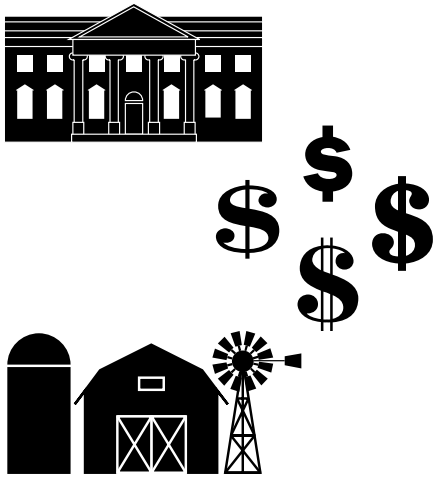
RUTGERS COOPERATIVE EXTENSION AT THE NEW JERSEY AGRICULTURAL EXPERIMENT STATION

PLANT & PEST ADVISORY

FRUIT EDITION $1.50 MAY 1, 2001



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FIRE in Bridgeton

Robert Belding, Ph.D., Specialist in Pomology

The new Food Industry Research and Extension (FIRE) Center is now functioning in Bridgeton, NJ thanks, in part, to NJAES Dean/Director of Research, Adesoji Adelaja. Soji gave an overview of the new FIRE Center at the Rutgers Agricultural Research and Extension Center on Monday, April 30th.

The FIRE Center opened this year to develop and implement new technology transfer to support the ailing food industry in New Jersey. The Center will work closely with the Rutgers Agricultural Research and Extension Center to link food industry opportunities with the needs of New Jersey farmers. In the works is a proposal to develop additional market outlets for New Jersey peaches, providing outlets for unprofitable or unutilized peaches. The intent is to increase the value and reduce the volume of fruit in the market at peak seasons. This will be good for all New Jersey growers.

Over the past few years, marketing fruit during peak season has been a major stumbling block for farm profitability. Answering the needs of New Jersey farmers, the FIRE Center is developing a marketing component available to private New Jersey interests as well as to commodity groups such as the New Jersey Peach Promotion Council and the New Jersey Apple Industry Council. Beyond providing economic opportunities to the Bridgeton area, (unemployment 9.3%), the Center will provide outlets for unprofitable or unutilized farm produce through 'value added' processing or improved marketing. One example of 'value added' processing is the use of New Jersey blueberries in making "Jersey Blues", an iced tea product that touts the health benefits of blueberries. The business that manufactures "Jersey Blues" was created using patented intellectual property rights that were developed at Rutgers University. Rutgers initiated the business and the ownership was sold to blueberry growers who will reap the potential benefits.

The FIRE Center is funded from a number of state and local programs in a team approach, and is planned to have the following components:

- Food Manufacturing Assistance and Technology Transfer Facility
- Business Management/Finance Program
- Marketing/International Trade Development Program
- Business Incubation Facilities

SEE FIRE ON PAGE 2

Provado 1.6F Section 18 for Stone Fruits

Peter W. Shearer, Ph.D., Specialist in Tree Fruit Entomology

Provado 1.6F was recently granted a Section 18 Emergency Use Permit in New Jersey to control **aphids**, including **green peach aphid** (GPA) and other aphid vectors of the **Plum Pox Virus** (PPV).

Provado is an excellent product to control insecticide-resistant populations of GPA. It can be applied after petal fall through 0 days of harvest. This product is very effective. A single application at 5-6 ounces/acre applied after petal-fall through shuck-off should control GPA until they leave the orchards in early summer. Additional sprays (a maximum of 4 applications and no more that 24 ounces of product per season) may be required if the New Jersey Department of Agriculture. implements a regulatory management plan to control aphid vectors of the Plum Pox Virus. This means if PPV is found in New Jersey, stone fruit growers may be required to spray stone fruit trees (with the possible exception of cherries) to help prevent the spread of this devastating disease. This product is considered toxic to bees so do not apply it until after petal-fall and do not allow it to drift onto flowering weeds. A current label must be in the possession of the applicator and, as always, read and follow the label. ❑

FIRE FROM PAGE 1

- Nutraceutical Product Development Program
- Workforce Development and Training

Economic returns of this program will multiply the investment both to New Jersey farmers, and to the people of the state. I want to thank Dean Adesoji Adelaja for his efforts and insights in initiating programs that directly benefit our industry and our state. ❑

Twilight Fruit Meeting

Tuesday, May 15, 2001 at 6:15 p.m.
Wm. Schober Sons, Inc.
Corner of Route 553 (Buck Road and Route 604 [Monroeville Rd.]), Monroeville, NJ

Sponsored by Rutgers Cooperative Extension of Gloucester County. This meeting will be conducted at Wm. Schober Sons, Inc., apple and peach farm owned and operated by Myron and Darlene Hurff and son, John Hurff. The Hurff Farm is 250 acres, of which 200 is in tree fruit in the southern edge of Gloucester and the northeastern edge of Salem County. The meeting will start at their packinghouse storage and retail marketing facility right along Buck Road. A walking tour of blocks around the buildings will be conducted with various stops to conduct the program listed below. A weed control demonstration in a block of Jerseyglo peaches will be evaluated. Blocks of Empire and Staymanred apples on MM111, Stark Spur Dixiered Delicious and Red Cort on MM111 will be evaluated. White nectarine and scab immune Apple Block will also be discussed.

6:15 p.m. Welcome and Introductory Remarks by Myron Hurff and Jerome L. Frecon Agricultural Agent, Rutgers Cooperative Extension

6:25 p.m. Peach and Apple Herbicide Demonstration and Discussion by either Dr Brad Majek or Jeff Hammerstedt, Rutgers Cooperative Extension

6:40 p.m. Demonstration of Integrated Pest Management Monitoring Techniques and Problems by Dave Schmitt, Tree Fruit IPM Program Associate and Dean Polk, Statewide Fruit IPM Agent, Rutgers Cooperative Extension

7:05 p.m. Insect Control Update and New Labels for Insect Control by Dr. Peter Shearer, Specialist in Fruit Entomology, Rutgers Cooperative Extension

7:20 p.m. Disease Management Update by Dr. Norman Lalancette, Specialist in Tree Fruit Pathology, Rutgers Cooperative Extension

7:35 p.m. Discussion of Scab Immune Apple Varieties and White Nectarines by Jerome L. Frecon

7:50 p.m. Apple and Peach Rootstocks and NC140 Testing Programs plus more information an Apple Thinning by Dr. Robert Belding, Specialist in Pomology, Rutgers Cooperative Extension

8:05 p.m. New Marketing Opportunities for Fruit Growers and Update on New Jersey Apple Industry by Mr. Ron Good, Agricultural Marketing Specialist, New Jersey Department of Agriculture

8:20 p.m. Worker Protection Standard Review and Aids by Jer ome L. Frecon

8:45 p.m. Adjourn

NJDEP pesticide applicator units will be available.

This location is not totally accessible to the physically impaired. Special arrangements can be made by calling Jerry Frecon at Rutgers Cooperative Extension of Gloucester County at 856- 307-6450, 1 day prior to the meeting.

Thoughts on Apple Thinning

Win Cowgill, Agricultural Agent

In Northern New Jersey, the first apple bloom began on Sunday, April 29 at the Rutgers Snyder Farm in Hunterdon County. Apple bloom is overlapping peach bloom this season with Redhavens in full bloom on Sunday the 29th.

It is time to think about chemical apple thinning. No single practice in apple production will have a greater impact on the bottom line than the utilization of plant growth regulators (PGR's) for chemical thinning.

Bloom and petal fall thinning are becoming increasingly popular with apple growers. Thinning early at these stages allows us to make one or two additional applications if needed.

Chemical thinning stabilizes annual crop production and improves size, color and quality of fruit. Research has shown that fruit size is directly related to how early fruits are thinned. Thinning that reduces the clustering of fruit will improve fruit color and quality. Adequate chemical thinning will promote or guarantee return bloom, and promote consistent annual production of crops.

No single thinning program is applicable to all orchards because of the many variables. Past experience combined with detailed records of materials, rates, crop performance, crop management practices, yield and weather conditions are your best guide.

It is essential to understand what thinning materials are available, how they work, and the different windows of opportunity that are available for their application. Knowing the cultivar response to these different materials will greatly increase the success of your thinning program. Many factors can influence the effectiveness of plant growth regulators used for chemical thinning of apples. Below are some of the factors followed by a discussion of timing windows for application, the materials available and some general recommendations.

Climatic conditions cannot be controlled but can greatly affect the strength of fruit set and the effectiveness of chemical thinning materials. Dr. Rich Marini, VPI reports that a combination of temperature, humidity, wind and elevation will all effect chemical activity. Thinners when applied during poor drying conditions will generally increase activity. Dew or light rain following treatment may re-suspend the chemical and cause additional uptake.

Cloudy conditions cause shading and reduce the carbohydrate levels in young fruits, causing poor fruit retention. Marini reports applying thinners just before, during, or after a three-day cloudy period, especially when temperatures are above 65°F would likely increase the thinning response.

Michigan information indicates that thinning activity is related to temperature with more activity when materials are applied in a warming trend.

What does the above mean to you the grower? It means that good records and daily observation are essential when working with chemical thinners. Rates, materials and timing must be adjusted based on the season's current weather conditions.

Windows of Application for Thinning Apples

Bloom Thinning Apple – Bloom thinning is a good idea in apple production theoretically, as the earlier we thin, the better fruit size that can be obtained. Thinning early lets us come back for repeat applications with other materials if necessary, at petal fall and later.

In New York, NAA is recommended as a bloom thinner for Empire and other smaller fruited cultivars. When fruit set conditions warrant a bloom application on these cultivars, an application of NAA at Bloom can do some limited thinning. New York recommends 10ppm. I would try on a trial basis 3-5 parts per million NAA. Additional thinning applications will be needed in most years. NAA does not have a memory and therefore repeat applications are not cumulative.

Petal Fall Window (PF up to 8MM size) - All labeled thinning materials are effective at this time including NAA, NAD, ACCELL, Vydate and Sevin. Thinning early gives us greater fruit size, but usually at PF we do not take enough fruit off and must come back again with another application.

Early Fruit Set Window (8mm up to 12mm) - This is the traditional time for chemically thinning apples. All labeled thinning materials are effective at this time including NAA, NAD, ACCELL, Vydate, Sevin and ethephon. Slightly higher rates are needed on some materials; combination treatments have generally been more effective than single materials.

Late Fruit Set Window (15-20MM) - All labeled thinning materials are effective at this time including NAA, ACCELL, Vydate, Sevin and ethephon. The high rates of these materials must be used at this timing along with combinations of materials.

Closing Window (20MM+) - During this time of thinning the receptivity and response to thinners is declining. The use of combinations is necessary at this time. Ethephon 2 or Ethrel has been effective on some varieties at this timing. Dr. Ross Byers of VPI has done extensive work on using Ethrel for apple thinning.

Some Notes and Suggestions for Apple Thinning in 2001

- In general early applications of good rates thin aggressively. Moderate and mild thinning occurs at lower rates and/or at later timings.
- Rates of individual thinners and/or combinations should be based on past grower experience with individual cultivars in each fruit block or use

See Apple Thinning on page 4

APPLE THINNING FROM PAGE 3

variety and rate guidelines as outlined in our *1998 NJ Commercial Tree Fruit Manual*.

New Thoughts on NAA: many researchers have been indicating that while NAA thins fruit and helps with return bloom, it does not increase fruit size. In addition, in up to a third of the cases, NAA may reduce fruit size. Hence, the move toward Sevin XLR or Sevin and NAA combinations. Most of us are recommending against NAA for spur red delicious or at the very least only in a combination, and not more than 5ppm on Reds.

The NAA base rate depends on the variety, the harder to thin cultivars require the higher NAA concentration. The exception would be Spur Delicious. I would not use more than 5ppm NAA on Reds and I would use it only in combination with Sevin or Vydate at Petal Fall.

	NAA
Rate	**Level of thinning by cultivar**
10PPM	Easy to Thin
15PPM	Intermediate to thin
20ppm	Difficult to thin

You can also use 3-5 ppm NAA at petal fall and follow up at 8mm with 1qt of Sevin/A if needed.

All the above petal fall treatments allow for you to come back with a second application of the appropriate material at 8-10MM. Also a third application is possible with the use of Ethephon in the late fruit set window of 12-18mm. Ethephon can be used up to 25mm as a last resort.

A second approach might be to try using Sevin XLR at petal fall at 1 qt/A. It can be used alone or combined with NAA. Combined with NAA it is more aggressive. Varieties like Gala and Fuji are hard to thin and will benefit from the multiple application approach. Since Gala, Fuji, Golden Delicious and others are hard to size and thin, be aggressive if bloom warrants at petal fall.

For Gala, time sprays based on bloom on the older wood, not one-year-old wood. Time the rate by sizing the fruit on the older wood, i.e. 5-8mm for sprays later than petal fall. The goal is to thin off the bloom on the one year wood, the fruit is always smaller on one year wood on Gala.

Golden Delicious: consider the use of Ethephon 2 (21.7%) at 1/2 pint per 100 gallons plus 10ppm of NAA. Ethephon is labeled for Goldens. The label calls for an increased rate for spur Goldens. One north Jersey grower has used this combination on Goldens for over 15 years with success.

Fuji can be thinned successfully at petal fall according to reports from British Columbia, Canada. According to a report published in *Compact Fruit Tree*, Vol. 31 No. 1, April 98, Dr. Norm Looney conducted two sets of experiments in 1995 and 1997 with Fuji. Carbaryl (Sevin) proved to be an effective thinner of Fuji at petal fall. The addition of ACCELL enhanced the thinning effect and appeared to improve return bloom. This report can be viewed online at the IDFTA website, http://wwwIDFTA.com.

For Jersey Reds try 5ppm NAA plus Sevin XLR at 1 quart/A. Again, this combination has been consistently successful in North Jersey.

As you can see there are a lot of ways to go. Try some bloom and petal fall sprays, use multiple applications. Keep detailed records including weather two days before and two days after application. Always be sure to leave some check trees. Experiment slowly on portions of your acreage by cultivar.

If you still have too much fruit after petal fall and 8-10 MM applications, consider the use of Ethephon or Ethephon combinations.

A Review of Chemical Choice for Apple Thinning

NAA- is one of our oldest and most reliable thinners. It can be applied from petal fall to 20MM fruit size at rates of 5ppm to 20ppm per 100 gallons. It is especially effective in helping to return bloom.

Note of Caution: on red delicious do not apply concentrations more than 5ppm to avoid pygmy fruits. Do not use NAA or NAD on any trees that are to be treated with Accell, Promalin or Provide this year! Pygmy fruits may result.

NAD- is a mild form of NAA and is used at PF and early fruit set only! It is very affective on summer varieties such as Paulared, Jerseymac, Macintosh cultivars and Macoun. It is usually applied at 40-50 ppm per 100 gallons at PF-5MM. (See above caution.)

Accell- is a newer material that works as a mild thinner but has the ability to increase fruit size over and above the thinning response. It is valuable for use on small-fruited cultivars like Empire. It is best applied PF to 8MM and used at the maximum rate which is 30 gms/A. It is best used in combination with other materials for effective thinning. Sevin or Vydate are our two choices for combination.

Note of Caution: Do not use Accell on any trees treated with NAA or NAD this year, they are not compatible. Avoid drift on threes that have been treated with either NAA or NAD. Avoid the combination of Accell plus Sevin on Gala Strains. It appears that on Gala this combination is a very aggressive treatment and under the right weather conditions (cloudy days following application) can cause over thinning.

Sevin is a carbamate insecticide that is a standard thinner for apples. *Only Sevin XLR-Plus* should be used. It has been reported to be safer on bees and to have less toxicity to mite predators. It has the same concentration of active ingredient as Sevin 50W and

SEE CHOICES ON PAGE 5

Fruit IPM

Dean Polk, Agricultural Agent

Peach

✔ **Oriental Fruit Moth (OFM):** OFM trap counts average over 60 males per trap in peaches and double that number in apples. We are close to a peak flight for this insect. The first insecticide applications for OFM should have been applied by Monday in southern counties, and by the middle of the week in central counties. Due to cooler weather and lack of egg laying the biofix was reset in southern counties for 4/21. However, that made only about a 1 day difference in the target date for spraying. Please see last newsletter for treatment options.

✔ **Catfacing Insects (CFI):** While populations are low, growers should remember that these insects overwinter as adults in orchard weeds and nearby hedgerows and woods. Adults can move into trees during warmer weather and start feeding on flower parts and young fruit. Injury that is sustained prior to shuck off usually results in aborted/dropped flowers and fruit. Injury after that time will result in deeply scarred fruit. Petal fall sprays should always include an insecticide that is effective for true bugs. These include Guthion, Imidan, Lannate and the pyrethroids, with the OP's being the preferred option. During the past few days some activity was seen in the trees. Some plum curculio activity was also seen. Remember, do not use Lannate to target PC.

✔ **Green Peach Aphids (GPA):** Aphid populations vary greatly from farm to farm. However, one farm in Gloucester County had GPA in over 90% of the trees sampled with a beating tray. Treatments should be initiated any time significant numbers like this are seen in beating tray samples. Treatment options include Provado, Lannate and Thiodan, in that preferred order.

✔ **Thrips (flower thrips - FT and western flower thrips - WFT):** Thrips are active on developing fruit at this time. Dry weather can also exacerbate thrips problems, especially on nectarines. If a thrips material was not applied at petal fall on nectarines, then an application should now be made. If using Spintor, remember that this cannot be used alone, since it has very little effect on other arthropod pests that are present in peaches and nectarines at this time of year.

Apple

✔ **Arthropods:** Mites have hatched, leafminers continue to lay eggs, leafroller larvae are present at low numbers, and European apple sawfly and curculio will need to be controlled at petal fall. However, the one active pest that needs immediate attention on some farms is apple scab.

✔ **Apple Scab:** Scab lesions were seen in one commercial block at the same time they were seen in an abandoned block. These means that this orchard was not protected for the infection periods we had from 4/8 through 4/11. While this was from 1/4"G to early tight cluster, there was still significant inoculum present. Last year we saw that 2 applications of Flint or Sovran 10 days apart gave very good suppression.

Pear

✔ **Pear Psylla:** Most growers with pears have treated this insect by this time. Where treatment has not been initiated, the insects are

See Fruit IPM on page 6

Choices from page 4

thins the same way. Sevin is a mild thinner at the full rate 1 quart/acre. It can be used at PF till 20 mm and is best used in combination with other thinners (NAA or Accell) with most varieties. When used alone it may underthin some cultivars in New Jersey. (Do not use Vydate in combination with Sevin.

Vydate L is a carbamate insecticide that works the same way as Sevin. Vydate has had a state label in New Jersey since 1996 based on our research trials in North Jersey. It too is a mild thinner like Sevin and should be used in combination with another thinner for best results (NAA or Accell). At 1-2 pints per 100 gallons it should be applied dilute between PF/5MM and 20MM. Up to two applications can be made per season. Vydate may be less toxic to mite predators than Sevin and at the 1-2 pint/100 rate has activity on spotted tentiform leafminers if present and white apple leafhopper at the thinning timing.

Ethephon 2 or Ethrel are both labeled for apple thinning. Manufactured by Microflow and Rhone-Poulenc respectively, their labels are slightly different. Ethephon is used extensively throughout Europe to help bring non-bearing apples into production as well. This use is outlined on both labels. More on the use of Ethrel in future Plant and Pest Advisory newsletters.

Refer to the *2001 NJ Commercial Tree Fruit Production Guide* for a complete program or refer to the online edition of the Fruit Guide available online at: http://www.rce. rutgers.edu/pubs/ag/commercial/treefruitguide/index.html.

Contact your area fruit agent for specific apple thinning suggestions. ❑

FRUIT IPM FROM PAGE 5

mostly in the hardshell stage in southern counties, but in softshell stages further north. It is far better to treat the younger softshell stage. Provado and Agrimek have given good results. Remember that Agrimek must be used with spray oil (1 gal/A) or a silicone based penetrant.

Blueberry

✔ **Leafrollers and Spanworms:** While larvae are present, no significant numbers have been seen that require treatment. Redbanded leafroller adults are close to a flight peak, so additional larvae should be present over the next couple of weeks.

✔ **Cranberry Weevil (Blueberry Blossom Weevil):** Although weevils are still active, no additional damage has been noted since late last week.

✔ **Aphids:** A few aphids are present, but levels are low and no significant populations have been noted.

Calendar of Events

May 2, 2001, 1:00–4:00 p.m. - NJQWA Educational Session – Vineyard Pest Management Workshop, Rutgers Fruit Research & Extension Center, Cream Ridge, NJ. Contact: Fruit Research & Extension Center at 609-758-7311, X10.

May 15, 2001, 6:15 PM - Twilight Fruit Meeting, Wm. Schober Sons Farm, Rt. 553 Buck Rd. Monroeville, NJ. Contact: Jerry Frecon at Rutgers Cooperative Extension of Gloucester County at 856-307-6450.

June 5, 2001, 6:15 PM - Twilight Grape And Enology Meeting, Heritage Tree Fruit LLC. Rt. 609 Richwood-Elmer Rd., Richwood, NJ. Contact: Jerry Frecon at Rutgers Cooperative Extension of Gloucester Co. at 856-307-6450.

June 26, 2001, 6:15 PM - Twilight Fruit Research Meeting, Rutgers Agricultural Research and Extension Center, Northville Rd., Upper Deerfield Township, Bridgeton, NJ. Contact: Jerry Frecon at Rutgers Cooperative Extension of Gloucester Co. (Registration required) This meeting will be part of the State Horticultural Association of Pennsylvania Fruit Tour of southern NJ.

Insect Trap Counts

Tree Fruit - Southern Counties

Week Ending	AM	CM	LPTB	OFM	PTB	STLM	TABM-A	TABM-P	OFM-A
1-Apr				0.00					
8-Apr				0.00					
13-Apr				0.20		725.00			6.00
19-Apr				2.02		1040.00			43.00
27-Apr				63.82		1466.67	0.00	0.00	132.00

At. Co. Blueberry Trap Averages

WEEK END	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
8-Apr		133.00				
15-Apr		197.50				
22-Apr		195.75				
29-Apr		215.60				

Burl. Co. Blueberry Trap Averages

WEEK END	CBFW	RBLR	OBLR	SNLH	OR BEET	BBM
8-Apr		—				
15-Apr		—				
22-Apr		25.00				
29-Apr		107.00				

Springtime Tips for Organic Blueberry Production

Bill Sciarappa, Ph.D., Agricultural Agent

Reprinted from the Organic Farming edition of the Plant & Pest Advisory, April 27, 2001.

Native Americans made extensive use of wild blueberry. The culture of highbush blueberry began in the Whitesbog area of New Jersey less than 100 years ago with selections from the wild by Elizabeth White, Frederick Coville and George Darrow. Some of these selected varieties are with us today and they tend to possess greater inherent resistance to various pests than the other fruit species like apple and peach that we culture today. Varietal resistance gives us a good start in undertaking the challenge of growing organic highbush blueberry in the northeast. Nonetheless, there are some significant pests that remain.

Some members of Rutgers Cooperative Extension and the Blueberry Working Group at the Rutgers' Philip E. Marucci Center for Blueberry and Cranberry Research and Extension in Chatsworth are currently trying to provide more science-based knowledge in this area of organic and cultural pest management. Understanding that this return to somewhat successful past practices is still a "work in progress", here are a few tips for you to consider in your organic production practices.

1. Rogue out diseased plants and prune old cane for **Putnam scale** during the dormant stage of the blueberry crop. Organically approved oils and lime sulfur are also good at dormancy time for scale suppression. If you missed it this season, plan for the next.

2. **Mummy berry** disease inoculum is greatly reduced when the over-wintering stage – "mummies" - are buried 1- 4"under the soil through tillage. These mummy caps look like miniature mushrooms and can be observed now on top of the soil. Also, well-drained soils can reduce mummy survival while wet sites provide an optimum environ. Utilize both methods of cultural control now.

3. **Anthracnose** and **Botrytis** disease inoculum and some other fungae can be reduced through good field sanitation practices like removing all pruned twigs and old dead leaves from the field (where these fungal pathogens survive over the winter). Rutgers Cooperative Extension is currently testing hydrogen dioxide for these and other pathogens which have recently been OMRI approved.

4. Weed management in the row can be provided with the use of mulches like leaves, pine needles, straw, hay, sawdust and bark , especially on more upland or mineral soils. Watch your carbon to nitrogen ratio and consider composted materials. Plasticulture with trickle irrigation has been successful when starting new fields. Take notes as to your problem weed species.

5. Weedy breakthroughs can be handled with careful use of non-selective, organic herbicides and mechanical removal by hand hoeing or rotary hoeing. Some rotary hoe brands have trip mechanisms that guide the cutting discs between the blueberry bushes with little damage. Shop around and talk to other growers in your area.

6. Scout and monitor insect invaders. Learn to identify **spanworms**, **leafrollers**, **gypsy moths** and **cutworms** during bloom. Bt based products are best used if pest populations exceed the economic thresholds you choose to bear. If your decision is to spray, spray early. Hopefully, your judicious use of insecticides will conserve beneficial predators and parasites that will biologically control a major pest in conventional fields – **aphids**. Post bloom and later in the season, use pheromone traps for **cranberry fruitworm** and sticky, attractant traps for **blueberry maggot** (a legless, larval fly). Studies with various mass trapping systems against this key fly pest as an adult are underway as is the search for effective organic insecticides. Frequent picking will help lower fruit loss.

7. Build your soil with organic amendments but be sure to test both your soil pH levels and your foliar nutrient levels during the season. Insuring proper fertility allows the best growth of your blueberry crop and maximizes the inherent pest resistance of your particular variety.

Please remember that even if you are successful with the 7 practices mentioned above, that organic highbush blueberry production is still a "work in progress". Be sure to contact your county agent for details and offer your insights as well to help us all in developing more successful and sustainable practices. Finally, plan on comparing notes at our Twilight Growers Meeting co-sponsored by Rutgers Cooperative Extension and NJ - NOFA (Northeast Organic Farming Association of NJ) hosted by Emery's Berry Patch with organic grower Mike Marchese. That's tentatively planned for the evening of July 18 in New Egypt. Hope to see you then. ❑

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