

Berry News

VOLUME 6, ISSUE 3 - MAY 11, 2018



Spring Berry “To Do” List

What a difference a week makes! The warm weather last week pushed berries forward dramatically. But many growers are still struggling with damage caused by **Voles**— what to do with the little vermin?! According to Lynn Braband, of the NYS Community IPM Program, trapping is your best bet. Voles tend to be a little large for mouse-sized traps and a little small for rat-sized. Lynn suggests putting out both sizes. According to Lynn, [museum](#)



[specials](#) are about the right size. It’s hard to find a supplier – but check with Forestry Suppliers.com. In addition to snap traps, you might also check into the [larger multiple capture traps](#) like this one sold by Kness. If you are using rat sized snap traps - the Tom Cat plastic ones work well and are easy to set- baited with apple and under the cover of an inverted box or milk crate so that the voles feel secure entering and no other animal can get caught accidentally.

—Strawberries—

- Strawberries have gone from just barely out of dormancy to full bloom seemingly overnight in the lower Hudson Valley. Buds are appearing in the Capital District.
- Growers in other areas of the country rely on phosphite sprays to help strengthen root systems and manage root rot. I need to find more support for this locally – but after the survey we did over the last two years there is no question that root disease issues are a primary problem for eastern NY growers.
- Strawberry Rootworm (*Paria fragariae*) adults are feeding and laying eggs during the night after overwintering. Growers could find very small larvae feeding on the roots in a few weeks. Adults are small, round

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beetles The description of foliar damage is usually described as “shotholes” which is true, but there is also some feeding areas that look almost skeletonized, or rasped. This can be a particular problem for brand new plantings. Insect pathogenic nematodes could be used in affected fields, or a fairly broad-spectrum insecticide may yield control long enough for plants to grow past the adult feeding threat. Still the grubs are the real danger to planting vigor.

- Low level Nitrogen for some berries might help them recover - If your June bearers look particularly bad after the mulch has been removed, you could add small amounts of nitrogen – preferably through drip as nitrogen moves readily in water to plant roots, but you can also broadcast in the row. The rate should be about 5# actual N/acre for each fertigation event, use Calcium nitrate (nitrate form is better because it’s easier for plant to take up – especially in cold soils).

Plant uptake will improve as air temperatures increase and plant transpiration occurs. You can keep fertigating throughout the spring putting on a total of 10-20# actual N prior to fruiting. The tipping point is 30# of N – spring applications of 30# of actual N have been repeatedly shown to result in too much vegetative growth and less fruit. Plus the excess nitrogen encourages fruit rot. So be conservative if you are adding Nitrogen in the spring.

- Watch for weak growing areas and check for weevil larvae, grubs, poor drainage, root rot and/or winter damage.
- Begin fungicide application for fruit rot starting at 10% bloom.



Adult strawberry rootworm (Paria fragariae) feeding damage on newly emerged



Fall planted June bearing plug strawberries on plastic

- Keep eye out for overwintering pests – like cyclamen mite! Cyclamen mites are much harder to detect, but cause leaves to be stunted and malformed as they emerge from the crown. It’s difficult to control these mites – so removing obviously infested plants is a good management practice.
- Plan for frost protection – inspect irrigation equipment and row cover. Make sure you have some type of adequate temperature detection system at the field level.
- Spider mites seen in strawberries throughout the region. Remember that mite thresholds are quite low – use a presence/absence method. Look at 60 fully expanded tri-foliate leaves and if you find 15 mites you have reached threshold. You may want to spray and then add beneficial predator mites as soon as possible to fields to control these pests.

—Blueberries—

- Blueberries are ranging from pink to tight bud – and by the time you receive this newsletter we may be well into bloom in the lower Hudson Valley. Bud movement was amazingly fast as soon as the cold lifted.
- Bring in bees around 10% bloom.
- Bloom applications to prevent fruit molds.
- Azalea Bark Scale. This scale's telltale bright white egg sacs on the lower branches of infested plants are becoming more apparent in some southern blueberry fields.
- Reports from Rhode Island indicate that Winter Moth populations are down from previous years. As we’ve not seen this pest in eastern NY yet I wouldn’t worry, but if you see any larvae

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feeding in buds please contact me

- Scale blueberries
- Treat for mummyberry disease if needed – Mummyberries look like tiny black pumpkins. They can be on the ground or still hanging on the plant – but they are really hard to find. . If you saw mummyberry last year, you can control by raking off and/or removing the ground cover – including the sod. Then re-mulch over the top. This works better than any fungicide spray. Manure or urea sprays applied to the ground over the dropped mummies will also help. Indar is a translaminar material that could help – but you need to wait until berries are blooming to apply.
- Look for scale insects. Dormant oil will help control them as will Brigade, Triple Crown or Esteem when used as crawlers appear in early spring. We've had an

increasing problem with these insects over the past few years – this may be due to the SWD sprays and the loss of beneficials – hard to tell but the timing of the scale problem is curious.

—Brambles—

- Primocane emergence slower than expected given the rapid movement of blueberries and strawberries this past week – BUT I think soil temperatures are just catching up with the air temps.
- Scout for Twospotted mites and Red mites.
- As season progresses, scout for Yellow Rust. More information next issue on this disease.
- Complete the necessary Pruning: Remember to keep cane density at no more than 4 canes per square foot.

Spray Guidelines to Manage Fungicide Resistance

Written by Cassandra Swett

Here's a strawberry spray guide that manages fungicide resistance, when your main objective is gray mold (Botrytis) protection:

Pre-bloom (crown rot protection)

Spray: Every 7-10 days

Rotating: Captan 50 WG or 80 WDG (group M)

With: Rovral 50 WG (Group 2) --this compound can only be applied once, and only pre-bloom

Early Bloom (10%) to fruit set

Spray: Every 7-10 days

Rotating: Elevate 50 WDG (group 17), CaptEstate (group M + 17), Switch 62.5 WG (group 9 + 12), Fontelis* (group 7), Scala (group 12) and Pristine WG (group 7 + 11)

With: Captan or Thiram Granuflo+ (both group M)

An example: Captan+Fontelis*, then Switch, then Captan, then Pristine, then Thiram+, then Elevate, then Captan

After fruit set:

Spray: Every 7-10 days

Rotating: Captan and Thiram+ (both group M)

With: CaptEstate (group M + 17), Elevate (group 17), or Fontelis* (group 7) -each applied only once during this interval.



Botrytis cinerea, the causal agent of gray mold on strawberry, on infected fruit. Note dusty covering of gray spores on infected fruit. *Courtesy of APS image database: IW000098*

Rates

For every compound, there is a range in the rate you can apply. For fungicides at risk of resistance (Switch, Pristine, Rovral, Scala), the lower rate is always recommended. For fungicides that are not at a high chance of resistance (Elevate, Fontelis*, Captan, Thiram+), the amount you apply should be adjusted, in part, based on how high disease pressure is. If it rained at least once since your last spray, and temperatures are between 65 and 75° F,

you will want to use the higher concentration. If, in contrast, it's been cooler than 65, warmer than 75 and / or dry, use the lower rate.

Timing

The same goes for how often you spray. We get a lot of rain this time of year, and every time it rains the fungus has a chance to infect plants. So long as it's raining about every week, plan to spray every 7-10 days.

Tips

- Control is improved when you rotate between Fontelis* and Switch and when you tank mix Fontelis with Captan.
- One of the compounds in Pristine is the same FRAC group as Fontelis*, so don't use these sequentially.

Switch and Pristine are both highly effective, but are at high risk of resistance if they are used too often. Because of this, it is recommended that they are only used ONCE each year.

What about non-synthetic chemicals?

There is some interest in using non-synthetic chemicals for fruit rot control, as a rotation with synthetic chemicals, especially in post bloom control, and for organic management. One such compound is Regalia, a plant extract labeled for use on gray mold and anthracnose fruit rot in strawberry. Trials are lacking for strawberries, but in grape Regalia can be as effective as Pristine against *Colletotrichum*, and is moderately effective against *Botrytis*. In trials in California, disease control with Regalia is best when rotated with conventional compounds. We will be doing work on strawberry starting this year to evaluate Regalia and other bio-pesticides / biologicals, so we should have more information on this in future years.

**Fontelis is not labelled in NYS.*

+Thiram Granuflo is labelled but is NOT listed in the 2015 Cornell Pest Management Guidelines for Berry Crops.

Source: Penn State Extension, Small Fruit Blog <http://extension.psu.edu/plants/tree-fruit/news/2015/time-for-strawberry-fruit-rot-protection>.

Driscoll's New Berry Varieties at Baldor Bite

Liz Higgins, CCE ENYCHP

On May 2nd I had an opportunity to participate in a discussion with chefs, buyers and berry breeders from Driscoll's berries at Baldor BITE in NYC. Rick Harrison, VP of Global Variety Development at Driscoll's, and his team of Strawberry, Raspberry, Blueberry and Blackberry Breeders discussed their process for developing new berry varieties and considerations for creating the berry of the future. They led a discussion on the berry characteristics important to chefs, brokers and retailers and we tasted new Driscoll berry varieties that are under consideration for commercialization.

The breeders discussed the need to balance flavor, appearance, productivity and shelf-life in creating a new berry. In order to have berries year-round in the US, Driscoll's produces berries on farms in South America, Mexico, across the US and in Canada (they also grow berries in Europe). Their plant breeding facilities are located in each different growing region. The breeders need to balance many traits, and shelf-life is very important for their business. If shelf life could be less important, that would allow more berries to be considered that are stronger in other traits like flavor. To reduce the distance traveled and time in transit, Driscoll's is considering growing more berries in the northeastern US, hoping that they would have more options to select

berries for flavor as they would be closer to their markets. The discussion with the buyers was interesting because several retail buyers reiterated

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One of the new varieties we tried was a "blush" strawberry that was light pink and white. It was delicious! We learned that the white trait in strawberries is a single gene and the wild strawberries of South America were white and North America were pink. Most varieties of strawberries are red because the native wild strawberries of Europe were red.

how important shelf life was to them but a food broker, who sold to restaurants, said that he really appreciated being able to get more flavorful varieties. It was clear that Driscolls was considering 2 different markets in its breeding program – the traditional grocery store market and a more targeted market that would pay a premium for flavor and uniqueness. Driscolls is constantly looking to improve its berries and, depending on the type of berry, a variety may only be in active production for 3 years before it is replaced with a better performing variety. One other interesting fact was that in Europe, Driscolls identifies the berry by variety on the package, but in the US it does not. I discussed this with some of the breeders and this was, in part, because in US markets they change varieties often during the growing season, as the growing location changes and there was a perception that constantly changing variety names would confuse consumers. Several of us noted that the apple industry takes the opposite approach. They are considering, for their targeted, premium markets creating “limited release” variety-identified varieties like the blush strawberry in the sidebar.

Lessons that can be applied:

1. Always keep looking for better, varieties. Figure out what your weak links are in your production system and try to find a variety that is better. Are your yields too low,

What is the life expectancy of a Driscolls berry variety?

| | Approximate # of varieties they grow at a time | Life expectancy of a variety before it is replaced with a new variety |
|-------------------------------------|---|--|
| Strawberries | 12-15 | 3.5 years |
| Blueberries | 2-3 | 5-10 years |
| Blackberries and Raspberries | 5-10 | 3 years |

do your berries not hold up well for your markets, how is the flavor or texture?

2. Consider your market when you select your variety. The flavor/shelf life balance was a clear area of trade-off in different markets. Yield vs flavor could be another tradeoff. Can you get a higher price for more perishable, flavorful berries, or are your customers more price and appearance/condition of the berry focused?

3. Consider your pricing and marketing. Do you have a limited season berry that is unusually good and could command a premium price? Are your customers aware of it?

Time to Check Your W-4's

Richard Stup, Cornell University

A question came up recently about tax withholding on employee paychecks and a significant change with the new tax law. As most employers and many employees know, Form W-4 “Employee’s Withholding Allowance Certificate,” is the federal tax form that tells employers how much tax to withhold from an employee’s paycheck. It’s one of the standard new employee forms, but employees can update it at any time to adjust withholding. In the past, employees sometimes claimed to have many dependents as a way to have less tax withheld from their paycheck, but that strategy might not work so well in the future.

First, a few important definitions are in order:

Dependents. These are the people that a taxpayer can claim “depend” on him or her for their living needs. This can be a spouse or other adult in some circumstances

but most commonly includes minor children.

Exemptions. In tax lingo this is the amount that taxpayers can claim for themselves and dependents so that it won’t be taxed. Exemptions are subtracted off of adjusted gross income before any tax is calculated.

Allowances. This is what the employee calculates and reports on Form W-4 in order to guide how much the employer withholds. The more allowances an employee claims, the less the employer withholds from the paycheck for taxes.

Tax credit. This is an amount that taxpayers can claim to reduce their tax owed, dollar for dollar, after taxes are calculated.

The new tax law passed in December 2017 has an important change. No longer will the number of dependents you have be a

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factor in the number of allowances you can claim on your W-4. Compare the 2017 W-4 to the 2018 W-4, note that the 2017 form asked for the number of dependents in line D of the personal allowances worksheet, the 2018 version omits that. This is because the Tax Cuts and Jobs Law passed in December 2017 phases out personal exemptions for the years 2018 through 2025. The new tax law increases the amount of child tax credits in order to offset the effect of eliminating personal exemptions. See here for a more thorough discussion of this issue.

So, what does all this mean? Let me illustrate with an example: An employee, in an effort to minimize tax withholding, claims a large number of allowances on his W-4, more than the worksheet would indicate. So, the employer doesn't withhold enough for taxes on paychecks throughout the year. At the end of the year, this employee does his tax return and gets a nasty surprise. He finds out that not only will he not get a refund, he actually owes additional tax. Why? Because he really doesn't have as many allowances as he claimed on W-4 and the child tax credit is only given for children with Social Security numbers and who are living in the U.S.

On a related topic, employers have asked if claiming too many allowances on Form W-4 is a government red flag.

First, W-4 isn't normally sent to the government, the employer simply retains it and uses it to calculate withholding, although IRS can review it in an audit. There used to be a rule requiring employers to report any W-4's claiming 10 or more allowances but that rule has been scrapped.

I encourage employers and employees to discuss this and other tax issues with a qualified tax professional. For further reading, here's an article about doing a paycheck checkup.

Special thanks to Libby Eiholzer from Cornell Cooperative Extension and Darius Arezzo from Farm Credit East for identifying this issue and engaging in a spirited discussion of the implications!

By Richard Stup, Cornell University. Permission granted to repost, quote, and reprint with author attribution.

The post Time to Check Your W-4's appeared first on Cornell Agricultural Workforce Development. To subscribe to the Ag Workforce Development blog, please visit: <http://agworkforce.cals.cornell.edu/>.

—For Your Information—

For information on **Protected Culture Berry Production** – check out the [Tunnel Berries website](https://www.tunnelberries.org/) at: <https://www.tunnelberries.org/>. Additionally there is some really interesting information about the [impact of controlling the amount of UV radiation on pests](#) – A little light reading when you can't sleep!



Is your Farmers' Market, Farm Stand or Mobile Market authorized this season in the Farmers' Market Nutrition Program (FMNP)? You can find out by going to the website!

The list of Authorized Markets is organized by MARKET County. To view the list, please click [here](#). If you don't see your Market listed, contact us to see if we have received the Market's application.

A market or farm stand can apply to participate in the program using the following materials:

- Market Participation Agreements ([FMC-8](#)).
- Vendor List ([FMC-11](#)) or Supplier List ([FMC-10](#)) or Crop Plan ([FMC-12](#)). Read the Rules and Procedures for Markets ([FMC4](#)) to determine which document to submit.
- Written rules and regulations describing how the market is governed (farm stands managed by the grower are exempt).

Please contact the Department with any questions. **Nutrition Unit**, NYS Department of Agriculture and Markets, 10B Airline Drive, Albany, NY 12235 / Division Ag Development: (518) 457-7076 x1 / www.agriculture.ny.gov

Interested in Pollinators? A great article was recently featured in the Penn State Gazette, '[Who Pollinates Pennsylvania Blueberry Plants?](#)' describes the percentage pollination attributed to different species of pollinators – fascinating!

Calendar of Events

May 16th, 2018. - "Youth Required: Building a Healthy Food and Farming Community"

Scoville Hall, Room 206, at SUNY Adirondack, Bay Road, Queensbury, NY. 6 -7:30pm
The program features people in the early stages of their careers in a variety of agricultural sectors who will discuss career paths, opportunities and future trends in agriculture. **Free and open to the public.**

Participants include:

- Holly Rippon-Butler is land Access program director with the National Young Farmers Coalition. Rippon-Butler grew up on her family's third-generation dairy and beef farm in upstate New York, where she continues to farm with her parents.
- John-Paul Sliva, founder and farmer at Bard College Farm, is a Glens Falls native. Sliva has been instrumental in helping to start the Glens Falls Community Garden and the Red Hook Community Garden and also worked on the farm at the Farmhouse Restaurant in Lake George.
- Kate Ziehm, president of Morning Ag Clips, is a New Hampshire native who graduated in 1997 from Cornell University with a degree in Animal Science and a concentration in Business Management and Marketing. After graduation, Ziehm worked for Cargill as a dairy nutritionist. She currently lives in Greenwich, where she grows pumpkins and has a small herd of alpacas.
- Leah Hennessy of Moxie Ridge Farm and Creamery moved back to upstate New York in 2014 to start a goat farm after spending eight years in Los Angeles in a career that spanned Hollywood, wine and online media. In 2014, her growing love of agriculture and passion for small food systems brought her back to New York with the secret dream of starting a goat farm. The farm opened in Spring 2017.
- Michael Palulis of Echo Creek Farm in Salem grows Certified Organic vegetables that can be acquired at local farmers markets, wholesale or through the Harvest Share CSA Program. Palulis has worked extensively in the restaurant industry and has had his own restaurant, The Sushi Bar, at Stratton Mountain.
- Kimberly Feeney London will serve as moderator. London is an adjunct lecturer of business at SUNY Adirondack and will teach a new Experience Agriculture course this fall. London has been a farmer and farm-to-table restaurant pioneer in this area since 2006.

July 12, 2018 – FSMA Training

Cornell Cooperative Extension, Albany County – Voorheesville, NY. More information to follow. Questions? Call Laura McDermott, 518-746-2562

August 14, 15, 2018 NASGA Summer Tour

Watsonville, California

www.nasga.org

This year's summer tour will take place in northern California. We plan to visit progressive growers and marketers in the Watsonville area as well touring low elevation nurseries near Manteca and Turlock. Along the way we will take in other agriculture ventures. In California the options are endless.

November 6-9, 2018 NASGA European Tour

Amsterdam, Netherlands

www.nasga.org

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