New Mating Disruption Product for Dogwood Borer Control in Apple

Win Cowgill, County Agricultural Agent, Dave Schmitt, Tree Fruit IPM Program Associate and Dean Polk, Fruit IPM Agent

A new Isomate product for mating disruption of Dogwood borer (DWB) on apple is now labeled and available. The manufacturer is CBC (America) Corp.

Dogwood borer has been a concern in New Jersey with the adoption of apple dwarfing rootstocks. We have been planting our trees high with the rootstock 4-6” out of the soil for enhanced dwarfing control. Many rootstocks then form burrknots which attract the Dogwood borer. Our Rutgers Fruit IPM program has been trapping Dogwood borer for many years and we’ve found the numbers have increased significantly over the last ten years. In one North Jersey apple block we found over 30% infestation.

The Isomate DWB product will give growers an alternative to trunk sprays with Lorsban 2E, it is also labeled for organic production. We feel that it will adequately control Dogwood borer in light infestations and after multiple years of use give equal control to Lorsban. Below find some additional research information from Cornell on DWB Isomate research. Also, find the new label for the DWB Isomate on page 7 of this newsletter.

Dogwood Borer Research

Dave Kain and Art Agnello, Cornell University

Reprinted from Great Lakes Fruit Grower News, December 2011
http://fruitgrowersnews.com

Apples grown on dwarfing rootstocks, such as M.26 or M.9, often develop aggregations of root initials, commonly known as burrknots, on the rootstock portion of their trunks.

Dogwood borer females find these burrknots to be an attractive medium on which to lay their eggs, in order to provision their offspring. Burrknots apparently provide an ideal environment for dogwood borer larvae and easy entry into the trunk. The larvae feed on the root initials that make up the burrknot, but as this tissue is consumed, they may

See Borer Research on page 2
move into the bark of the trunk, where their feeding may eventually cause a decline in the vigor and thriftiness of the tree, and possibly even girdling and death.

The most common signs that borer larvae have been actively feeding on these burrknots are reddish brown frass or translucent, golden-brown, empty pupal cases. Because of the recent increase in acreage of apple trees grown on dwarving rootstocks that are prone to the development of burrknots, we have seen an increase in dogwood borer populations.

Dogwood borer occurs throughout New York State, as well as in other states. On average, about half of the trees in an orchard on dwarving rootstock will have burrknots and about a third of those burrknots will be actively infested by dogwood borer larvae.

Previous research with Isomate-LPTB supports the idea that treatment with Isomate-DWB will work best when infestation is low or moderate. However, using Isomate-LPTB, higher populations can be reduced to a manageable level by treating with the pheromone for more than one season. We would expect the same would be the case using Isomate-DWB; results from the next two seasons’ trials will address this question.

From other trials that have been conducted, indications are that Isomate-DWB should work at least as well as, and maybe better than, Isomate-LPTB. Results from the first season of our trial suggest that, at this early stage, it has been comparable in efficacy to Isomate-LPTB.

We have estimated the cost of applying chlorpyrifos (Lorsban 4E) based on a plant density of 800 trees per acre, $8 per hour for labor and a price of $30 per gallon for Lorsban 4E, at approximately $25 per acre. Treatment with Isomate-DWB dispensers at a rate of 150 per acre the first season, followed by 100 per acre thereafter, using the same labor rate, costs approximately $63.60 per acre for the first season and $42.40 per acre in subsequent seasons.

Assuming that the efficacy of Isomate-DWB is equal or superior to that of Isomate-LPTB, then the ease with which pheromone dispensers are applied, the fact that no special equipment is needed and, presumably, the improved worker safety, may make the use of this product an attractive alternative for some growers.

**Wine Grape Information for the Region**

Mark L. Chien, Viticulture Educator, Penn State Cooperative Extension

**FLX Notes:** I took a quick tour of the Finger Lakes recently and discovered just how much this wine region has grown up. After visits to Long Island, and knowing what I do of Ontario and other wine areas in the East, I’m convinced that serious professional wine makers and grape growers, along with skilled help in the cellar and fields, is what is necessary to push an industry forward. We are all somewhere on this continuum, some further along than others. If you are interested in the production of fine aromatic white wines, then a visit to the lakes is an essential learning experience, but any wine grower or maker would benefit from interaction with these professionals and tasting their wines.

**Vine Size and Balance:** John Santos, the outstanding wine grower in the Finger Lakes, recently reminded me of the importance of establishing vine balance in vineyards. Vine balance is not an accident of nature. It is achieved by thorough site assessment, vineyard design and development, followed by careful management. I wrote an article called *Vine Size and Balance* a few years ago and updated it (http://www.pawinegrape.com/uploads/PDF%20files/Documents/Viticulture/Vine%20Size%20and%20Balance%20Jan12.pdf). These concepts are the foundation upon which fine wines are made.

**Practical Viticulture Information from Hershey:** The grape section at the Mid-Atlantic Fruit and Vegetable Convention is always a good blend of practical information and research.

**Bunch rot and Phomopsis (Bryan Hed, Penn State):** Late season conditions contribute to bunch rots that can be caused by a variety of organisms, including botrytis. Rots can severely affect juice and wine quality. Cluster compactness determines the susceptibility and spread of the diseases within clusters from berry to berry contact. This is really important to remember! Opportunities for control are at bloom, especially if the weather is wet to manage latent infections; pre-close is the last opportunity to get fungicides into the cluster; and at veraison the cluster can be protected from the outside; and at pre-harvest, especially in wet conditions it is necessary to control the spread of fruit rots. Fungicides for botrytis include Vanguard, Scala, Elevate, Ronal, Sirobilarins (Flint, Pristine), Endura (boscalid), and Switch. Rotate between FRAC group (see Noemi’s talk, next). Cultural practices to mitigate fruit rots include variety selection, improving aeration, spray deposition and light penetration into the canopy and clusters (leaf removal, shoot thinning and positioning). Avoid excess nitrogen.
and water, and try to manage berry wounding (birds, deer, insects, etc.) as much as possible – an intact berry skin is the best barrier to opportunistic fungal pathogens. Loosen the clusters! Bryan showed a great slide of a fully formed, very compacted Vignoles cluster that was sprayed with orange paint – removing outer berries revealed how little of the actual berry surface area was covered by the paint. He said that one berry/cm change is compactness = 2.8% change in coverage. His cluster zone leaf removal at trace bloom has given good results opening up cluster architecture by reducing fruit set.

Phomopsis can be a problem in wet and cool years like 2011. Captan, mancozeb and ziram are good materials to control phomopsis. If it was a problem last year then overwintering spores are likely to exacerbate the disease this spring. Start spraying early (1”) and get good coverage. Dormant sprays of lime sulfur (10g/ac) or fixed copper (3lb/ac) are thought to have some efficacy on overwintering phomopsis.

Grape diseases and FRAC groups (Noemi Halbrendt, Penn State): Noemi tracks grape disease infection periods at the Fruit Research and Extension Center in Adams County. Many months have more days with infection periods than not; it’s a challenging situation for wine grape growers, especially for vinifera wine grapes. She offered these tips: be sure to have the correct timing/application interval, most effective material and rates, optimal spray coverage, a good sprayer, proper tractor speed, gallons of water per acre and nozzle direction. Like Bryan, she emphasizes the need for high quality canopy management. Resistance is a major threat to the continued viability of fungicides and Noemi highlighted with some excellent tables the fungicide choices for powdery and downy mildews and their Fungicide Resistance Action Committee (FRAC) group numbers that can help growers to properly rotate materials to avoid resistance. Each fungicide material should have FRAC number prominently displayed on the product label. This system was designed to help applicators to understand which products are in the same chemical class and how to avoid overuse that leads to resistance problems. In addition to Bryan’s suggestions about IPM, Noemi adds “poor spray coverage=low rates on susceptible tissues=poor control and increased resistance development”; fungicide weaknesses are magnified when weather favors the pathogen (often in the East), spray every row, every time; use high volumes of water and be proactive by focusing on effective control early. In all cases, good vineyard sanitation practices will improve any disease management program.

I will place my talk on bird management, and some slides from Noemi and Bryan’s presentations on the PWGN website - http://pawinegrape.com.

New Grape IPM Website: Ontario may be the best place for wine grape growers and makers to find useful production information. The Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) has one of the best informational websites I have ever found: Ontario Grape IPM (http://www.omafsra.gov.on.ca/IPM/english/grapes/index.html). Dr. Wendy McFadden-Smith, the grape pathologist for OMAFRA, has launched a grape integrated pest management site that is loaded with great photos, biology, scouting methods, and management recommendations. The information is divided between new and advanced growers. There’s even a cool visual identification quiz so you can test your scouting knowledge. This is an excellent complement to the NY-PA Pest Management Guidelines for Grapes (http://ipmguide-lines.org/grapes).

Upcoming Meetings: Pruning workshops are coming up: Naylor Vineyard (York) on February 18th. A New Grape Grower Workshop in Lancaster, PA on March 9th after the Eastern Winery Exposition (3/7-8). The next few weeks are packed with events. Here are some regional listings (go to the http://www.pawinegrape.com/uploads/PDF%20files/Documents/Events/Draft%20Copy_2012%20Viticulture%20and%20Enology%20Events%20Calendar_Chien.pdf for a full calendar and event website registration and information):

Ohio Grape Producers Conference – February 20 and 21
Ontario Fruit and Vegetable Convention – February 22 and 23
Maryland Wine and Grape Industry Annual Meeting – February 24 and 25
New Jersey Grape Expectations – February 25
Finger Lakes Grape Growers Convention and NY Wine Industry Workshop – March 1-3
Pennslyvania Winery Association Annual Meeting – March 6
Eastern Winery Exposition – March 7-8
Lake Erie Grape Growers Conference – March 8
New Grape Grower Workshop – March 9

Submitted by Jerry Frecon, Agricultural Agent.
Calendar of Events

Fruit Meetings 2012


Feb. 20, 2012  8:00 am – 3:00 pm, President’s Day Fruit Growers Educational Meeting - Biglerville High School, Biglerville, PA. (All day educational meeting for peach and apple growers.) Sponsored by Penn State and Adams County Fruit Growers Association. Contact Brenda Cressler – 717-334-6271.


March 6, 2012, 8:00 am – noon, Apple Scab in Pennsylvania – Penn State Fruit Research & Extension Center, 290 University Dr., Biglerville, PA. Sponsored by Penn State Cooperative Extension. Contact 717-334-6271 or tab36@psu.edu.

March 7, 2012  8:00 am – 5:00 pm, Strawberry/Bramble School, Adams County Cooperative Ext. Sponsored by Penn State Ext.


March 13, 2012  9:00 am – 4:00 pm, Blueberry Open House - Kerri Brooke Caterers, 753 South White Horse Pike, Hammonton, NJ. Contact Gary C. Pavlis – 609-625-0056.


Grape Expectations

a Viticultural and Enological Symposium


Sponsored by Rutgers Cooperative Extension In cooperation with the New Jersey Wine Industry Advisory Council and Garden State Winegrowers Association

8:30 Registration and Continental Breakfast
9:00 Welcome, Introductions, And Symposium Overview, Dr. Gary C. Pavlis-RCE
9:55 What’s New From The Industry?
10:10 Break
10:25 Looking Forward to Disease Forecasting with NEWA in 2012, Dr. Peter Oudemans-RCE
11:00 Weed Control in Established Vineyards, Dr. Brad Majek-RCE
11:30 Governor’s Cup Reviews, John Almaier-Alba Vineyards and Charlie Tomasello-Tomasello Winery
12:15 Buffet Lunch Featuring NJ Wines
1:15 The Mystery Wine Challenge
1:45 Make ML Fermentation Your Friend, Sigrid Berntsen-Briand-Lallemand
2:30 To Cork or Not to Cork, George Taber
3:00 Break
3:15 Wine Grape Research Update at NJAES, Dr. Dan Ward/Dr. Gary C. Pavlis
3:30 H2A Workers-What They Can Do For You, Dr. Audrey T. Cross, PhD, JD
4:00 2012 ABC Regulatory Update
4:15 NJ Wine Showcase

Cost: $95 per person. $75 for Garden State Winegrower members.

Make checks out to: Atlantic County Board of Agriculture. Send registration information to: GRAPE EXPECTATIONS, Rutgers Cooperative Extension, 6260 Old Harding Highway, Mays Landing, NJ 08330 For more information on registration: (609) 625-0056 (Voice) (609) 625-3646 (FAX) pavlis@aesop.rutgers.edu.
North Jersey Commercial Fruit Meeting
(Note: there will be no South Jersey Fruit Meeting this year)
Wednesday, March 7, 2012, 8:30 a.m. - 4:15 p.m.
Warren Grange #10
102 Asbury Broadway Road
County Route 643
Asbury, NJ 08802
(Warren County)

Preliminary Program- times and speakers subject to change

Welcome and Update on Tree Fruit Support From the NJ Agricultural Experiment Station, Dr. Larry Katz - Director, New Jersey Agricultural Experiment

NJDA Jersey Fresh/Tail Gate Market Programs Update, Bill Walker - NJ Department of Agriculture

Impact of Brown Marmorated Stink Bug in Tree Fruit, Dean Polk

Mating Disruption of Peach Borer in Northern NJ, Dr. Atanas Atanassov - North Jersey Program Associate in Fruit IPM

Industry Show and Tell

How about Apple Scab, Resistance Issues and How to Grow Apples with Protectant Programs, Dr. Dave Rosenberger, Extension Plant Pathologist, Hudson Valley Lab, Cornell University

Real Experiences with Crop Insurance to Manage Your Risk, Dave Lee - County Agricultural Agent, RCE - Salem County and Win Cowgill - Area Fruit Agent

Tree Fruit Spray Program for 2012 with BMSB Focus, Dean Polk - Tree Fruit IPM Agent

Presentation of the Outstanding Fruit Grower Award, NJ State Horticulture Society

12:00 – Luncheon  Note: you must pre-register - lunch cannot be purchased at the door! March 1 is the deadline to pre-register for luncheon.

Afternoon Session

New Pest - Spotted Wing Drosophila (SWD) in NJ - What it is and How to Control it, Dean Polk

Pesticide Safety Update, Speaker to be Announced

How to Manage Blueberries- Pruning and other Practices, Dr. Gary Pavlis, RCE of Atlantic County

Using copper, Apogee, and summer fungicides to avoid both disease and fruit russet on apples, Dr. Dave Rosenberger

Apogee- How it has been used successfully in NJ for Fireblight and Growth Control, Win Cowgill

Pruning Sweet Cherries- A New Video Series and Website, Win Cowgill

4:15 – Adjourn

Pesticide Credits will be awarded at the end of the program

Pre registration required for program and luncheon. Deadline March 1, 2010.

Meeting will be held regardless of weather.

Contact Diana Boesch, RCE of Hunterdon County, 908-788-1339 email: boesch@aesop.rutgers.edu

For program questions contact Win Cowgill, cowgill@njaes.rutgers.edu

Cost:  Registration per person $20.00
Additional farm personnel per person $5.00
Luncheon (pre-registration required) $18.00
South Jersey Evening Fruit Meeting
Tuesday, April 3, 2012 at 7:20 p.m.
Gloucester County Office of Government Services - Auditorium
1200 North Delsea Drive, Building A, Clayton, N.J. 08312

Sponsored by Rutgers New Jersey Agricultural Experiment Station (NJAES) Cooperative Extension, Gloucester County

Moderator: Jerome L. Frecon, Agricultural Agent,
Rutgers NJAES, Cooperative Extension

7:20 p.m. “Annual Meeting of the New Jersey Peach Council” H. Carl Heilig, Jr., Chair Board of Trustees Presiding.

7:30 p.m. “Advanced Yellow and White Fleshed Selections from the Rutgers NJAES Peach Breeding Program” by Jerry Frecon, Agricultural Agent, and Dr. Joe Goffreda, Director of the Rutgers Fruit and Ornamentals Center, Cream Ridge, NJ.


8:10 p.m. “Fungicide Resistance Management Strategies” by Dr. Norman Lalancette, Specialist in Tree Fruit Pathology, Rutgers NJAES, Cooperative Extension.

8:30 p.m. Introduction of Dr. Ann Nielson, Extension Specialist in Fruit Entomology, Rutgers NJAES. Cooperative Extension

8:40 p.m. “Pest Management Approaches for 2012” by Dean Polk, Statewide Fruit IPM Agent, Rutgers NJAES, Cooperative Extension.

9:00 p.m. “Residual Herbicide Options for Annual Weed Control” by Dr. Brad Majek, Extension Specialist in Weed Science, Rutgers NJAES, Cooperative Extension.

9:20 p.m. Adjourn Meeting

NEW JERSEY PESTICIDE APPLICATOR UNITS WILL BE GIVEN AT THE CONCLUSION OF THE MEETING.

The GC Office of Government Services Building is accessible to the physically impaired
For more information contact Rutgers Cooperative Extension of Gloucester County at 856-307-6450, ext. 1.

Where’s the snow? These January, 2011 photos recall last winter’s record snowfall (snowiest January on record for NJ). New Jersey joined the bulk of the lower 48 states in having a milder, less snowy January 2012 than usual. According to State Climatologist, Dave Robinson, “A fast moving jet stream roaring west to east to our north kept polar air at bay. Back here in NJ, January marked the 12th consecutive month with temperatures above the 1981-2010 average. January precipitation was below average and snowfall generally less than half of average, with only one event of note. The 35.2° average temperature across the state was 4.0° above normal.”
Photos courtesy of Jerry Frecon.
BIOCNTROL

ISOMATE® DWB
A MATING DISRUPTION FORMULATION FOR DOGWOOD BORER (Synanthedon scitula)

For Organic Production

ACTIVE INGREDIENTS:
(Z,Z)-3,13-Octadecadien-1-yl Acetate .................. 79.84 %
(E,Z)-2,13-Octadecadien-1-yl Acetate .................. 5.46 %
(Z,Z)-3,13-Octadecadien-1-ol ...................... 1.50 %
(E,Z)-2,13-Octadecadien-1-ol ..................... 0.27 %
OTHER INGREDIENTS ...................... 12.93 %

TOTAL ....................................... 100.00 %

55.12 mg active ingredients per dispenser

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

It is CRITICAL that ISOMATE DWB is applied as directed.

Crops
Apples and other pome fruits; plums, cherries and other stone fruits; pecans and other tree nuts, blueberries and other berry crops and dogwood, crabapple, oak, birch, mountain ash, willow, pine and other ornamental nursery crops.

Target Pests
Dogwood borer (Synanthedon scitula).

Rate
Minimum of 100 dispensers per acre (0.21 fl oz or 5.51 g a.i. per application) for low populations areas and where dogwood borer mating disruption has been practiced for a number of years. Maximum of 200 dispensers per acre (0.42 fl oz or 11.02 g a.i. per application) is recommended for the initial treatment year and for high populations, including around borders of treatment area. Do not exceed 150 g a.i. (or 2721 dispensers) per acre per year.

Application
Dispensers should be placed on lateral branches at chest height within the tree.

Timing
Apply in the spring before the end of May. It is important to apply prior to dogwood borer adult emergence. Consult your local pest control advisor or Pacific Biocontrol representative for proper timing or estimated dispenser longevity in your area.

Note
Isomate DWB suppresses mating of target pest. Immigration of mated female moths of this species from adjacent external sources of infestation will reduce the level of control. Manage by:

a. Treatment of external sources of infestation with Isomate DWB.
b. Treatment of external sources of infestation with an effective insecticide.
c. Treatment of pheromone treated orchard with insecticide.

Area-wide application is most effective. Supplementary applications of insecticide are advised when Isomate DWB is used in orchards with high pest populations or adjacent to orchards with high pest populations. All pests must be monitored so that timely intervention with insecticides is possible.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage
Store in original unopened package in a dry location at temperatures below 40°F. Do not store in cold facilities used for food.

Pesticide Disposal
Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility.

Container Handling
Nonrefillable container. Do not reuse or refill this container. Dispose of empty foil packet in the trash.

ENVIRONMENTAL HAZARDS

For terrestrial uses: Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of this product.

WARRANTY AND LIMITATION OF DAMAGES

The directions for use of this product are believed to be adequate and must be followed carefully. Pacific Biocontrol Corporation warrants that the product complies with the specifications expressed in this label. To the extent consistent with applicable law, Pacific Biocontrol Corporation makes no other warranties, and disclaims all other warranties, expressed or implied, including but not limited to warranties of merchantability and fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. To the extent consistent with applicable law, Pacific Biocontrol Corporation’s liability or default, breach or failure under this label shall be limited to the amount of the purchase price. To the extent consistent with applicable law, Pacific Biocontrol Corporation shall have no liability for damages (special, consequential or incidental) that result from handling, storage and use of this product, which is not in compliance with the label. Use of this product implies all directions of this label have been read carefully.

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PLANT & PEST ADVISORY

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**Pesticide User Responsibility:** Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCE in your County.

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