

Ohio Fruit ICM News

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Volume 12 (3)

February 29, 2008

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One more week of questionable weather and we should get into more of a Spring weather pattern. With that in mind... Do you have your pruning done? Do you have your equipment cleaned up and nozzles replaced on your sprayers? Have you looked at your soil test and leaf analysis results? Know where your copy of the 2008 Spray Guide is? Have you met with your lenders lately to update them on the business operation? Have you discussed and updated your business plans with your family and partners? Thought about your labor needs and how you will meet them? Have you thought about your updating your marketing program? Have you contacted the local media to let them know you would enjoy having them feature you when the crops start coming in?

Organics 101: An Introduction to Organic Crop Production

Sponsored by the Ohio Ecological Food and Farm Association (OEFFA) and the Ohio State University Organic Food & Farming Education and Research (OFFER) Program, will run from 8:30 am - 4:00 pm on Thursday, March 20, 2008 at the university's Ohio Agricultural Research and Development Center (OARDC), 1680 Madison Avenue in Wooster, Ohio.

The program will feature organic farmers and OFFER researchers, who together will present the latest and best recommendations for transitioning to organic production.

Marketing organic crops, the economics of organic production, the organic certification process, organic certification standards and finding approved production inputs will be among the topics. So will crop rotations, pest management and soil biology.

The growing demand for organic food presents a great opportunity for Ohio farmers. Any Ohio farmer who is looking for information on organic crop production is encouraged to attend this workshop.

Preregistration for this workshop is \$25.00 if received by March 10. Registration received after March 10 is \$30.00. To register, send your name, address, telephone number (optional), email address (optional) and payment to *Kathy Bielek, 201 Thorne Hall, OARDC, Wooster OH 44691*. Make checks payable to OSU/OFFER.

More information is available on the OEFFA website (www.oeffa.org), or contact Kathy Bielek, OARDC, at (330) 202-3528, or bielek.4@osu.edu, or Mike Anderson, OEFFA, at (614) 421-2022, or mike@oeffa.org.

The ABC'S of Pheromone Mating Disruption by Greg Krawczyk, Extension Tree Fruit Entomologist, Penn State University (Source: Fruit Times Vol. 27#2 <http://fruittimes.cas.psu.edu/FT2702.pdf>)

The new technology called mating disruption (MD) has emerged as a very useful and powerful method in insect management. According to the Random House Webster's College Dictionary (1997) a "pheromone is any chemical substance released by an animal that serves to influence physiology or behavior of other members of the same species". In insect world a sex pheromone is used to help one sex (typically the male in insects) orient toward and find the other gender for mating. Despite minute amounts being released by female moth, the sex pheromones can be detected over hundreds of yards on wind currents, and by flying upwind in the pheromone plume, the male can almost always find the female.

The current Pennsylvania Tree Fruit Production Guide 2008-2009 includes an updated chapter entitled "Using pheromones for mating disruption" (p.183). Over the last 10 years this technology of practical application of insect sex pheromones to control pests in fruit orchards becomes a very familiar term for most commercial Pennsylvania fruit growers. The disruption of insect communication by pheromones takes place when enough artificial sources of pheromone are placed in an area that the probability of a female being found by a male, mating, and laying viable eggs is reduced below the point where economically significant damage occurs. Since the sex pheromones are highly species specific and only individuals of the same species respond to the pheromone volatile in the air, mating disruption is probably one of the most selective methods to control the target pest. But because of difficulties in managing high populations of pests, mating disruption programs should not be viewed as stand-alone strategies, but rather as one tactic within the toolbox of pest management options. In fruit system the mating disruption pheromone materials are available for the control of codling moth, Oriental fruit moth, peachtree borer, lesser peachtree borer, as well as for some leafroller species and some other borers.

The commercially available MD materials generally consist of some kind of reservoir (dispenser), carrier and sex pheromone. Although some technologies utilize low number

of pheromone release points, in most cases the pheromone is being released from a high number of points per unit of area. The number of dispensers can vary from 1 to 40,000 or more release points per acre. The flowable formulations of some pheromones (sprayable pheromones) can be applied as regular spray using standard equipment the same as for pesticide applications. The most common MD materials can be grouped into a number of different categories.

Hand-Applied Dispensers are the most popular and commonly used form of mating disruption. The standard system includes an impermeable reservoir fitted with an impermeable membrane for regulating pheromone release. Pheromone-impregnated polymerspirals, ropes, dispensers, or tubes are currently the most often used products. Wires, clips, or circular twin tubes allow these dispensers to be twist-tied, clipped, or draped directly onto the plant. The large reservoirs utilized in these products allow for long residual activity ranging from 60 to 140 days. This long residual properties of MD products may allow early season applications to suppress mating for most or all of the growing season depending on the type of dispenser and pest species. Application rates vary from one to several dispensers per tree (or 10 to 400 dispensers per acre) and can be labor intensive.

Often the cost for MD products tends to be relatively high, especially taking into account the fact that mating disruption is target specific and works only against the target, usually one pest species. To control multiple pest species, often multiple applications of various MD products are necessary. Additionally, under high pest pressure situations, supplemental insecticides might be needed to provide acceptable control of MD targeted pest.

Sprayable Pheromones—Microencapsulated pheromones are enclosed in a polymer capsule that controls the pheromone release rate. These capsules are small enough and durable enough to be applied in water through normal airblast sprays in the same manner as conventional pesticides. This makes them very attractive to use by many fruit growers. Residual activity is generally up to 4-6 weeks, which gives them some flexibility in pest management programs but also means they may need to be reapplied several times in a season for a target pest. Residual activity may be reduced by rainfall soon after application and a sticker type spray adjuvant is often recommended. Currently, for the growers on the East Coast, the only available effective sprayable pheromone is registered for the control of Oriental fruit moth: CheckMate® OFM-F. Several formulations for codling moth and several species of leafrollers have been tested and sold commercially, but they have not been tested adequately under Eastern U.S. weather conditions. Another MD technology utilizing the Ultra-Low Volume (ULV) pheromone applications although appear effective in controlling codling moth requires specialized delivery equipment and therefore so far being utilized at a very small, mostly experimental settings.

Other Methods—Many other methods of mating disruption are being developed and/or tested in the eastern fruit growing regions, but most of them have not been proven commercially yet.

Since mating disruption products do not kill insects, special considerations are necessary for deciding what type of mating disruption product, rate, and application method are being used. Borders of disrupted blocks are often at higher risk because of pest mating occurring outside the disrupted area and therefore efficacy increased with the size of the block treated. Peach and apple orchards adjacent to each other benefit from disruption in both crops for pests like the Oriental fruit moth. Under normal weather condition, the pheromone plume, due to its weight, tends to descend from the point of release. The importance of the proper placement of the dispensers can not be overvalued; the as high as possible placement of release points (dispensers, ties, flakes etc.) will help in providing a good distribution of the pheromone and better disruption of moths communication. Also, the residual activities of many of these products vary greatly; therefore it is extremely important to maintain careful insect monitoring system in orchards so no unexpected “surprises” will happen. Properly maintained pheromone traps should be able to provide excellent indirect information related to the efficacy of applied MD program.

Although mating disruption can work in smaller, isolated orchards the best results are achieved using this technology on large area-wide settings. During last two years more than a 1,200 acres of fruit orchards in Pennsylvania is participating in the area-wide CM and OFM mating disruption project sponsored by the grant from the Pennsylvania Department of Agriculture and fruit growers from the State Horticultural Association of Pennsylvania. Large-scale mating disruption implementation trials have yielded significant reductions in pesticide usage while keeping crop damage levels acceptably low. During a 2007 a number of smaller, isolated fruit farms also joined the area-wide pest control tactic and initiated a smaller whole-farm mating disruption programs, where all fruit blocks within a single farm being treated with some kind of MD materials. Despite smaller areas and slightly different approach, also this group of growers was able to drastically reduce the insecticide programs on their farms and still maintain excellent fruit quality at harvest.

For current recommendations consult the 2008 Midwest Tree Fruit Spray Guide.

Northeast Ohio Winter Grape School

OSU Extension is pleased to announce that the 2008 Northeast Ohio Winter Grape School will be held at Chalet Debonne Vineyards in Madison, Ohio on Monday, March 17, 2008 from 10:00 am to 3:00 pm. If you are involved in our local grape and wine industry, you will not want to miss this event. Chalet Debonne Vineyards is located at 7743 Doty Road.

Featured speakers for morning session will include Greg Johns, Dr. Roger Williams, Dr. Mike Ellis, Dr. Doug Doohan, and Linjian Jiang all from the Ohio Agricultural Research & Development Center, David Marrison and Randy Zondag from OSU Extension. Topics to be discussed include sprayer management, sprayer calibration, grape insect control, weed control in vineyards, grape disease control, NE-1020 national grape program and Ohio grape & wine economic impact study.

Producers in attendance will also receive Core and Category 4 credits for their private pesticide applicator's license. The registration fee for this program is \$15 for the first

person from each family and \$10 for each person thereafter. The registration fee includes program handouts, refreshments and a wonderful Saint Patrick's Day buffet lunch. Registration is required by March 10, 2008. Late registration will be \$20 per person. Space is limited for this program, so reservations will be accepted on a first come first serve basis. Please register by calling the Ashtabula County Extension office at 440-576-9008.

New Possibilities for Black Currants by Elizabeth Keller, Communication Services, NYSAES Cornell University, Geneva (Source: New York Berry News, Vol. 07, #2)

When Curt Rhodes of RH Rhodes and Sons, Inc. in Penn Yan, NY first contacted the New York State Food Venture Center (FVC) in 2004 for assistance with value-added black currant products, FVC director Olga Padilla-Zakour realized she had a unique opportunity. Black currants are making a comeback in New York after Congress banned them in 1911 as a contributing factor to the spread of white pine blister rust. In 1966, the availability of disease-resistant varieties made Congress relax its position and made lifting the ban a state issue. New York, once the number one producer of currants in the US, lifted the ban in 2003 through the efforts of Hudson Valley grower Gregg Quinn.

Working with the Rhodes family, Padilla-Zakour had an opportunity to encourage the reintroduction of black currants by creating formulations for value-added recipes that make the crop more profitable and offer alternative marketing options.

There were two serious challenges to overcome in processing the fruit. While Black currants have four times more vitamin C than oranges and twice the antioxidants of blueberries, they are high in acid and pectin, so formulations for jams, jellies, and dressings have to be altered and existing methods adapted to produce a quality product. These challenges were overcome and Rhodes has several new products to market and a co-packer to make them. The products were debuted at the 125th Anniversary Open House at the (Geneva Experiment) Station where they made a big hit.

The black currant craze is gaining momentum. Rhodes is selling his crop to wineries that use it primarily for blending. Through Padilla-Zakour, Rhodes also gained a link to Bellwether Hard Cider. Bill Barton, of Bellwether, wanted to blend black currant juice with his hard cider, but commercially available juice concentrate did not produce the desired results. Padilla-Zakour told him to put him in contact with Rhodes and the FVC produced a test batch of 100 gallons of fresh black currant juice for blending under the sponsorship of the NY Farm Viability Institute. "The difference in quality between concentrate and fresh pressed juice manufactured using optimal conditions is what makes the final black currants products so distinctive, full of flavor and color", said Padilla-Zakour. The fresh juice worked like a charm, and Bellwether's newest product, 'Black Magic' is one of their top sellers, going for \$3 a bottle more than regular hard cider. Thanks to contacts like these, and through products formulated by Padilla-Zakour, Rhodes' entire 2008 crop is already spoken for.

Calendar - Newly added in ***Bold***

March 14, Agricultural Linked Deposit program closing. Applications and a list of participating lenders are available on the Ohio Treasury Web site at www.ohiotreasurer.gov.

March 17 Northeast Ohio Winter Grape School 10:00 am to 3:00 pm at Chalet Debonne Vineyards, 7743 Doty Road Madison. Registration is \$15 for the first person from each family and \$10 for each person thereafter. Registration is required by ***March 10***. Late registration will be \$20 per person. Space is limited for this program, so reservations will be accepted on a first come first serve basis. Please register by calling the Ashtabula County Extension office at 440-576-9008

March 20, Organics 101: An Introduction to Organic Crop Production 8:30 am - 4:00 pm, OARDC, 1680 Madison Avenue in Wooster. Pre-registration for this workshop is \$25.00 if received by March 10. Registration received after March 10 is \$30.00. To register, send your name, address, telephone number (optional), email address (optional) and payment to *Kathy Bielek, 201 Thorne Hall, OARDC, Wooster OH 44691*. Make checks payable to OSU/OFFER. More information is available on the OEFFA website (www.oeffa.org), or contact Kathy Bielek, (330) 202-3528, or bielek.4@osu.edu

March 25-27, 20th Anniversary SARE Conference. Registrations made after March 1 require a late fee and must be made online or by telephone. All registration closes March 19. Requests for refunds due to cancellation must be received in writing by March 1. Refunds will not be issued after March 1. Contact Lorie Bousquet or Ryan Overstreet at (573) 882-8320 or muconf3@missouri.edu with questions about registration.

March 29, Southwestern Ohio Beekeeper School, Oasis Conference Center Loveland. 8AM-3PM. Adult registration \$30, Youth under 17 \$20. For more information contact the Warren County Extension Office at 513.695.1311

NOTE: Disclaimer - This publication may contain pesticide recommendations that are subject to change at any time. These recommendations are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. Due to constantly changing labels and product registrations, some of the recommendations given in this writing may no longer be legal by the time you read them. If any information in these recommendations disagrees with the label, the recommendation must be disregarded. No endorsement is intended for products mentioned, nor is criticism meant for products not mentioned. The author and Ohio State University Extension assume no liability resulting from the use of these recommendations.

Ohio Poison Control Number

(800) 222-1222
TDD # is (614) 228-2272