Fruit IPM

Dean Polk, Fruit IPM Agent and David Schmitt, Eugene Rizio and Atanas Atanassov, Ph.D., Program Associates, Tree Fruit IPM

Peach
✔ Brown Rot: Some blossoms are in the pink stage, with blossoms opening as the week goes on. Blossom infections from the brown rot fungus can occur whenever pistils are exposed and favorable infection conditions exist. Infections can occur during any wetting period when temperatures are between 41 and 86°F. However optimum conditions for infection occur with wetting and temperatures in the mid 70’s. During long wetting periods (several days or more) blossoms can be infected regardless of temperature. Generally infections that occur when conditions are sub-optimal are less severe. Blossoms and fruitlets will remain susceptible until the pistil desiccates (sometime between petal fall and shuck split).

✔ Oriental Fruit Moth: Traps are up, but no OFM adults have been caught. Therefore, a biofix point for OFM was not been as of this date. The first insecticides for first generation Oriental Fruit Moth control should be applied at 150-175 degree days after biofix. This timing generally coincides with late petal fall and early shuck split in peaches.

✔ Green Peach Aphid: GPA colonies begin forming sometime during bloom. Examine trees for the presence of colonies from pink to shuck split. Count the number of colonies on ten trees and use a treatment threshold of 2 colonies/tree at petal fall for peach, and 1 colony/tree for nectarine. See the production guide for recommended materials and rates.

Pear
✔ Pear Psylla: If using Esteem or Centaur for psylla control, make one application delayed dormant through popcorn, or two applications delayed dormant through petal fall. In lieu of oil, Surround may also be applied starting at swollen bud. Additional applications made at green cluster and petal fall will help suppress egg laying. If using oil, apply a second application combined with a pyrethroid at green cluster.

✔ Pear Diseases: Include effective materials such as Ziram and EBDC formulations for Fabrea leaf spot beginning at the cluster bud stage. See the production guide for materials and rates.

Apple
✔ Apple Scab: Orchards that had scab last year should start a scab control program using very effective materials at ½” green. Orchards that were clean last fall can begin using very effective materials at tight cluster. In southern counties, scab, powdery mildew, and cedar apple rust are diseases of concern starting at tight cluster. Rebecca Magron in Hunterdon County has already found mature ascospores (the overwintering primary scab inoculum). Therefore, primary apple scab infections can take place with any significant wetting period over the next several
weeks and into late May. Trees should have already been covered with effective fungicides. See the accompanying article on apple scab by Dave Rosenberger and Kerik Cox.

✔ Rosy Apple Aphid: Esteem and Centaur should be applied for San Jose scale and rosy apple aphid control no later than ½" green. Vydate @ 2.5-3 pt/A, Assail, Actara, and Calypso may be applied up to prepink. Assail will improve European apple sawfly control when applied at pink. However, we generally try to avoid neonicotinoid materials close to bloom because of bee safety concerns. Neonics and pyrethroids applied just prior to bloom will suppress or control leafminers if those populations are present. Refer to the production guide for rates.

✔ European Red Mite; San Jose Scale: Oil applications for mite suppression and scale control should start at ½" green. Apply 4-6 gals oil/acre at ½" green to tight cluster; 2-3 gals/acre at tight cluster to pink. An additional oil application at 1-1.5 gals/ac may be made at pink.

Label Changes
(Adapted from Art Agnello, Scaffolds)

Guthion and azinphosmethyl - This is the last season for the use of of Guthion/azinphosmethyl products, in accordance with the scheduled phase-out guidelines previously established by EPA. In both apples and pears, a total of 3 lb formulated product/A is allowed in 2012, the same as in 2011. In cherries, it's 1.5 lb/A for 2012. Recall that there is a 60–ft buffer required from permanent bodies of water and occupied buildings, and a PHI in Pick-Your-Own operations scaled from 33–44 days, according to use rate. Read your labels carefully. (These products had been previously excluded from use on peaches, nectarines, plums, prunes, and apricots.)

Admire Pro - This is the Bayer formulation of all their imidacloprid materials for fruit (and veg use). This step now completes Bayer CropScience's conversion of all Provado uses to Admire Pro. There is still some Provado in the channels of trade and that label is still legal.

Isomate DWB - (Pacific Biocontrol/CBC America). This is a new dispenser and formulation for the control of dogwood borer in fruit crops (mostly apples). Use of this product has been proven effective for dogwood borer control in NY trials.

Scouting Calendar
The following table is intended as an aid for orchard scouting. It should not be used to time pesticide applications. Median dates for pest events and crop phenology are displayed. These dates are compiled from observations made in Gloucester County. Events in northern New Jersey should occur 7-10 days later.

Critical Spring Temperatures for Fruit Bud Development Stages
Temperatures at which 10% and 90% of normal buds will be killed.

<table>
<thead>
<tr>
<th>Apples</th>
<th>Silver Tip</th>
<th>Green Tip</th>
<th>2 inch Green</th>
<th>Tight Cluster</th>
<th>First Pink</th>
<th>Full Pink</th>
<th>First Bloom</th>
<th>Full Bloom</th>
<th>Post Bloom</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% kill</td>
<td>15</td>
<td>18</td>
<td>23</td>
<td>27</td>
<td>22</td>
<td>24</td>
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<tr>
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<td>25</td>
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</table>

<table>
<thead>
<tr>
<th>Pears</th>
<th>Bud</th>
<th>Burst</th>
<th>Tight Cluster</th>
<th>First White</th>
<th>Full White</th>
<th>First Bloom</th>
<th>Full Bloom</th>
<th>Post Bloom</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% kill</td>
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<td>26</td>
<td>28</td>
<td>28</td>
<td>29</td>
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<table>
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<tr>
<th>Apricots</th>
<th>Bud</th>
<th>Burst</th>
<th>Red Tip</th>
<th>First White</th>
<th>First Bloom</th>
<th>Full Bloom</th>
<th>In the Shuck</th>
<th>Green Fruit</th>
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<tbody>
<tr>
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<td>22</td>
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<td>27</td>
<td>28</td>
<td>28</td>
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<tr>
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<td>20</td>
<td>22</td>
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<th>First White</th>
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<th>Open Cluster</th>
<th>First White</th>
<th>Full Bloom</th>
<th>Post Bloom</th>
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</thead>
<tbody>
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<td>22</td>
<td>25</td>
<td>27</td>
<td>28</td>
<td>28</td>
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<td>22</td>
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<td>27</td>
<td>28</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Tart Cherries</th>
<th>Bud</th>
<th>Side Green</th>
<th>Tight Cluster</th>
<th>Open Cluster</th>
<th>First White</th>
<th>Full Bloom</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% kill</td>
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<td>24</td>
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<td>28</td>
<td>28</td>
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<td>24</td>
<td>26</td>
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Source: Plant Industry Bureau, New Jersey Department of Agriculture; Submitted by Jerry Frecon, Agricultural Agent.
Management of Peach Blossom Blight
Norman Lalancette, Ph.D., Specialist in Tree Fruit Pathology

Apricots and some plum cultivars are currently in full bloom. Many of our peach and nectarine cultivars are in pink or at pop-corn stage, and some cultivars already have their first flowers open. Depending on the cultivar, this bloom is about 3 weeks ahead of normal. Regardless of the timing, the opening of flower petals is an important event from the standpoint of managing blossom blight.

Flower opening exposes the inner susceptible flower parts, the anthers and pistil, to infection by the brown rot pathogen Monilinia fructicola. This fungus has overwintered on mummies and fruit peduncles (stems) and is now producing inoculum (spores). Spores are transported by wind or rain from these overwintering structures to the open flowers. Although infection from dew is possible following wind transport, rainfall events are most important for both infection of the flowers as well as inoculum production.

Since flowers of all peach and nectarine cultivars are susceptible, growers must provide fungicide protection during this period. Generally, a series of sprays at pink (<5-10% bloom), full bloom (75-100% bloom), and petal fall (75-100% petal fall) are needed. These successive sprays protect the susceptible inner flower parts as they open.

Typical incidence levels of blossom blight canker on non-treated trees in our research trials ranges from 5 to 20% shoots infected. This relatively low incidence makes it difficult to locate cankers while scouting. Furthermore, blight rarely occurs at a level which causes yield loss, primarily due to the large number of fruit set by peaches. So, the tendency might be to discount the importance of bloom sprays, but this thinking could not be further from the truth. A mere 5% canker incidence on a moderate size tree with 300 shoots results in 15 cankers, each capable of producing 36,000 spores after each rainfall/high humidity period. These cankers are an important inoculum source for initiating the brown rot epidemic on fruit. Need we say more?

The recommended fungicides for blossom blight applications consist of the protectants Captan or chlorothalonil (Bravo, Echo, etc.), the site-specific fungicides Vangard or Rovral, or some combination of these two fungicide types. Topsis-M or Topsis-M + Captan could also be used for one of the applications. If peach scab and/or rusty spot are problematic in a block, then Gem or Abound at the highest label rate should be used for the petal fall spray; these materials will control all three diseases at this timing. As a fungicide resistance management strategy, it is highly recommended that DMIs not be used during bloom, but be “saved” for preharvest brown rot control. The DMIs, belonging to FRAC group 3, are listed in Table 6.4 on p. 88 of the 2012 NJ Commercial Tree Fruit Production Guide.

A number of new fungicides have been registered or are currently in the process of being registered for use on tree fruit in 2012. The properties and use of these materials will be discussed at upcoming Evening Tree Fruit Meetings.

**References:**

**Sporulating blossom blight canker on Autumn glo peach**
Managing Apple Scab in High Inoculum Orchards
Dave Rosenberger and Kerik Cox, Plant Pathology, Highland and Geneva, NYSAES, Cornell

In apple orchards where scab was poorly controlled last fall, growers will need to compensate this spring for what we might call the five curses of high-inoculum, as outlined below:

1. Expect more ascospores. Orchards with a lot of scabby leaves in fall are indeed “high-inoculum”.
2. Expect more ascospores at green-tip: This is a logical corollary to the previous item. However, it is noted separately because the spores that are discharged early in the season pose the greatest risk for generating economic losses in commercial orchards. Thus, having more ascospores at green tip escalates the risk of getting green-tip infections that will produce conidia before petal fall, which in turn ratchets up the risk of fruit scab.
3. Conidia may overwinter in buds. Thus, conidia in buds can be expected to have much greater infection efficiency than ascospores since the majority of ascospores released at green tip will never find tissue where they can cause infections. Incidentally, viable spores have been found inside buds on at least several occasions in New York.
4. Expect more infections from marginal infection periods: In low-inoculum orchards, relatively small numbers of ascospores are released during any given wetting period, and only a few of those released will be deposited on host tissue and complete the infection process in the minimum time listed for infections in the revised Mill’s table. As the duration of wetting increases, more and more spores can be deposited on host tissues, so the severity of infection periods increases with time at any given temperature. In high-inoculum orchards, the total spore contingent is much higher (perhaps 7000 times higher as pointed out in #1 above), so many more spores will succeed in completing the infection process during short or “marginal” infection periods.
5. Fungicides will seem less effective in high inoculum orchards.

The only options for changing the odds are to either improve fungicide efficacy via higher rates, shorter intervals, and better spray coverage, or to implement inoculum reduction practices in the high-inoculum orchards.

Considering all of the above, the three early-season strategies outlined below are logical options for managing scab in high-inoculum orchards:

First, apply one or more inoculum-reduction strategies to reduce the potential ascospore load. Four proven options for reducing ascosporic inoculum include:

(A) treating orchards in either late fall or early spring by applying 40 lb/A of urea dissolved in water and sprayed over the orchard floor
(B) flail chopping leaf litter to speed leaf degradation
(C) applying dolomitic lime to the orchard floor at the rate of 2.25 tons/A (only if soil test calls for it, RARELY apply dolomitic lime in North Jersey Orchards.
(D) raking or vacuuming the leaf litter and removing it from the orchard.

The use of dolomitic lime has only been tested for lime applied in late fall or winter, so its effectiveness following springtime applications is uncertain. Removing leaf litter from the orchard is practical only for small homeowner orchards unless one invests in specialized raking/vacuuming equipment that can cover large acreages efficiently.

We have received several questions recently about the efficacy of lime-sulfur for suppressing ascospore production. Lime sulfur sprays were evaluated early in the 20th century, and three applications in spring partially suppressed ascospore production. However, later researchers abandoned lime-sulfur in favor of urea, which generally proved more effective.

Second, begin fungicide applications at silver tip or green tip. Having a fungicide in place before the first infection period after bud break is absolutely essential, especially in orchards where the DMI fungicides are no longer effective. As noted above, failure to control early infections vastly increases the risks of economic losses.

Third, use higher rates of fungicides or fungicide combinations: In low-inoculum orchards, the scab risk at green tip can be adequately addressed with a copper spray (as applied to suppress fire blight) or by using mancozeb at 3 lb/A. Either of these options will provide about seven days of protection against apple scab. Even in low inoculum orchards, however, we know that higher rates of fungicide are needed as we approach tight cluster because 3 lb/A of mancozeb used alone is not adequate to control scab during the period of peak ascospore discharge between tight cluster and petal fall. In high-inoculum orchards, high numbers of ascospores may be released at green tip. Therefore, we suggest that high inoculum orchards should be treated with a combination of either mancozeb at 3 lb/A plus copper, or mancozeb at 3 lb/A plus Syllit at 1.5 pt/A. (Note that Syllit and copper are NOT compatible!) Syllit is the liquid formulation of dodine. The new label no longer contains the restriction against using apple pomace from Syllit-treated trees for cattle feed.

For many years, dodine provided excellent scab control when applied in early-season sprays because of its excellent retention and redistribution characteristics, and also because it provides 48 hr of post-infection activity. Thus, it is an ideal mixing partner for mancozeb in green tip and half-inch green sprays except where

See Apple Scab on page 5
Apogee® for Fireblight Prevention and Growth Control in Apple Production
Win Cowgill, Agricultural Agent

The weather has moved our growing season earlier by one full month. We were pink on peaches at Rutgers Snyder Farm in Hunterdon on Saturday and Green Tip on McIntosh Apple.

One of the main reasons for using Apogee is for the prevention of the shoot blight phase of fireblight on high value apple cultivars. Consider Apogee use on high value fireblight susceptible cultivars especially when they are grown on fireblight susceptible rootstocks. However, you have to begin applications early, from king bloom to petal fall (1-3 inches of growth). Note: make sure to read our NJ suggestions at the end of this article.

Controlling the Shoot-blight Phase of Fireblight

Controlling vegetative growth with Apogee will reduce the incidence and severity of fireblight infection (Erwinia amylovora) of shoots and leaves. Apogee does not have direct antibiotic activity against the fireblight bacteria, but Apogee can decrease host susceptibility.

Blossom Blight

Apogee does not control blossom blight. However, Apogee can be combined with Strep materials when used at bloom for blossom blight control according to Dr. Keith Yoder, Extension Fruit Pathologist at VPI. They do not interact. If conditions are favorable for blossom blight (rain and 65°F plus temperatures) when you make your first Apogee treatment add Strep, if you have late bloom you may need to add Strep to your second Apogee application as well, according to Dr. Yoder.

For maximum reduction in fireblight susceptibility, Apogee should be applied at least 10 days before the occurrence of weather conditions favorable for shoot and leaf infections.

Apogee reduces the susceptibility of apple shoot tips to fireblight and should be used as one component of a comprehensive IPM strategy for control of fireblight. This decrease in susceptibility will not become effective until about 10 days after application. Once you see shoot blight it is too late to use Apogee.

Tree-Row Volume (TRV): Using Apogee as part of a management program significantly reduces the tree row volume. Spray guides typically recommend using the tree row volume to determine the correct pesticide application rates.

Timing and rates are important considerations with Apogee application (as with any other pesticide or PGR!) First, you need to consider the amount of vigor in your orchard – high vigor will require higher rates to do the job. For timing, the most important application is the first – it must be made when terminals are 1-3 inches long, no later (bloom – petal fall). Subsequent applications are made at 7- to 14-day intervals depending on the vigor of the orchard. For moderate vigor orchards in New Jersey, 3 or 4 more applications are sufficient, whereas in high vigor or ‘crop loss’ orchards, up to 4 to 6 or more applications may be necessary to adequately control growth.

NJ Experience with Apogee

I have used Apogee at the Rutgers Snyder Farm, Hunterdon County, on selected blocks for the past 10 years. We have had good growth control and minimal fireblight outbreaks on the blocks it was used. See Apogee on page 6

Edited by Win Cowgill; submitted by Dave Schmitt.
utilized. We have been utilizing a very low the 3-4oz rate/100 gal x 2 applications at TRV concentrated at 1.5x with good results and then increase to the 8 ounce rate/100 for the 3 and 4th application. When this protocol is followed there have been minimal fireblight strikes. In 2010 I increased the last 2 applications to 6 ounces/100 to gain longer control. Growers in southern NJ and growers with non-dwarf trees may need 5 applications.

**Apogee may be an effective tool to help you reduce production costs,** as you can reduce pruning bills, and increase pack out via better color and pest control. But, you must get effective vegetative growth control to realize these benefits. On selected systems like tall spindle it can be applied selectively to the tops of the trees to maintain growth control.

**Important Notes:** Careful application and analysis of block-by-block cost/benefit must be followed to achieve the desired results with Apogee.

**Do not use Apogee on Empire apples:** Apogee can cause fruit corking and cracking when applied to Empire. The occurrence of this injury is sporadic, and the circumstances that lead to expression of the injury are not known. However, it has occurred across several years in Michigan, New York, Ohio, and Pennsylvania and NJ. Apogee has been applied to many commercially important varieties, but Empire is the only variety identified as being sensitive to Apogee.

**Basics of Apogee Use**

*Apogee*® (BASF Corp.) is a PGR (Plant Growth Regulator) for fireblight suppression and vegetative growth control of apples. The chemical ingredient, prohexadione calcium, blocks the synthesis of active gibberellins, the plant hormone that in part regulates shoot growth. Vegetative growth suppression with Apogee typically lasts for 2-5 weeks per application during the current growing season. Apogee does not affect vegetative growth the following year.

Apogee provides many beneficial effects including:

- Reduced incidence and severity of fireblight of shoots (shoot blight). This decrease in susceptibility will not become effective until about 10 days after application.
- Vegetative growth control
- Reduced need for summer and dormant pruning
- Improved light penetration into the tree canopy
- Improved color of red varieties because of better light penetration into the canopy

**Use a Water Conditioner**

The loss of effectiveness caused by hard water is due to the calcium it contains. It follows that one should not add calcium fertilizer to the spray tank when applying Apogee. Research conducted by Ross Byers in Virginia shows that tank-mixing boron with Apogee causes a similar loss of effectiveness. To clear up any confusion, hard water does not mean the same thing as high-pH water. Dr. Byers’ research shows no benefit from adjusting the pH of the spray tank before applying Apogee. It’s the calcium in the calcium carbonate that creates a problem with Apogee, not the carbonate.

If your water is high in calcium carbonate the water may need to be conditioned. Add one pound of ammonium sulfate (AMS) for every pound of Apogee. Use high quality, spray-grade AMS to avoid plugging nozzles. Research at the Rutgers Snyder Farm in 2000 also indicated the water conditioning products Quest and Choice could also be used effectively to modify the water hardness and improve the efficacy of Apogee. In our trial at the Snyder Farm the addition of water conditioners AMS, Choice and Quest significantly enhanced the effectiveness of *Apogee*™ in reducing total shoot growth. The efficacy of *Apogee*™ can be greatly enhanced with the addition of water conditioning agents in high calcium hardness water conditions. This result is important to growers who wish to use lower rates of Apogee to reduce undesirable effects on fruit set, or simply to save money.

In addition to conditioning hard water, AMS previously has been shown to increase the uptake of some chemicals, and this may explain why it improved the performance of Apogee in our study.

**NJ Suggestions for 2012 Apogee Use**

**For Just Fireblight Shoot Phase Control (younger trees)** - one to two applications of at 6-12 ounces per acre. With young trees we want them to fill in but want the apogee effect of reducing shoot blight potential. Read table 3 on the current Apogee label. The rate can be reduced according to Dr. Yoder if the multiple applications are made at the correct timing. For just Fireblight control two applications will be enough. I treat all young apple trees with apogee (1-5) for Fireblight suppression. If you use the lower rate(s) and miss the additional applications then you will lose growth control, as the shoots will re-grow which is what you want in most cases on 1-2 year old trees and maybe 3-4 year old trees depending on your density and how quickly the trees have filled their space.

**For Growth Control**

- My suggestion is to make four applications begin at 3-4 ounce rate to avoid interactions with PGR chemical thinning. Begin at 1-3 inches of growth bloom-petal fall, and repeat at 7-14-day intervals at the low rates in North Jersey for two applications. With the third application the rate can be increased up to 8-12 ounces per 100 as needed depending on vigor and how much growth control is desired and how long you stretch between applications. I usually increase to 8 ounces.
- More vigorous varieties and southern New Jersey growers may need a fifth application due to the longer growing season.

**See Apogee for Growth Control on page 3**
Early Season and Fruit Nutrition
Mike Fargione, Extension Educator, Cornell Cooperative Extension, Hudson Valley Regional Fruit Program

Reprinted from Cornell Tree Fruit Grower Alert Message – Tuesday, March 20, 2012

The unseasonably warm weather will continue through Friday, when more normal temperatures are expected. A National Weather Service meteorologist told me that we may have a 36-48 hour period on Wednesday through Thursday when the average temperature is 70°F! No frost is predicted this week, so oil, oil, oil! It looks like rain may finally arrive on Sunday, so be sure orchards of apples and peaches are protected with fungicide by that time. Dr. Rosenberger suggested that growers who are late getting peaches pruned may want to run through blocks and remove hanging mummified fruit to reduce brown rot inoculum.

Technical Editor’s note- In North Jersey we are at 1/4 to 1/2 inch green on apple and pink on apples.

Fertilizer programs in NY are based on supplying just enough nutrition to optimize cost and production. Here are some guidelines on fruit nutrition from Steve Hoying, Horticulturist at Cornell’s Hudson Valley Lab. Note - We strongly recommend growers use split applications of N this year in case we have a light crop due to frost and need to drop the second application to reduce vigor. In the absence of last year’s leaf analyses, infer N need based on last year’s shoot growth and fruit condition, and on older nutritional analyses.

- Bearing trees with low N status may have terminal shoot growth less than 8 long, and may have produced highly-colored, early-maturing fruit. However, trees that had excessive cropload last year and/or did not receive adequate supplemental irrigation may also show limited shoot growth.
- Bearing trees with excessive N status have shoot growth over 18” and poorly-colored fruit.
- Also, consider leaf and soil analyses from 2 or more years ago. Combined with growth observations, older nutritional data will give useful, if not ideal, indications of N needs. Plan to do leaf analyses this year if you find yourself relying on older data.
- The optimal timing for N application may be green tip through bloom, or a split application at green tip followed by a second between bloom and petal fall. Avoid application of N after shoot growth begins because it may contribute to higher fruit N levels. Another strategy would be to apply N in September to provide higher reserve N levels for the next year.

A “standard” fertilizer program for bearing apples where leaf analysis shows no major deficiencies and no deficiency symptoms are visible could include:

- a soil application of 20-40 lbs of actual N; 50-80 lbs KCl; 2 lbs B.
- at green tip - 4 lbs C-O-C-S or Kocide per 100 gal.
- at tight cluster to pink - one spray of 3 lbs. feed grade low biuret Urea plus 1 lb. Solubor per 100 gal.
- at first cover - foliar spray of Zn-EDTA at label rate.
- at petal fall, first and second cover - 3 sprays Epsom salts per 100 gal., especially on McIntosh to reduce drop.
- beginning at 1st or 2nd cover, 3 foliar sprays of 1-2 lbs calcium chloride per 100 gal.
- during the period of shoot growth - 3 more calcium chloride sprays at 3-4 lbs per 100 gal.; Bitterpit susceptible varieties should receive 6 or more calcium sprays per season.
- after harvest - supplemental potassium as needed; In Northern NJ -1/2 ton of high calcium lime annually to maintain pH and soil calcium.

Stone Fruit - peaches specifically

The common apple orchard broadcast fertilizer mix (1-0-2 of N-P-K plus B) is not recommended for stone fruit. Do not apply higher rates of custom-mixed apple fertilizer blend to stone fruit in order to meet their higher N needs.

Unlike apples, stone fruit do not require a large amount of potassium. Careful analysis of leaf samples is important to judge the amount of potassium needed. In addition, stone fruit are very sensitive to chlorides; the sulfate form should be substituted for the muriate form when large applications of K2O are called for in the leaf analysis.

Both excess and deficiency of Boron can reduce fruit quality in stone fruit. Rates of boron for soil application in stone fruit orchards should not exceed 1 lb per acre (equals 1/2 of the rate suggested for apples and pears) unless both soil and leaf analysis results indicated that greater amounts are required.

For more in-depth information on orchard nutrition programs, see Dr. Warren Stiles publication at: http://ecommons.cornell.edu/bitstream/1813/3305/2/Orchard%20Nutrition%20Management.pdf. Dr. Stiles is a retired Cornell Fruit Nutrition Expert now farming in Cape May County, NJ.

Note: I have a peach nitrogen fertilization fact sheet for NJ, let me know if you would like a copy. Win Cowgill cowgill@njaes.rutgers.edu.

Submitted and edited for New Jersey by Win Cowgill.
Wine Grape Information for the Region
Mark L. Chien, Viticulture Educator, Penn State Cooperative Extension

Ontario: I think there are wine industries and then there are “serious” wine industries. Ontario is serious. I was there to speak at the Ontario Fruit and Vegetable Convention and got to tour some vineyards and wineries between sessions. It is all very impressive. It got me to wonder why they can do it there and we have struggled down here. For example, the Grape Growers of Ontario are a $3.8M organization representing the needs of Ontario’s grape growers, who tend 14,000 acres of grapes, and still growing. It’s not ideal viticultural conditions there - so far north and predominantly clay soils, but they have learned to manage their challenges, with the help of significant research and education programs at Brock University and Niagara College, and a faithful partner in the provincial government. The VQA program is the standard for the world (in my humble estimation). You can read my impressions of Ontario and notes from the grape sessions of OFVC, including talks by Andrew Landers on spray deposition, Stefano Poni on leaf removal for crop and fruit rot reduction and Rufus Isaacs on grape berry moth management at: http://pawinegrape.com.

Meeting Materials: There is a lot going on these days. I have given presentations in Ontario and Maryland, as well as the pruning workshops and a session with Adam McTaggart from Boxwood Vineyards about Cabernet Franc production at the Eastern Winery Exhibition, the new grape grower workshop on 3/9, and a recent visit to the Return to Terroir biodynamic wine tasting event in New York City. I will post almost all of the notes and materials on the Pennsylvania Wine Grape Network website’s Meeting Summaries section: http://pawinegrape.com.

Biodynamic Wines: It is hard to dismiss a production system, no matter how unusual, that is used in earnest by some of the commonly acknowledged greatest wine estates in the world. The folks who sell wine, including the popular wine media, as well as sommeliers, retailers and consumers appear to be transfixed by organic and biodynamic wines. Personally, I do not have a problem with biodynamics. It’s out there and people respond to it, so I think we (production, research and extension) have to pay attention. I attended the 7th Return to Terroir tasting in New York, where 77 BD wines were poured and recorded some comments and thoughts about biodynamic wine growing. Is biodynamic wine production practical for Eastern US vineyards? Other than on a very small scale, I do not believe it is. But even if it doesn’t fit our conditions, we should learn from it: http://pawinegrape.com.

Winery Sanitation Workshop: There is hardly anything more fundamental to fine wine production than a sanitary cellar and wine making practices. Penn State extension enologist Denise Gardner and colleagues at Cornell extension are offering an all-day winery sanitation workshop at the CLEREL research lab in Portland, (western) NY on April 11th. It will cover the basics and terminology of sanitation, microbiology of spoilage, protocols and evaluating effectiveness, and a tasting of wine flaws. Cost is $50 and pre-registration is required by April 6. Denise has other wine making events coming up including Level 2 PWQI in four locations around the state in April/May. http://pawinegrape.com.

Here We Go Again: It has been unseasonably warm this winter which portends an early budbreak, which means an extended frost season. While an early start on the front end of the season bodes well for an early harvest, frost has been a significant problem in recent years. There are many passive and active measures to deal with frost, the expensive ones tend to work pretty well and the inexpensive ones are, well, you get what you pay for. The best deterrent is proper site selection, which you have probably discovered on your own by now. Some of the more readily available methods include using soy bean oil sprays, keeping the cover crop mowed very low, and double pruning cane and or spur pruned vines to take advantage of apical dominance. We have 4-6 weeks before bud break so there is plenty of time to finish pruning and tying and to get ready for the new vintage. Here We Go Again 2012 is my annual kick-off instructions for the upcoming vintage and I hope it will be helpful and optimistic as we head into a new year: http://pawinegrape.com.

Calendar of Events


April 11, 2012, 5:30-8:30 - 1st North Jersey Twilight Fruit Meeting. Rutgers Snyder Farm 140 Locust Grove Rd Pittstown, NJ. Contact Win Cowgill <cowgill@njaes.rutgers.edu or 908-788-1339.

April 18, 2012 7:15 pm – 9:30 pm, Evening Fruit Meeting - Gloucester County Office of Government Services-Auditorium, 1200 North Delsea Drive, Clayton, NJ, Sponsored by NJAES, 856-307-6450, ext. 1. Pesticide Credits will be issued.
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 by 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

7:55 p.m. Field Scouting Report on Current Pest Problems by Dave Schmitt, Fruit IPM Program Associate, Rutgers NJAES Cooperative Extension.

8:10 p.m. New Fungicides for 2012 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 further information contact RCE of Gloucester County, 856-307-6450, ext. 1.

NEWA Weather and IPM Forecasting - New Weather Tool for NJ Fruit Growers
Win Cowgill, Agricultural Agent

Network for Environment and Weather Applications
Thanks to our Rutgers Cooperative Extension Director, Dr. Larry Katz, Rutgers Weather stations online at http://climate.rutgers.edu/njwxnet/index.php have joined for a second year with the Cornell NEWA web system to bring tons of data and IPM forecasts to you at locations throughout New Jersey. Rutgers Dr. Peter Oudemans started our association with NEWA last year on behalf of our grape growers. Dr. David Robinson, our New Jersey State Climatologist and Professor at Rutgers, maintains the NJwxnet system and has made significant equipment updates to the stations throughout the state. Make sure to find the closest station to your farm on this system, then bookmark it for daily use.

Set your web browser to http://newa.cornell.edu; navigate the map to find you station.

Then select your location on the map by pulling down the drop down menu and selecting the town closest to you, or by clicking on the icons on the map. Then the station you pull up gives you access to a wealth of New Jersey Pest and Disease forecasting models that are highly accurate.

IPM forecasts include Fireblight, Apple Scab, OFM, STLM, Plum Curculio, and Grape Berry Moth. Also, daily weather summaries, growing degree-days and much more are available. Right off the bat the apple scab model will be of most interest; make sure to adjust the forecasted green tip date to your actual date, mine was off by three days.

Log on and explore, these IPM forecasts will be invaluable to you if you use them.

Note: we will also be making apple thinning forecasts from this NEWA/NJwxnet data again this season using the Cornell MaluSlim model.

We really need to hear from you on how you are using this NEWA site and data. It does cost significant dollars for Rutgers to participate. Please let me hear from you at cowgill@njaes.rutgers.edu.

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