

The Vegetable & Small Fruit Gazette

August 2009

Volume 13, No. 8

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Quote for Thought from Pete Ferretti

A fence should be horse high, hog tight and bull strong.

~Old saying from The Harper Book of Quotations

Onion Thrips

Tom Butzler, Penn State Cooperative Extension

Walking through an onion field the other day, I came across a large section of the field where the leaves were bent over and appeared withered. Upon closer inspection, you could see that the leaves were streaked white. These two symptoms are characteristic of thrips activity.

The white appearance on leaves occurs when they use their beak like structure to puncture leaf tissue and extract the sap. This process also removes the chlorophyll; hence the white look. Punctured leaves allow water to escape and can result in smaller bulb size. Less chlorophyll leads to less carbohydrate production and reduced plant growth and early senescence. Thrips overwinter in small grains and alfalfa fields as adults and nymphs and will migrate into onion fields during warm spring days. Once in a field, the females lay eggs in the onion neck region. Upon hatching, nymphs will go through several stages with all of them feeding on newly emerging leaves.

Although a reliable treatment threshold has not been developed, the University of California suggests that threshold of 30 thrips per plant mid-season (lower for very young plants and higher for larger mature plants) has been used successfully for dry bulb fresh market and drying onions. The technique is to sample at least five plants from four separate areas of the field. New York guidelines recommend sampling 5 plants each in 10 different areas of a field for a total of 50 plants per field. Using a hand lens, count thrips as you pull apart the inner leaves near the bulb as well as those under the leaf folds.

As with any integrated pest management plant, the first step is to look at cultural practices. Probably not possible in our area but it is a good idea to keep onion fields as far as possible from grain and alfalfa fields. If the fields are in close proximity, try to plant onion fields upwind. Soil test to make sure the appropriate amount of nutrients are applied yearly. Nitrogen should not be over applied and is best applied with several applications during the growing season.

Some interesting research has shown that straw mulch has can suppress thrips activity. Not only does the straw help maintain plant growth and vigor but it is thought to increase biological control through enhancement of predator populations.

Extension educators are always preaching the idea of drip irrigation as a way to keep moisture off the leaves, a good disease management practice. In the case of thrips, overhead irrigation is effective in reducing thrips activity as they wash many of the insects off the leaf.

The final cultural practice is to keep fields clean of onion debris. Left behind plant material on the soil surface can serve as an overwintering site.

Several insecticides are labeled for onions and listed in The Commercial Vegetable Guide. It is recommended that a lot of water is used during the application (30 g/acre) at high pressure to not only ensure thorough coverage but to reach areas like the onion neck were thrips are concentrated.

2009 Cool and Wet: How has it affected the Vegetable Crops in PA

Mike Orzolek, Penn State Horticulture

Depending on where you are located in Pennsylvania, growing conditions in 2009 may have been horrible or near normal. In Central Pennsylvania, we have had our share of cool, wet weather in the last 90 days. Day as well as night temperatures have been on the average 5°F to 8°F below normal resulting in extremely slow growth of many vegetable crops especially cucurbits and peppers. The low night temperatures have been a major factor on the slow, almost painful growth of watermelon, squash, cucumber, cantaloupe and pumpkin. At the current stage of development, I am having serious doubts about harvesting pumpkins in September. Plants are green and vigorous, but with few flowers and fruits. On the other hand, we have had high quality, high yielding crops of lettuce, onions, cabbage and broccoli. They didn't mind the low to mid forty degree nights we had in May and June. I planted a cauliflower variety trial in June on bare ground and planted the extra transplants on raised beds with black plastic mulch and drip tape. The cauliflower plants growing on plastics mulch are 30% taller than the same plants growing in bare ground; even though cruciferous plants tend to grow better in cool weather.

With all the rain we have had lately, I would imagine that a significant amount of nitrogen you applied prior to transplanting or seeding your vegetable crop has leached by now. I suggest taking a tissue test on any crops that have light green colored leaves and appear stunted. If your leaf tissue test comes back with a nitrogen application recommendation, be sure you follow the recommendation very precisely since excess nitrogen at this stage of plant development could delay fruit maturity and that is the last thing you want to do this cool, wet year. I will say in general, I have not observed too many insects on my crops except for Colorado Potato beetles on my eggplant.

A Study of Alternative Controls for Gray Mold on Raspberries

Graham Sanders, former graduate student and Elsa Sánchez and Kathy Demchak, Penn State Horticulture

New products for managing gray mold (caused by *Botrytis cinerea*) hit the market every year. In 2006 and 2007, we conducted a trial at the Penn State research farm to evaluate several of these. We focused on alternative products including one nutritional supplement, Vigor-Cal-Phos, that is marketed for managing diseases.

The treatments we tested were:

Product(s)	Active Ingredient(s)	Manufacturer	Rate Applied
Milstop	Potassium bicarbonate	BioWorks, Inc., Fairport, NY	3.75 lbs/acre
Lime sulfur	Calcium polysulfate	Miller Chemical and Fertilizer, Corp., Hanover, PA	1% spray solution volume
Phostrol	Mono- and dibasic-sodium, Potassium and ammonium phosphates	Nufarm Americas, Inc., Burr Ridge, IL	5 pts/acre
Oxidate + Milstop	Hydrogen dioxide; (Milstop information listed above)	Biosafe Systems, Glastonbury, CT	1% spray volume for the first 3 applications, 0.3% for the remaining 3
Vigor-Cal-Phos + Oxidate	Phosphorus salts of calcium and copper; (Oxidate information listed above)	Agro-K Corp., Minneapolis, MN	4 qts/acre
Endorse	Polyoxin D zinc salt	Arvista Corp., San Francisco, CA	1.8 lbs/acre
Shemer + Milstop (evaluated in 2007 only)	<i>Metschnikowia fruitcola</i> cells; (Milstop information above)	AgroGreen Minrav., Ashdod, Israel	0.2% spray volume

The products were applied to a planting of ‘Nova’ and ‘Prelude’ summer bearing red raspberries at early, mid and late bloom and harvest. With the exception of lime sulfur, all applications rates were based on manufacturer recommendations for managing gray mold. The lime sulfur rate was based on the recommendation of a Penn State plant pathologist. Lime sulfur was applied during the growing season as opposed to during the dormant season to determine if it could be used for in-season gray mold management. Milstop is allowed in organic farming. Oxidate is also allowed in organic farming; however, it falls under the restricted category which requires documenting the need for its use. Endorse was evaluated at the request of the IR-4 program and is not currently labeled for raspberries. However, it has been found to effectively manage gray

mold in other crops. Company representatives recommended applying Oxidate, Vigor Cal Phos and Shemer in tank mixtures with other materials to maximize their efficacy.

We used two controls in this study: a water only spray and a fungicide rotation of Elevate 50 Water Dispersible Granules (fenhexamid; Arvesta Corp., San Francisco, CA) applied at a rate of 1.5 pounds per acre and Captan 50 Wettable Powder (captan; Arvesta Corp., San Francisco, CA) applied at a rate of 4 pounds per acre.

Phytotoxicity symptoms in each plot were evaluated following each spray application. Fruit was harvested by hand three times weekly and berries were sorted into marketable and unmarketable categories.

Phytotoxicity

Applying Phostrol resulted in phytotoxicity on both cultivars. Symptoms were a uniform browning of the leaf margins and veins. On floricanes, symptoms increased with each treatment application. Primocanes outgrew these symptoms as the leaves expanded and new ones emerged. Additionally, applying Milstop and Milstop + Oxidate, resulted in phytotoxicity on 'Nova' only. Generally, symptoms were the same spraying both these treatments, although lower than when applying Phostrol. Symptoms from these products were usually not found throughout the treatment plots and were mainly yellowing of the leaves. Phytotoxicity was not found to affect yields.

Yields

In 2006, Captan/Elevate sprays resulted in the largest berries. Though not statistically significant, Captan/Elevate and Endorse sprays resulted in the largest berries in 2007. Additionally, in 2007, spraying Captan/Elevate resulted in the largest yields. Captan/Elevate sprays also resulted in the fewest berries affected with gray mold in 2007. This was a similar trend in 2006. None of the remaining treatments resulted in increased yields or decreased gray mold incidence over the water only control.

Captan/Elevate was the most effective treatment for plant productivity and managing gray mold. The application of the other alternative gray mold products evaluated provided no yield benefit or control of gray mold over spraying water on the plants.

Blueberry IPM Training at Perry Acres, Berks County, PA

Cesar Rodriguez-Saona, Rutgers Entomology and Kathy Demchak, Penn State Horticulture

A workshop on Blueberry pest identification and monitoring techniques is being offered by personnel from Rutgers University in cooperation with personnel from the Atlantic Blueberry Company and Penn State. The workshop will be held at Perry Acres, farm of George Perry, former Ag extension agent and long-time fruit grower in Berks County.

Location: Perry Acres
33 Perry Lane
Hamburg, PA 19526

Date: Monday, September 21, 2009

Time: 1:00-4:45 pm

Workshop Description: The *Blueberry IPM Training Workshop* will provide growers and extension agents with general information on pest management practices in blueberries. Emphasis of the workshop will be placed on sampling and identification of insect pests and diseases. Admission is free. Handouts and refreshments will be provided, but we suggest you bring a folding chair for some portions of the presentations.

Presenters

Cesar Rodriguez-Saona, Small Fruit Extension Specialist, Rutgers University
Dean Polk, Fruit IPM Agent, Rutgers University
Faruque Uz-Zaman, Research Associate, Rutgers University
Gene Rizio, Fruit IPM Program Associate, Rutgers University
Becky Gleason, IPM Coordinator, Atlantic Blueberry Company
George Perry, Grower, Perry Acres

Program

Part I:

- 1:00-1:15 **Introduction:** Speaker introductions, an overview of the Perry Acres farming operation, project outline, workshop objectives and materials (Perry, Rodriguez-Saona, Polk, and Uz-Zaman)
- 1:15-1:30 **IPM Concepts:** Principles of IPM and roles of scouting (Rodriguez-Saona and Uz-Zaman)
- 1:30-2:00 **Sampling in Blueberries:** Where and how to sample (Polk)
- 2:00-2:30 **Common Blueberry Pests:** What to look for (Rodriguez-Saona and Polk)
- 2:30-3:00 **Break** – Refreshments

Part II:

3:00-4:10 **Field Demonstration:** Hands-on sampling in blueberries (Polk and Rizio)

4:10-4:45 **“Ask a Grower”:** Opportunity to ask a New Jersey grower on implementation of sampling techniques (Gleason), and a Pennsylvania grower about challenges in upland blueberry production (Perry)

Registration

Please register for this workshop by calling the Schuylkill County extension office at 570-622-4225 by 4:30 p.m. on September 17th. Please provide your name, an email address or phone number where we may contact you if necessary, and tell us how many people from your operation plan to attend.

Directions to Perry Acres

From the Harrisburg area: Take I-78 East to Exit 29. At exit 29, merge onto PA Rt. 61 heading South and travel 4.2 miles. Turn left onto Moselem Springs Rd/PA Rt. 662. Follow this road for 5.1 miles. Turn left onto Forge Hill Rd and travel 0.3 miles. Make another left onto Beektree Rd which you will follow for 0.6 miles. Turn left onto Perry Lane. You will see the meeting location on the right.

From the Allentown area: Take Rt. 222 South past Kutztown to the intersection with Moselem Springs Rd/PA Rt. 662. Turn right onto Moselem Springs Rd/PA Rt. 662 and follow this road for 1.3 miles, which will split. Follow the road to the right, which becomes Hard Hill Road/Rt. 143 which you will follow for another 1.3 miles. Turn left onto Beektree Road and travel 0.6 miles. Turn right onto Perry Lane and you will see the meeting location on the right.

From the Reading area: Take Rt. 222 North to the intersection with Moselem Springs Rd/PA Rt. 662. Turn left onto Rt. 662 and follow as above from the Allentown area.

Acknowledgements: Costs of this workshop are defrayed by NE-SARE project LNE08-273 “Spatially Based Whole-Farm Integrated Crop Management (ICM) Systems for Northeast Highbush Blueberry Production”.

10 Commandments of Customer Service

Scott Guiser, Penn State Cooperative Extension

John Berry, Penn State Extension Educator, recently completed a Retail Farm Market School. His reference packet contained the following “10 commandments of Customer Service”. I Googled “10 commandments of Customer Service” and see that, in this realm, many Moses’s received many messages. Do a search yourself, and you will find lots of good advice. Some very successful businesses are willing to share pearls of wisdom.

Below is a list that all *employees interacting with customers* need to think about.

1. The customer is never an interruption to your work! The customer is your reason for being in business. Chores can wait.
2. Greet every customer with a friendly smile. Customers are people and they like friendly contact. They usually return it.
3. Call customers by name. Make a game of learning customers’ names. See how many you can remember.
4. Remember, you are the company! As an owner or employee, the way you represent yourself to your customer is the way your business will be perceived by that customer.
5. Never argue with customers. The customer is always right (in his or her eyes). Be a good listener; agree where you can, and do what you can to make customers happy.
6. Never say “I don’t know”. If you don’t know the answer to the question, say “That’s a good question. Let me see if I can find an answer.”
7. Remember, every dollar you earn comes from you customers pockets. Treat them like the boss.
8. State things in a positive way. It takes practice, but will help you become a better communicator.
9. Try to get customers to remember a good experience at your market.
10. Always go the extra mile! Always do just a little more than the customer expects.

Here are a few other ideas I gleaned from the dozens of lists I found on-line. These are things *managers* should think about.

1. Treat your employees the way you want them to treat customers. Tell employees that you appreciate the work they do. Also, employees like to be “in” on what’s happening. Involve them in the business.
2. Know what your customers want and need. Do market research. Study the competition. Know what your competition is providing. Take their best ideas and use them in your business. It’s not stealing.
3. Don’t become complacent just because you have become successful. Remember GM, Wannamaker’s and Woolworths?

4. Have fun and create a fun and friendly work environment. In a recent interview, the CEO of Wawa, a convenience market chain with 5 billion dollars in annual revenue, said their research indicated that customers liked the Wawa employees and noticed that employees seemed to like each other.
5. Find ways to get customer feed-back. Listen to customers, learn from customer complaints, devise methods to get continual feedback about your business... and act on it.

Upcoming Meetings

If you have a meeting you would like to announce, please send the meeting title, date, location and contact information to esanchez@psu.edu.

Local

- August 11, 2009, 4-8 PM – barbeque at 6. **Vegetable Grower Field Day**, Seedway Vegetable Trial Farm, Hershey, PA. You are invited to view over 300 varieties of vegetables grown on a full-scale working vegetable farm. Crops included sweet corn, tomatoes, melons, watermelons, peppers, eggplant, beans, cucumbers and summer squash. You are welcome to taste all the tomatoes and melons and chose your favorites! The farm is near the corner of 322 and Meadow Lane but you will need to phone or email for exact directions. vegseed@seedway.com or 800-952-7333. RSVP's are also needed to plan for the barbeque.
- November 2009 (tentative date) **Western Pennsylvania Vegetable & Berry Seminar**, Butler, PA. For more information contact Eric Oesterling at (724) 837-1402 or reol@psu.edu or Lee Young at (724) 228-6881 or ljs32@psu.edu.

Regional

- October 16-17, 2009. **Fall Flower & Garden Fest**, 9 a.m. to 2 p.m., at Truck Crops Experiment Station, Crystal Springs, Mississippi. Free admission and parking. For more information: <http://msucares.com/fallfest> or 601.892.3731
contact: Dr. Rick Snyder, Professor & Extension Vegetable Specialist
- November 8-10, 2009. **Southeast Strawberry Expo**, Sheraton Imperial Hotel, Research Triangle Park, NC. For information, contact the NC Strawberry Association, phone 919-542-4037, info@ncstrawberry.com.
- January 12-14, 2010. **2010 Atlantic Coast Agriculture Convention and Trade Show** at the Taj Mahal in Atlantic City. For more information contract Mel Henniger at mailto:henniger@aesop.rutgers.edu
- February 2-4, 2010. **Mid-Atlantic Fruit and Vegetable Convention**, Hershey Lodge, Hershey, PA. For more information visit <http://www.mafvc.org/html/>.

National

- July 14-16, 2009. **Plasticulture 2009**. Ramada Inn and Penn State University, State College, PA. For more information visit www.plasticulture.org.
- July 25-28, 2009. **Annual Meeting American Society for Horticultural Science**, St. Louis, MO. For more information visit www.ashs.org.
- August 9-13, 2009. **93rd Annual Meeting of the Potato Association of America**, Delta Fredericton Hotel in Fredericton, New Brunswick, Canada For more information contact Loretta Mikitzel at loretta.mikitzel@gnb.ca.

International

- None listed at this time.

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The newsletter is also posted within three days on the Department of Horticulture Vegetable program website at: <http://horticulture.psu.edu/cms/veg crops>.

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