling damage caused by leafhopper nymph feeding.
Pg. 178, Fig. 293: Late instar rose leafhopper nymph with dark spots on the base of thoratic hairs.

OMAFRA. 2011. Tarnished plant bug and other stinging insects. Ontario Ministry of Ag; Food and Rural Affairs (Fruit Program). On-line at http://www.omafra.gov.on.ca/english/crops/facts/tarbug.htm Figure 4-71. Stink bug injury

EXTENSION/OUTREACH RESPONSIBILITIES

- **Current Program Work Team(s)/Program Councils, Administrative Leadership (positions related to Extension, i.e., principal organizer, co-chair, speaker, etc.)**

  Active participant in the Cornell Fruit PWT and its Tree Fruit subgroup

- **Extension Workshops and Conferences (development, participation-list date and duration, title, constituency [i.e., stakeholder group, etc.] and size of audience, i.e. number of attendees and your role, i.e., principal organizer, co-chair, speaker, etc.)**

Out-of-State presentations at meetings of tree fruit professionals: (2000-2016)

Management Strategies for the Pear Psylla, *Cacopsylla pyricola* (foerster) in Northeast Pear Orchards. December 1, 2015 , The Connecticut Pomological Society Annual Meeting , *(30 min.; 90 attendees primarily growers, chemical field reps. 45 contact hours). http://cfgrower.com/the-connecticut-pomological-society-meeting/*

Monitoring and Management of the BMSB in Urban and Agricultural Environments in New York State. October 22, 2015. New England, New York, Canadian Fruit Pest Management Workshop. Burlington Vt. (65 University faculty, fruit extension educators, and private consultants)

Monitoring and Management of the Lepidopteran Pest Complex in New York and Vermont. June 30, 2015. New York & Vermont Fruit Pest Management Workshop. Hicks-Wilson Orchard, Granville, NY, Champlain Orchard, Shoreham, VT, Sentinel Pine, Shoreham, VT (*3 University faculty, 20 tree fruit growers, 2 fruit extension educators, and private consultants. 20 contact hours*)

Development of Attract and Kill Strategies of Spotted Wing drosophila for Organic Raspberry Production in NY. March 14-17, 2015, *Entomological Society of America Eastern Branch Meeting,* Atlantic Sands Hotel & Conference Center, Rehoboth, DE *, (30 min.; 40 attendees primarily growers . 20 contact hours).*

Management of the Brown Marmorated Stink Bug. January 30th, 2015; *New England Vegetable and Fruit Conference in Hudson, MA, (30 min.; 110 attendees primarily growers; . 55 contact hours).*

Management of the Spotted Wing Drosophila. January 30th, 2015; *New England Vegetable and Fruit Conference in Hudson, MA, (30 min.; 110 attendees primarily growers).*

Development of Attract and Kill Strategies of Spotted Wing drosophila for Organic Raspberry Production in NY. December 4th, 2014; *89th Annual Cumberland-Shenandoah Fruit Workers Conference, Winchester, VA. (69 University faculty, fruit extension educators, and private consultants).*

Celebrating the Contributions in the Entomological Career of Dr. Harvey Reissig. March 17th , 2014; *Entomological Society of America Eastern Branch Meeting*, Crown Plaza at Fort Magruder, Williamsburg, VA, *(12 min.; 40 attendees, extension, researchers and graduate students).*

Ecology and Management of the Spotted Wing drosophila. December 17th, 2013; *New England Vegetable and Fruit Conference in Manchester, NH, (30 min.; 100 attendees primarily growers).*

Management of the Brown Marmorated Stink Bug. December 18th, 2013; *New England Vegetable and Fruit Conference in Manchester, NH, (30 min.; 110 attendees primarily growers).*

Managing Resistance in the Tree Fruit Lep Complex. December 17th, 2013; *New England Vegetable and Fruit Conference in Manchester, NH, (30 min.; 120 attendees primarily growers).*

Monitoring and Management of the BMSB in Urban and Agricultural Environments in New York State. October 23, 2013. New England, New York, Canadian Fruit Pest Management Workshop. Burlington Vt. (65 University faculty, fruit extension educators, and private consultants)

Attract and Kill Strategies for the Invasive Brown Marmorated Stink Bug, Halyomorpha halys (Stal): (Pentatomidae), in NY Organic Vegetable Production. . Northeast IPM Brown Marmorated Stink Bug Working Group meeting, November 27, 2013, Alson H. Smith Research and Extension Center, Virginia Agriculture Experiment Station, Winchester, VA *(20 min.; 75 attendees; fruit growers, extension agents, researchers and graduate students, total contact*

hours = 25).

Monitoring the BMSB in Urban and Agricultural Environments in New York State. Northeast IPM Brown Marmorated Stink Bug Working Group meeting, November 29, 2012, *88th Annual Cumberland-Shenandoah Fruit Workers Conference, Winchester, VA. (55 University faculty, fruit extension educators, and private consultants).*

Tree Host Survey, Monitoring and Management Strategies for the Invasive Brown Marmorated Stink Bug, Halyomorpha halys (Stal): (Pentatomidae), Along Borders of NY Tree Fruit. . Northeast IPM Brown Marmorated Stink Bug Working Group meeting, November 27, 2012, Alson H. Smith Research and Extension Center, Virginia Agriculture Experiment Station, Winchester, VA *(20 min.; 75 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 25).*

Development of a Citizen Science Project to Monitor the Spread of the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål), in NYS.
October 23-24, 2012 New England, New York, Canadian Fruit Pest Management Workshop. Burlington Vt. (55 University faculty, fruit extension educators, and private consultants)

The Leafroller and Internal Lepidopteran Complex: How Complex is it?
August 16th, 2012; NE Fruit Consultants Summer Tour and Meeting., *Shelbourne, MA, (25 min.; 155 attendees; fruit growers, extension agents, researchers, industry and consultants, total contact hours = 65).*

Threat of the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) to New England on Tree Fruit, Small Fruit, Vegetable and Sweet Corn. New England Annual Grower and Advisory Meeting , South Deerfield, MA 01373 March 21, 2012, *(35 min.; 65 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 38).*

Monitoring the Spread of Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) in NY. Measuring the Value of Urban Citizen Science. Northeast IPM Brown Marmorated Stink Bug Working Group meeting, Fruit Research & Extension Center , Penn State University, Biglerville, PA 17307 June 12-13, 2012, *(20 min.; 80 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 27).*

Surveying the BMSB in New York State. Northeast IPM Brown Marmorated Stink Bug Working Group meeting, November 29, 2011, Alson H. Smith Research and Extension Center, Virginia Agriculture Experiment Station, Winchester, VA *(20 min.; 75 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 25).*

Threat of the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) to NY on Tree Fruit, Small Fruit, Vegetable and Sweet Corn. Northeast IPM Brown Marmorated Stink Bug Working Group meeting, Fruit Research & Extension Center , Penn State University , Biglerville, PA 17307 June 20-21, 2011, *(25 min.; 85 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 35).*

Strategies for using Cyazypyr on pear psylla in NY pear orchards. Northeast Tree Fruit Insect Control Experts Meeting, DuPont Stine-Haskell Research Facility, Newark, Del. Oct. 24 - 25, *(25 min.; 19 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 8).*

Commercial Orchard Study Comparing Reduced Risk Insecticides to Conventional Tools for Management of Pear Psylla. Eastern Branch Entomological Society of America, Hilton Hotel, Harrisburg, PA, March 19, 2011 *(15 min.; 20 attendees; extension agents, researchers and graduate students, total contact hours = 5).*

The Internal Lepidopteran Complex: N.E. Apple Resistance Management.
July 15st , 2010; *Massachusetts Pome Fruit Summer Tour, Belchertown, MA, (45 min.; 75 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 56).*

Commercial Orchard Study Comparing Organic Materials To Conventional Tools For Pear Psylla Management.
Nov. 18th, 2010; 86th Cumberland Shenandoah Fruit Workers Meeting, (45 min.; 65 attendees; fruit growers, extension agents, researchers and graduate students, total contact hours = 49).

Technology Use in Fruit Extension: IPM Symposia. March 9st , 2010; *Entomological Society of America, Eastern Branch, Annapolis, MD, (25 min.; 28 attendees, extension agents, researchers and graduate students, total contact hours = 12).*

Intergrating alternative strategies to manage pear psylla, Cacopsylla pyricola (Foerster) and Fabraea leaf spot, *Fabraea maculata*, in northeast pear orchards.
March 22st , 2008; *Eastern Branch Entomological Meeting Eastern Branch, Harrisburgh, PA, (12 min.; 20 attendees, extension, researchers and graduate students).*

Apple Pest Management Employing Precision Application Timings of Reduced Risk Insecticides. December 12th, 2007; *New England Vegetable and Fruit Conference in Manchester, NH, (30 min.; 120 attendees primarily growers).*

Pear Psylla Management Alternatives in Northeast Orchards. December 12th, 2007; *New England Vegetable and Fruit Conference in Manchester, NH, (30 min.; 80 attendees primarily growers).*

Using a novel chemistry Spinetoram, 'Delegate' by Dow Agrichemical, for Pear Psylla Management in the Hudson Valley of NY.
November 11-14, 2007, National Conference; Dow Agrichemical New Product Release, Montrey, CA. (45 University faculty, fruit extension educators, and private consultants)

Transitioning to Organic Pear Psylla Management in the Hudson Valley of NY.
November 4-5, 2007, Great Lakes Fruit Workers Meeting. Niagara Falls, Canada. (95 University faculty, fruit extension educators, and private consultants)

Developing Digital Video Field Extension Outreach for Insect Pest Management Recommendations in the Hudson Valley of New York.
November 4-5, 2007, Great Lakes Fruit Workers Meeting. Niagara Falls, Canada. (95 University faculty, fruit extension educators, and private consultants)

Developing Digital Video Field Extension Outreach for Insect Pest Management Recommendations in the Hudson Valley of New York.
October 24-25, 2007 New England, New York, Canadian Fruit Pest Management Workshop. Burlington Vt. (55 University faculty, fruit extension educators, and private consultants)

Using a 'Non-Chemical' Approach for Pear Psylla Management in the Hudson Valley of NY. *November 16-17, 2006, 82nd Annual Cumberland-Shenandoah Fruit Workers Conference, Winchester, VA. (55 University faculty, fruit extension educators, and private consultants)*

In-State Presentations at fruit grower meetings and other meetings: (2000-2016)

Challenges in Managing Invasive Insect Pests and Conserving the Pollinator Complex
March 22nd, 2016 2016 Recertification Day, Kingston, NY (60 min.; 56 Fruit growers, fruit extension educators, and private consultants; total contact hours = 56)

SWD Management in Grape
February 18th, 2016 2016 Commercial Tree Fruit Schools, Kingston, NY (30 min.; 45 Fruit growers, fruit extension educators, and private consultants; total contact hours = 23)
http://rvpadmin.cce.cornell.edu/uploads/doc_382.pdf

IFTA Travel Log – Washington State Apple Production Region
February 17nd, 2016 2016 Commercial Tree Fruit Schools, Kingston, NY (30 min.; 208 Fruit growers, fruit extension educators, and private consultants; total contact hours = 104)
http://rvpadmin.cce.cornell.edu/uploads/doc_382.pdf

Review of the 2015 Insect Pest Management Season in ENY
February 17th, 2016 2016 Commercial Tree Fruit Schools, Kingston, NY (30 min.; 208 Fruit growers, fruit extension educators, and private consultants; total contact hours = 104)
http://rvpadmin.cce.cornell.edu/uploads/doc_396.pdf

Hudson Valley Research Laboratory Review for 2015
February 16th , 2016 2016 Commercial Tree Fruit Schools, Kingston, NY (30 min.; 208 Fruit growers, fruit extension educators, and private consultants; total contact hours = 104)
http://rvpadmin.cce.cornell.edu/uploads/doc_383.pdf

IFTA Travel Log – Washington State Apple Production Region
February 15st , 2016 2016 Commercial Tree Fruit Schools, Lake George, NY (30 min.; 58 Fruit growers, fruit extension educators, and private consultants; total contact hours = 26)

Review of the 2015 Insect Pest Management Season in ENY
February 15st , 2016 2016 Commercial Tree Fruit Schools, Lake George, NY (30 min.; 58 Fruit growers, fruit extension educators, and private consultants; total contact hours = 26)

Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål): What can we expect in 2016
February 2, 2016 Lake Ontario Winter Fruit Schools, Niagara County CCE Training Center, Lockport, NY (30 min.; 200 Fruit growers, fruit extension educators, and private consultants; total contact hours = 133)

Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål): What can we expect in 2016
February 2, 2016 Lake Ontario Winter Fruit Schools, Newark Garden Hotel, Newark, NY (30 min.; 200 Fruit growers, fruit extension educators, and private consultants; total contact hours = 133)

Emerging Insect Problems On Tree Fruit In Eastern New York
January 8th , 2015 Long Island Ag. Forum, Suffolk CCC, Riverhead, NY (30 min.; 36 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 18)*

Development of Pest Management Thresholds and Management Strategies for the Invasive Brown Mamorated Stink Bug, Halyomorpha halys (Stal): (Pentatomidae) in Commercial Tree Fruit in the Hudson Valley of NY. Apple Research & Development Program NYSAES, Jordan Hall , Geneva, NY November 19, 2015; *(15 min.; 20 attendees; researchers & ARDP Board Members; total contact hours = 5).*

Development of Horticulture, Disease and Insect Pest Management Strategies to Address Severe Late Season Tall Spindle Tree Collapse in NYS Orchard Systems. Apple Research & Development Program NYSAES, Jordan Hall , Geneva, NY November 19, 2015; *(15 min.; 20 attendees; researchers & ARDP Board Members; total contact hours = 5).*

Industry Tour and Presentation, September 10, 2014, Hudson Valley Research Lab, Highland, NY *(180 min.; 12 attendees; Ag. industry researchers and consultants, total contact hours = 36).*

Emerging Invasive Insects In Eastern New York
July. 21, 2015, Fire Training Center, 9 Training Center Lane, New Hampton, NY
(3*0 min.;* 35 USDA-APHIS-PPQ-PDC evaluation control team members/ Ag. & Mkts staff; *total contact hours = 18*)

Insecticide Resistance Strategies for managing Spotted Wing Drosophila
March 4, 2015, Clarion Hotel, 8250 Park Road, Batavia, NY
(3*0 min.;* 55 conventional organic fruit and vegetable growers, extension educators; *total contact hours = 28*)

Biological Control of Spotted Wing Drosophila in the Hudson Valley of NY State.
Mar. 4, 2015, Clarion Hotel, 8250 Park Road, Batavia, NY
(3*0 min.;* 55 conventional organic fruit and vegetable growers, extension educators; *total contact hours = 28*)

Invasive Species in Hudson Valley Grape.
February 12th, 2015; Hudson Valley Commercial Fruit Growers School, Garden Plaza Hotel, Kingston, NY (30 *min : 32 conventional and* organic grape growers, extension educators, industry representatives; *total contact hours = 16*)

Update on the Incidence and Management of Invasive Species in the Hudson Valley.
February 11th, 2015; Hudson Valley Commercial Fruit Growers School, Garden Plaza Hotel, Kingston, NY (30 *min : 209 conventional and* organic tree fruit growers, extension educators, industry representatives; *total contact hours = 108*)

Update & Annual Meeting for the Hudson Valley Research Laboratory, Inc.
February 10th, 2015; Hudson Valley Commercial Fruit Growers School, Garden Plaza Hotel, Kingston, NY (15 *min. :119 conventional and* organic tree fruit growers, extension educators; *total contact hours = 27*)

Insect Pest Management Season in ENY: Invasive Pests, New Materials.
February 9th , 2015 2015 Commercial Tree Fruit Schools, Fort William Henry Conference Center, Lake George NY *(30 min.; 65 Fruit growers, fruit extension educators, private consultants, industry representatives*; *total contact hours = 33)*

Insecticide Resistance Strategies for managing Spotted Wing Drosophila;
Jan. 14, 2015, CCE Albany County, 24 Martin Road, Voorheesville, NY
(3*0 min.;* 55 conventional organic fruit and vegetable growers, extension educators; *total contact hours = 28*)

Biological Control of Spotted Wing Drosophila in the Hudson Valley of NY State.
Jan. 14, 2015, CCE Albany County, 24 Martin Road, Voorheesville, NY
(3*0 min.;* 55 conventional organic fruit and vegetable growers, extension educators; *total contact hours = 28*)

Insecticide Resistance Strategies for managing Spotted Wing Drosophila;
Dec. 17, 2014, Ramada Inn, 1305 Buckley Road, Syracuse, NY
(3*0 min.;* 55 conventional organic fruit and vegetable growers, extension educators; *total contact hours = 28*)

Biological Control of Spotted Wing Drosophila in the Hudson Valley of NY State.
Dec. 17, 2014, Ramada Inn, 1305 Buckley Road, Syracuse, NY
(3*0 min.;* 55 conventional organic fruit and vegetable growers, extension educators; *total contact hours = 28*)

Sprayer Considerations for Managing Spotted Wing Drosophila.
Dec. 17, 2014, Ramada Inn, 1305 Buckley Road, Syracuse, NY
(3*0 min.;* 55 conventional organic fruit and vegetable growers, extension educators; *total contact hours = 28*)

Attract and Kill Strategies for the Invasive Spotted Wing Drosophila in NY Organic Small Fruit Production. Northeast IPM Spotted Wing Drosophila Working Group meeting, September 16, 2014, Hudson Valley Research Lab, Highland, NY *(20 min.; 25 attendees; Ag researchers and graduate students, total contact hours = 7).*

Overview of Three Years of ARDP Funded Research in Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) Management in NY Tree Fruit. Apple Research & Development Program NYSAES, Jordan Hall , Geneva, NY November 12, 2014; *(15 min.; 20 attendees; researchers & ARDP Board Members; total contact hours = 5).*

Organic Pesticide Applicator Training for Fruit and Vegetable Growers; 'IPM in Organic Pest Management Programs' Cornell Cooperative Extension, April 3-4, 2014 Hudson Valley Laboratory, Highland, NY (13*0 min.;* 27 organic fruit and vegetable growers, 2 extension educators; *total contact hours = 63*)

Onion Bulb Mite & Brown Marmorated Stink Bug in Hudson Valley Vegetable Crops.
Onion School, March 7, 2014 Cornell Cooperative Extension Orange County, Middletown, NY
(25 *min. 65 conventional and* organic vegetable growers, extension educators; *total contact hours = 25*)

Migration and Population Increase of the BMSB in NYS.
Agrassistance Mtg; March 7, 2014, Studebakers Restaurant, Lyons, NY (60 *min. :120* conventional tree fruit growers, extension educators; *total contact hours = 120*)

Managing Sweet Corn Insects and Resistance with New Insecticides.
Northern Commercial Vegetable Growers' School, February 25, 2014, Plattsburgh City Recreation Department, Plattsburgh, NY (25 *min.: 25 conventional and* organic vegetable growers, extension educators; *total contact hours = 10*)

Management of the Stink Bug Complex in Commercial Vegetable Production. February 24th, 2014; Hudson Valley Commercial Vegetable School, The Falcon, Marlboro, NY (25 *min. :80 conventional and* organic vegetable growers, extension educators; *total contact hours = 33*)

Strategies for Late Season SWD Management in Berries and Grapes. February 13th, 2014; Hudson Valley Commercial Fruit Growers School, Garden Plaza Hotel, Kingston, NY (30 *min. :30 conventional and* organic small fruit growers, extension educators; *total contact hours = 15*)

Management of the Stink Bug Complex in Commercial Tree Fruit. February 12th, 2014; Hudson Valley Commercial Fruit Growers School, Garden Plaza Hotel, Kingston, NY (30 *min. :209 conventional and* organic tree fruit growers, extension educators; *total contact hours = 104*)

Update on the Plans for the Hudson Valley Research Laboratory. February 11th, 2014; Hudson Valley Commercial Fruit Growers School, Garden Plaza Hotel, Kingston, NY (15 *min. :209 conventional and* organic tree fruit growers, extension educators; *total contact hours = 51*)

Review of the 2014 Pest Management Season in ENY.
Cornell Cooperative Extension Eastern NY Commercial Horticulture Program, Upper Hudson / Champlain Commercial Tree Fruit School, February 10, 2014, Fort William Henry Hotel and Conference Center, Lake George, NY (30 *min. :65 conventional and* organic tree fruit growers, extension educators; *total contact hours = 32*)

Organic Insect Tree Fruit Pest Management. NOFA-NY Winter Conference, January 26th, 2014 Saratoga Hilton, Saratoga Springs, NY(30 *min. :70 conventional and* organic tree fruit growers, extension educators; *total contact hours = 35*)

Brown Marmorated Stink Bug Management Update. January 10th, 2014; Seneca Produce Auction Growers Meeting, 2295 Yerkes Road, Romulus, NY (45 *min. :30 conventional and* organic vegetable growers, extension educators; *total contact hours = 5*)

Brown Marmorated Stink Bug Management Update. January 9th, 2014; Finger Lakes Produce Auction Growers Meeting, 3691 State Route 14A, Penn Yan Yan, NY (45 *min. :50 conventional and* organic vegetable growers, extension educators; *total contact hours = 5*)

Monitoring *the BMSB in Urban and Agricultural Environments in New York State.* Agricultural Invasive Species session. November 13, 2012. Annual CCE Agriculture and Food System In-service, Ithaca, NY, *(30 min.; 20 CCE Vegetable Extension educators, total contact hours = 10*

Panel Discussion on Invasive Insect Presence Between the Urban and Agricultural Environmental Interface in New York State. Agricultural Invasive Species session. November 14, 2013. Annual CCE Agriculture and Food System In-service, Ithaca, NY, *(30 min.; 20 CCE*

Vegetable Extension educators, total contact hours = 10

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 21th, 2013 Hudson, NY (40 Orchardists, fruit extension educators)

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 21th, 2013 Milton, NY (40 Orchardists, fruit extension educators)

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 24th, 2013 Lake George, NY (40 Orchardists, fruit extension educators)

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 24th, 2013 Lake Champlain, NY (40 Orchardists, fruit extension educators)

Results from 2012-2013 Hudson Valley Insecticide Trials. *February 14, 2013 Hudson Valley Fruit School, Kingston, NY (30 min.; 55 tree fruit growers, fruit extension educators, and private consultants*; *total contact hours = 28)*

Recommendations for SWD Management in 2013 in ENY. *February 14, 2013 Hudson Valley Fruit School, Kingston, NY (30 min.; 55 tree fruit growers, fruit extension educators, and private consultants*; *total contact hours = 28)*

Creature Features: Predictions and Management of BMSB and 17-Year Cicada in the Hudson Valley for 2013. *February 13, 2013 Hudson Valley Fruit School, Kingston, NY (45 min.; 85 tree fruit growers, fruit extension educators, and private consultants*; *total contact hours = 64)*

Tree Fruit Insect Round-Up. Managing the Hudson Valley Pome Fruit Insect Complex.
February 12, 2013 Hudson Valley Fruit School, Kingston, NY (45 min.; 85 tree fruit growers, fruit extension educators, and private consultants; *total contact hours = 64)*
(40 min.; 200 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 133)*

Updates on the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) in NY State
February 11, 2013, *Upper Hudson & Lake Champlain School, Lake George, NY*
(30 min.; 85 tree fruit growers, fruit extension educators, and private consultants; *total contact hours = 43)*

Updates on the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) and Spotted Wing Drosophila, *Drosophila suzukii* in NY State
January 22, 2013, 2013 Fruit & Vegetable Expo, Oncenter, Syracuse NY (3*0 min.; 85* fruit & vegetable producers, landscape professionals, fruit extension educators; *total contact hours = 43*)

Managing Insecticide Use
January 10, 2013, Aroma Thyme Restaurant, Ellenville, NY (*90 min.;* 21 fruit growers, fruit extension educators; *total contact hours = 31.5*)

2012 Insect Pest Management of Tree Fruit Updates
January 10, 2013, Long Island Agricultural Forum, Riverhead, NY (*20 min.;* 45 fruit growers, fruit extension educators, and private consultants; *total contact hours = 23*)

Monitoring the BMSB in Urban and Agricultural Environments in New York State. Apple Research and Development Board. November 26, 2012. Annual Report, Geneva, NY, *(15 min.; 20 CCE Fruit Extension educators, University Researchers, Fruit Producers, total contact hours = 5*

Monitoring the BMSB in Urban and Agricultural Environments in New York State. Agricultural Invasive Species session. November 13, 2012. Annual CCE Agriculture and Food System In-service, Ithaca, NY, *(30 min.; 20 CCE Vegetable Extension educators, total contact hours = 10*

Sweet Corn Insect Pest Management. Updates from the Hudson Valley. November 13, 2012. Annual CCE Agriculture and Food System In-service, Ithaca, NY, *(30 min.; 20 CCE Vegetable Extension educators, total contact hours = 10)*

Invasive Pest Update –Spotted- Winged
August 21, 2012 Cornell Cooperative Education Center, Troy, NY
(40 min.; 2 Small Fruit growers, fruit extension educators; *total contact hours = 1)*

Invasive Pest Update –Spotted- Winged
August 15, 2012 Hudson Valley Laboratory, Highland, NY
(40 min.; 7 Small Fruit growers, fruit extension educators; *industry reps.total contact hours = 1)*
Insect Pests of Ornamental and Landscape Plants: Biology and Management. Cornell Cooperative Extension, March 6, 2012; Webinar: Westchester CCE, Valhalla, NY (6*0 min.;* 2 CCE Sites; 150 landscape professionals, 30 fruit extension educators; *total contact hours = 180*)

The Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) in NY Ornamental and Landscape Environments: Biology and Management. Cornell Cooperative Extension
February 27, 2012, Webinar: Hudson Valley Laboratory, Highland, NY (6*0 min.;* 15 CCE Sites; 150 landscape professionals, 30 fruit extension educators; *total contact hours = 180*)

Invasive Pest Update – Biology and Management of Brown Marmorated Stink Bug and Spotted- Winged Drosophila on Grape.
March 8th , 2012 WNY Grape School, CLEREL Laboratory, Portland, NY
(45 min.; 110 grape growers, fruit extension educators, and private consultants; *total contact hours = 83)*

Invasive Pest Update – Biology and Management of Brown Marmorated Stink Bug and Spotted- Winged Drosophila on Grape.
February 17, 2012 Hudson Valley Grape School Kingston, NY
(45 min.; 30 grape growers, fruit extension educators, and private consultants; *total contact hours = 23)*

Invasive Pest Updates – Biology and Management of Brown Marmorated Stink Bug on Tree Fruit.. *February 13, 2012 Upper Hudson & Lake Champlain School, Lake George, NY*
(45 min.; 85 tree fruit growers, fruit extension educators, and private consultants; *total contact hours = 64)*

Tree Fruit Insect Round-Up. Managing the Hudson Valley Pome Fruit Insect Complex.
February 14, 2012 Hudson Valley Fruit School, Kingston, NY
(40 min.; 200 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 133)*

Invasive Pest Update: Management of BMSB and SWD on Tree Fruit in NY State
February 15, 2012 Hudson Valley Fruit School, Kingston, NY
(40 min.; 200 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 133)*

Tree Fruit Insect Pest Management. Novel Insecticides & Newly Invasive Pests.
February 6-7, 2012 Western NY Fruit Schools, Niagara County CCE Training Center, Lockport, NY (40 min.; 200 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 133)*

Tree Fruit Insect Pest Management. Novel Insecticides & Newly Invasive Pests.
February 6-7, 2012 Lake Ontario Fruit Schools, Wallington Fire Hall, Sodus, NY (40 min.; 200 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 133)*

BF 121- Week 3 - Vegetable Insect Control: Resource, Identification, Scouting and Management For Key Insect Pests in New York Vegetable Production. Cornell Beginner Farmer Program February 2, 2012, Webinar: Hudson Valley Laboratory, Highland, NY (9*0 min.;* 40 fruit growers, fruit extension educators; *total contact hours = 60*)

Surveying the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) in NY State
January 25, 2012, 2012 Fruit & Vegetable Expo, Oncenter, Syracuse NY (3*0 min.; 85* fruit & vegetable producers, landscape professionals, fruit extension educators; *total contact hours = 43*)

Insect Pest Management 101: Future Fruit Growers of NY; Cornell University. February 3, 2012, Hudson Valley Laboratory, Highland, NY (*180 min.;* 40 fruit growers, fruit extension educators; *total contact hours = 120*)

2011 Insect Pest Management of Tree Fruit & Web Based Pest Management Resources.
January 13, 2012, Long Island Agricultural Forum, Riverhead, NY (*30 min.;* 45 fruit growers, fruit extension educators, and private consultants; *total contact hours = 23*)

Threat of the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) to NY and New England on Tree Fruit, Small Fruit, Vegetable and Sweet Corn. Apple Research & Development Program NYSAES, Jordan Hall , Geneva, NY November 30, 2011; *Via Conference Call (15 min.; 20 attendees; researchers & ARDP Board Members; total contact hours = 5).*

The Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål). New England, New York & Canadian Fruit Pest Management Workshop, Bishop Booth Conference Center Burlington, VT. October 18-19, 2011 (*15 min.;* 45 fruit growers, fruit extension educators, and private consultants; *total contact hours = 11*)

Tree Fruit Efficacy Trial / Field Tour; Hudson Valley Laboratory, Highland, NY June 7, 2011 (*120 min.;* 40 fruit growers, fruit extension educators, industry representatives; *total contact hours = 80*)

The Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) in NY. Workshop to NY Agricultural Stakeholders. Hudson Valley Laboratory, Highland, NY June 9, 2011, (6*0 min.;* 50 fruit growers, fruit extension educators, NYS Ag & Mkts, Invasive Species Workers, researchers, growers; *total contact hours = 50*)

The Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) in NY. Webinar to NY Agricultural Stakeholders. Hudson Valley Laboratory, Highland, NY April 29, 2011, (*20 min.;* 50 fruit growers, fruit extension educators, NYS Ag & Mkts, Invasive Species Workers, researchers, growers; *total contact hours = 16.5*)

Efficacy of Volium Flexi and Volium Express on Tree Fruit Arthropd Complex. Syngenta Agrichemical Fruit and Vegetable Technical Information Exchange. The Inn at Glenora Wine Cellars, Dundee, New York, March 23th-24th, 2011. (*30 min.;* 30 fruit and vegetable university researchers, industry consultants*; total contact hours = 15*)

Shifting Management Strategies: The Challenge of Filling the Insecticide Void
January 27, 2011 Empire State Fruit and Vegetable Expo, Oncenter, Syracuse, NY*, (30 min.; 125 attendees; fruit growers, extension agents, researchers and graduate students; total contact hours = 63).*

Invasive Pest Update – Brown Marmorated Stink Bug and Spotted- Winged Drosophila *February 18, 2011 Hudson Valley Fruit School, Kingston, NY (40 min.; 40 Grape growers, fruit extension educators, and private consultants*; *total contact hours = 26)*

Annual Insect Update: Spotted Wing Drosophila, Stink Bugs, Grape Berry Moth
February 15, 2011 Hudson Valley Fruit School, Kingston, NY
(40 min.; 60 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 40)*

Invasive Pest Update – Brown Marmorated Stink Bug and Spotted- Winged
February 14, 2011 Hudson Valley Fruit School, Kingston, NY
(40 min.; 20 Small Fruit growers, fruit extension educators, and private consultants; *total contact hours = 13)*

Tree Fruit Insect Round-Up. Managing the Hudson Valley Pome Fruit Insect Complex.
February 17, 2011 Hudson Valley Fruit School, Kingston, NY
(40 min.; 200 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 133)*

Threat of the Brown Marmorated Stink Bug, *Halyomorpha halys* (Stål) to NY and New England on Tree Fruit, Small Fruit, Vegetable and Sweet Corn, November 10, 2010; *Hudson Valley Laboratory, Highland, NY Via Polycom (45 min.; 7 attendees; extension specialists; total contact hours = 5).*

Information Exchange; Syngenta Agrichemical New Product Release
March 22, 2010 . Dundee, NY (*30 min.;* 50 fruit and vegetable university researchers, industry consultants and extension educators*; total contact hours = 25*)

NEWA Workshop: Using the web to explore tree fruit insect pest management resources.
March 22, 2010, Hudson Valley Laboratory, Highland, NY (*30 min.;* 30 fruit growers, fruit extension educators; *total contact hours = 15*)

"Using Cellular and Digital Technology to do IPM"

January 26, 2010 Empire State Fruit and Vegetable Expo, Oncenter, Syracuse, NY *NY* (*30 min.;* 110 fruit growers, fruit extension educators; *total contact hours = 55*)

Using the web to expand your tree fruit pest management resources.
January 14, 2010, Long Island Agricultural Forum, Riverhead, NY (*30 min.;* 45 fruit growers, fruit extension educators, and private consultants; *total contact hours = 23*)

Developing Mite Management Strategies Using Reduced Risk Insecticides
February 25, 2010 Lake Champlain Fruit School, Lake George, NY. (*30 min.;* 75 University faculty, fruit growers, fruit extension educators, and private consultants; *total contact hours = 38)*

Grape Berry Moth Management in the Hudson Valley.
February 26, 2010 Hudson Valley Berry School, Kingston, NY
(30 min.; 70 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 35)*

Tree Fruit Insect Round-Up. Managing the Hudson Valley Pome Fruit Insect Complex.
February 25, 2010 Hudson Valley Fruit School, Kingston, NY
(40 min.; 200 Fruit growers, fruit extension educators, and private consultants; *total contact hours = 133)*

Codling Moth: Susceptibility Levels of CM to Azinphos-Methyl in New York Orchards.
November 31, 2009, Apple Research and Development Board, Geneva, NY. (15 Pome fruit stakeholders, researchers and extension personnel)

Codling Moth: Susceptibility Levels of CM to Azinphos-Methyl in New York Orchards.
October 25-28, 2009, Great Lakes Fruit Workers Meeting, Fishkill, NY. (55 University faculty, fruit extension educators, and private consultants)

Using Digital Technologies in Tree Fruit Extension.
October 6, 2009, Entomology Department Faculty Seminar Series, Geneva, NY. (25 University faculty and staff)

Managing Insecticide Use
June 1, 2009 CCE Orange County Fruit & Vegetable Dinner Meeting, Middletown, NY
(45 Fruit growers, fruit extension educators, & private consultants: 1.5 hours)

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 15th, 2009 Milton, NY
(50 Orchardists, fruit extension educators, commercial scouts)

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 15th, 2009 Hudson, NY
(40 Orchardists, fruit extension educators)

Grape Berry Moth Management in the Hudson Valley. & Polycom video conference: Q & A with Wayne Wilcox.
May 14, 2009 Hudson Valley Laboratory, Highland, NY
(24 vineyardists, fruit extension educators, & winery owners)

Grape Sprayer Demonstrations & Calibration Workshop
April 16th, 2009 Glorie Farm, Marlboro, NY
(24 vineyardists, fruit extension educators, & winery owners)

Conference; Syngenta Agrichemical New Product Release
February 11-12, 2009. Dundee, NY
(50 fruit and vegetable university researchers, industry consultants and extension educators)

Tree Fruit Insect Round-Up. Using Predictive Models for Insecticide Use in NY State; Insecticide Management for the Hudson Valley Lepidopteran Complex.
February 25, 2009 Hudson Valley Fruit School, Kingston, NY
(200 Fruit growers, fruit extension educators, and private consultants)

Abandoned Orchards Revisited: Managing Insecticide Resistance and Maintaining Insect Diversity.
February 19, 2009 Lake Champlain Fruit School, Lake George, NY.
(75 University faculty, fruit growers, fruit extension educators, and private consultants)

Late Season Pest Management Perspectives & Tools for use in Hudson Valley Pome Fruit.
August 19, 2008 Hudson Valley Laboratory, Highland, NY
(12 Orchardists, fruit extension educators)

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 20, 2008 Milton, NY
(40 Orchardists, fruit extension educators, commercial scouts)

Insect Pest IPM of Hudson Valley Pome Fruit: Early Season Management
May 20, 2008 Hudson, NY
(45 Orchardists, fruit extension educators)

Grape Berry Moth Management in the Hudson Valley. Sprayer Demonstrations & Polycom video conference: Q & A with Andrew Landers and Greg Loeb.
February 29, 2008 Hudson Valley Laboratory, Highland, NY
(14 vineyardists, fruit extension educators, & winery owners)

Trends in Lepidopteran Emergence and Migration Patterns Influenced by 'Global Warming'.
March 19, 2008 CCE Orange & Ulster County Onion & Vegetable School, Middletown, NY
(65 Fruit growers, fruit extension educators, & private consultants)

Management of Insect Pests & Iris Yellow Spot Virus in NY Onion.
March 19, 2008 CCE Orange & Ulster County Onion & Vegetable School, Middletown, NY
(65 Fruit growers, fruit extension educators, & private consultants)

Increasing Precision Application of FQPA-Inspired Pest Management Tools in Hudson Valley Pome Fruit.
March 9-11, 2008, 79th Annual Meeting of the Eastern Branch Entomological Society of America. Syracuse, NY (25 University faculty, fruit extension educators, and private industry & consultants)

Grape Insect Management in the Hudson Valley
February 29, 2008 Hudson Valley Fruit School, Kingston, NY
(45 Fruit growers, fruit extension educators, private consultants and home owners)

Web Links and Video Clips: New Tools for Teaching Fruit IPM.
February 27, 2008 Hudson Valley Fruit School, Kingston, NY (175 Fruit growers, fruit extension educators, and private consultants)

Tree Fruit Insect Round-Up. Using Reduced Risk OP Replacement Insecticides in NY State.
February 26, 2008 Hudson Valley Fruit School, Kingston, NY (175 Fruit growers, fruit extension educators, and private consultants)

Pest and Disease Management for Organic Apple
Jan. 26 2008 *NOFA – 26th Annual Organic Farming & Gardening Conference, Saratoga, NY*
(75 Fruit growers, fruit extension educators, private consultants and home owners)

Using Degree-Day Insect Developmental Models to Effectively Use Reduced Risk Insecticide Management Strategies.
January 11, 2008 Long Island Agricultural Forum, Riverhead, NY
(45 Fruit growers, fruit extension educators, and private consultants)

Traditional and Novel Approaches to Insect and Mite Pest Management on Tree Fruit
19 Jan. 2007 Long Island Agricultural Forum, Riverhead, NY
(45 Fruit growers, fruit extension educators, and private consultants)

Grape Berry Moth Management in the Hudson Valley
March 2, 2007 Hudson Valley Fruit School, Kingston, NY
(45 Fruit growers, fruit extension educators, private consultants and home owners)

Tour of Research Plots at the Hudson Valley Lab
Sept. 2000-2008 Annual Field Tour of Pesticide Research Trials, Highland, NY (approx. 35 agribusiness representatives)

Internet extension field based 'on-demand' video presentations via web streaming:
Mounted and accessed on the Hudson Valley Regional Fruit website:
http://hudsonvf.cce.cornell.edu/photogallery.html

Post-bloom pear psylla management. *7'07" min. July 28, 2008*

Post-bloom apple insect complex. *7'16" min; July 28, 2008*

Obliquebanded leafroller summer management. *4'19" min; July 28, 2008*

Pre-bloom pear psylla management. *4'47" min; April 23, 2007*

Pre-bloom adult pear psylla management alternatives. *3'15" min; March 30, 2007*

Obliquebanded leafroller summer management. *7'31" min; June 14, 2007*

Spring management of San Jose scale. *3'22" min; April 27, 2007*

Pre-bloom insect complex *3'50" min; April 27, 2007*

Petal fall insect complex. *4'12" min; May 11, 2007*

Petal fall insect complex. *10'25" min; May 21, 2007*

San Jose Scale - summer generation) *3'12" min; June 7, 2007*

Twilight meeting covering disease (Rosenberger), horticulture (Fargione, Hoying, Robinson), insect (Jentsch) *3'50" min; April 27, 2007*.

Grape planting demonstration; Legislative visit to the Hudson Valley Laboratory (Rosenberger, Hoying, Jentsch). *5'10" min; September 5, 2007*

Development of the Hudson Valley Laboratory web site:
Administered the design and layout, photography and use of the Hudson Valley Laboratory website for faculty and staff to disseminate articles, PowerPoint presentations in html and pdf formats. http://www.nysaes.cornell.edu/hudson/program.php

Development of the Hudson Valley Laboratory conference room Polycom system:
Administered the purchase and layout of the Polycom conferencing system for Hudson Valley based video conferencing. Conduct Polycom conferencing with remote locations for adult education and extension in apple and grape. Assist faculty with the use and trouble shooting of the Polycom system as needed.

Professional Development Activities

Meetings and Conferences:

November 29, 2012. 88th Annual Cumberland-Shenandoah Fruit Workers Conference, Winchester, VA.

November 27, 2012. Northeast IPM Brown Marmorated Stink Bug Working Group Meeting, Alson H. Smith Research and Extension Center, Virginia Agriculture Experiment Station, Winchester, VA,.

October 23-24, 2012. New England, New York, Canadian Fruit Pest Management Workshop. Burlington Vt..

August 16th, 2012. NE Fruit Consultants Summer Tour and Meeting, Shelburne, MA

Moderator for the general session for submitted papers; March 18-20st , 2011; Eastern Branch Entomological Meeting Eastern Branch, Harrisburgh, PA.

March 22nd & 23nd , 2011; Syngenta Information Exchange, Dundee, NY,

February 15-18th , 2011 , Hudson Valley Fruit School, Kingston, NY

Organizer and moderator for IPM symposia. March 9st , 2010; Entomological Society of America, Eastern Branch, Annapolis, MD.

February 15-18th , 2010 , Hudson Valley Fruit School, Kingston, NY

February 18, 2010, Lake Champlain Fruit School, Lake George, NY.

Moderator for the general session for submitted papers; March 22st , 2009; Eastern Branch Entomological Meeting Eastern Branch, Harrisburgh, PA,

March 22st , 2009; Eastern Branch Entomological Meeting Eastern Branch, Harrisburgh, PA,

March 11th & 12th, 2009; Syngenta Information Exchange, Dundee, NY,

February 11, 2009 DuPont Agrichemical New Product Release, Syracuse, NY

February 19, 2009, Lake Champlain Fruit School, Lake George, NY.

February 25, 2009 , Hudson Valley Fruit School, Kingston, NY

Eastern Branch Meetinsg of the Entomological Society of America
March 2014 Williamsburg, VA
March 2011 Harrisburg, PA.
March 2009 Harrisburg, PA.
March 2008 Syracuse, NY.

2000-20013 CCE Tree Fruit Petal Fall Mtg., Lake George, NY
2000-20012 CCE Tree Fruit Petal Fall Mtg., Columbia County, NY
2001-2008 Long Island Tree Fruit Meeting, Riverhead, NY

Polycom Video Conferences:

NE IPM Spotted Wing Drosophila Working Group, November 31, 2012, Jordan Hall, Geneva, NY

Colony Collapse Disorder
Dr. Nick Calderone, Cornell University, Department of Entomology, March 10, 2009 Geneva, NY

Crop Load Management in Apple: From Unpredictable Magic to Predictive Science
Dr. Terence Robinson, Horticultural Sciences, NYSAES. March 9, 2009 Geneva, NY

Identifying Promising Behavioral Stimuli for the Plum Curculio, Conotrachelus nenuphar (Herbst), an Important Pest of Tree Fruit in Eastern North America.
Dr. Tracy Leskey, USDA-ARS, Kearneysville, WV. *February 10, 2008* Geneva, NY

Strangers on the Land, Invaders at the Gate: An Assessment of Non-Indigenous Insects in North America Landscapes.
Dr. E. Richard Hoebeke. *October 14, 2008* Geneva, NY

Representative Professional Activities

Professional Societies

New York State Horticultural Society
Entomological Society of America

Professional Overview and Objectives

65 % Formal appointment in Extension (Professorial, Senior Extension Associates and Extension Associates)

35 % Estimation of time spent in outreach activities

Representative Research and Extension Responsibilities

Research:

The *mission* of our research program is to provide regional and statewide entomological expertise on the ever-changing landscape of agricultural insect pest management in the Hudson Valley, with emphasis on the unique nature of urbanization surrounding agricultural producing regions in Eastern NY. This in part is achieved through studies on the development and efficacy

of new chemistries, understanding the shifting levels of insecticide susceptibility within the pest and beneficial insect complex, experimentation on alternative strategies of crop production, with the intent to achieve greater reductions in risk associated with agricultural insect pest management. Evaluations of these studies are refined and developed into reports suitable for a variety of audiences. Through close collaboration with extension, we can then provide sustainable, environmentally sound recommendations for insect pest management with the intent to positively impact regional agriculture.

Research Goals cover three primary areas of study.
I. Our shift in emphasis in study has been to determine the impact of invasive species on regional agricultural commodities in tree fruit, vegetable, grape and small fruit. Two invasive insect species, the brown marmorated stink bug *Halyomorpha halys* (Stål) and the spotted wing drosophila, *Drosophila suzukii*,

II. Our second area of research focuses on insecticide toxicology or field efficacy screening. Our ability to focus on the impact of insecticides in a broad ecological evaluation of arthropod pests and beneficials in small randomized and completely replicated field plots, allows us to discern unique differences in insecticidal effects on a range of ecological factors. This is conducted within the canopy of tree fruit varieties, vine canopy or vegetable plots. Given the diverse pest complex in the Hudson Valley, high levels of insect pest pressure and predatory presence from abandoned orchards and wood lots, we are able to put experimental insecticides through rigorous field-testing. However, to understand more fully the impact of these insecticides within the commercial orchard environment, we also conduct large block trials with cooperating producers. These trials provide us with substantive 'holistic' data, providing experiences with the products the grower for them to discern the effectiveness of the material, relative to 'standard materials' they might otherwise use to achieve control.

Each year, efficacy screens funded through the agricultural industry, range from $38,000 to $55,000 in support of our program. Studies in alternative insect and disease control for apple and pear production have been ongoing since the inception of the laboratory. In 2008 we evaluated the insecticidal and miticidial efficacy of 22 experimental and commercial insecticides on apple and pear. In collaborative efforts with Geneva (Nault, Taylor) we also conducted industry and ORDP sponsored trials in Pine Island, Orange County, NY. During the past three growing seasons these trials studied the insecticidal efficacy of more than 60 onion treatments of experimental and commercially used NYS registered insecticides applied as both coated seed and drench treatments. A few large block commercial trials conducted on regional farms for pome and grape studies, with applications being made by the producer, are conducted each year, numbering 2 - 3 per year.

Our yearly reports (2006-2012) on the 'Results of Insecticide and Acaricide Studies in Eastern New York' represent the term of work dedicated to the evaluation of experimental, newly released and standard insecticide comparisons in pome tree fruit, onion and grape.

III. A third area of study is in the evaluation of reduced risk insecticides in statewide regional studies. Recent and ongoing studies are being conducted in collaboration with regional RAMP cooperators, coordinated by Cornell University faculty (Reissig, Agnello). Over the past two years I have been working with Cornell University faculty (Carrol, Nyrop, Agnello, Reissig) and researchers from the University of Massachusetts (Cooley) on pest management protocols for New York for use in orchards using guidelines established by Red Tomato, a non-profit produce marketing corporation. The purpose of our project is to determine if Northeast growers, using an

IPM protocol with reduced risk materials, could market their fruit as 'EcoApple' at premium prices that would off set increased production costs for implementing these protocols. The report entitled "A Pest Management Program Using Reduced-Risk Pesticides, Eco-Apple Protocols, and Value-Added Marketing for NY and New England Growers" (USDA Crops At Risk Project, 2007-2008) is included in this package.

Additional areas of study include *planting systems* that provide elements of reduced risk insect pest and beneficial management and pesticide load reduction for greater agricultural sustainability. This includes studies in organic apple and pear production. Less emphasis is placed on these studies due to our emphasis on commercial production concerns. However as economics, emphasis on 'buy local' and regional environmental interests shift, these studies may become of greater concern to our stakeholders.

Methods: Our research design and implementation includes projects of interest by regional producers that we design, and projects designed and conducted in collaboration with Cornell University researchers of various disciplines, private global industry representatives, and agricultural research institutions throughout the Northeast and mid-Atlantic. Our expertise in IPM, insect pest and beneficial complexes attacking fruit and vegetables, in conjunction with resources of perennial tree fruit orchards at the Hudson Valley Laboratory and cooperating commercial farms, provides us with unique opportunities to contract with industry and granting agencies to fulfill the Cornell research mission.

Extension Responsibilities:

The *mission* of my extension program is to establish close working relationships with regional growers, stakeholders, agrichemical industry representatives, agricultural research and extension personnel within the pome fruit, vegetable and grape industry. Working together with these groups to develop insect pest management strategies that will be efficacious and cost effective, conserving biological control agents with emphasis on the mite predatory complex, while paying close attention to the perceptions of, and dialoging with, the non-agricultural community in Eastern NY as is needed to maintain a positive working relationship and address concerns of the 'neighboring' public.

Extension efforts have included contracting with Polycom Corporation to establish a budget, hardware and software packages for the recent Hudson Valley Laboratory video conferencing installation for use by the HVL extension team. This equipment allows faculty to conduct point-to-point workshops with faculty and staff in Ithaca, Geneva, and extension sites throughout NYS, enhancing the educational outreach to the fruit growing community. Extension efforts also included the construction of the new Hudson Valley Laboratory web site, incorporating new text and photography, updated faculty and staff images and regional agricultural landscapes. The site now permits dissemination of entomological and pest management documents to our constituents through PDF, PowerPoint and web linked sources. Video extension resources of insect biology and pest management recommendations for Hudson Valley apple production will be posted on the program highlights page for grower access.
http://www.nysaes.cornell.edu/hudson/program.php

Working directly with agrichemical industry representatives, CCE regional and state extension staff, I have, by request, made presentations to stakeholders, private industry groups and producers, to both in-state and out-of-state audiences. These include presentations to researchers and regional fruit growers on insect biology and control advances from 1994-2009 at the annual Hudson Valley Commercial Fruit Schools, Kingston, NY; Lake Champlain Fruit School in Lake Champlain, NY; Long Island Fruit and Vegetable School in Riverhead, NY. I

assist the CCE Fruit Educator in digital computer presentation development yearly. I have given presentations to meetings at the Eastern Branch Entomological Society of America, research and extension specialists at the NY, NE, Can. Fruit Research Mtg., Burlington. VT., research and extension specialists at the Great Lakes Fruit Workers meetings in Niagara Falls, Canada and research entomologists at the Cumberland-Shenandoah Fruit Meeting, Winchester, VA.

I have participated in the region-wide introduction, monitoring and yearly evaluations of the establishment and spread of the biological control mite predator *Galendromus pyri (= Typhlodromus pyri)* into commercial orchards throughout the Hudson Valley on an experimental basis. This included extension education to apple 'fruit stand' clientele of pesticide reductions relating to biological control measures. We went on to establish and direct the regional biological control implementation program beginning spring 2001 with field and formal workshops. We are presently monitoring codling moth populations for reduced susceptibility to the organophosphate insecticides throughout NY State and have presented our findings at the Lake Champlain and Hudson Valley fruit schools..

Extension outreach to homeowners: I continue to write entomologically relevant articles concerning regional insect activity for the Middletown Record and Poughkeepsie Journal, regional newspapers, the Department of Environmental Conservation (DEC) website on insects of regional interest, on a seasonal basis.