At A Glance....Insect and Disease Problems That Should Be Considered This Week.

<table>
<thead>
<tr>
<th>PEST/DISEASE/CULTURE</th>
<th>APRIL 22- APRIL 29 EARLY-BLOOM</th>
<th>APRIL 29- –MAY 6 BLOOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moth Larvae – Leafrollers, Spanworms</td>
<td>Scout flower clusters for “worm” activity. Treat w/ Delegate, Altacor or Intrepid/Confirm if over 1 larva per 100 flower clusters. Avoid using Delegate and Altacor during bloom.</td>
<td>Scout flower clusters for “worm” activity. Treat w/ Bt products or Intrepid/Confirm if over 1 larva per 100 flower clusters.</td>
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<tr>
<td>PLUM CURCULIO</td>
<td>Treat fields with a history of high PC. Do not use Rimon during bloom.</td>
<td>Do not treat for PC during bloom.</td>
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<tr>
<td>Rimon</td>
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<tr>
<td>Mummy berry</td>
<td>Scout for cups and spray affected fields</td>
<td>Anthracnose sprays (Abound) will help to suppress infections</td>
</tr>
<tr>
<td>Anthracnose</td>
<td>nothing</td>
<td>Begin treatments when bloom is 20-50% open</td>
</tr>
<tr>
<td>Phytophthora root rot</td>
<td>Begin treatments</td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>NPK should be applied now</td>
<td></td>
</tr>
</tbody>
</table>

BLUEBERRY TWILIGHT MEETINGS

THURSDAY, MAY 30, 2013 @ 5:30
ATLANTIC BLUEBERRY CO
7201 WEYMOUTH RD.
HAMMONTON, NJ
FOR DIRECTIONS, CALL 609-561-8600

CULTURE
Dr. Gary C. Pavlis, Ph.D.
Atlantic County Agricultural Agent

Blueberry buds are pushing this week so bloom is just around the corner. This is an important time for growers because it is the perfect time to apply the NPK application that blueberry plants need. In the old days, fertilizer applications were made when the plants were still dormant. This is inefficient because if the plant is dormant it isn’t taking up nutrients. Stands to reason. The problem is, where is the fertilizer by the time uptake begins. The hope is that it has moved down to the root zone and is available to the plant. The reality is that some of it is and some of it has been washed away or moved past the root zone and is lost.
Lost fertilizer is lost money. As readers of this newsletter are aware, our research has shown that applying NPK when the plant can pick it up will increase yield dramatically. To put a finer point on it, when the blueberry plant is supplied with NPK a little at a time over the six week period starting at bud break the results will be the highest yield possible. It is probably not feasible to apply the needed NPK every day over that six week period but some form of that small dosing would be recommended. Most growers using fertigation apply NPK once a week for the six weeks. This is probably the best method we have right now though “spoon feeding” the plants even more would probably be beneficial. Lastly, I cannot emphasize more strongly that if you are not taking leaf samples to monitor your nutrient regime your fertilizer program is not efficient and it is costing you money with reduced yield. Doing what you always have done or just using a soil analysis is not in the long run a sustainable practice.

Sincerely,

Gary C. Parli, Ph.D.
Atlantic County Agricultural Agent

Editor - Blueberry Bulletin/GP/slp

INSECTS
Dr. Cesar Rodriguez-Saona, Extension Specialist in Blueberry Entomology, Rutgers University
Mr. Dean Polk, IPM Agent – Fruit
Mr. Gene Rizio, IPM Program Associate – Fruit

Cranberry Weevil (CBW): Over the past 7 days 36% of beating tray samples have been positive for CBW. About 8% of the total samples have been at or above the threshold of 5 adults/bush. This represents a decrease since last week. While most of the samples have been taken at wooded edges, one farm that was seen on 4/17 where the CBW level was near 0 at the perimeter, due to perimeter treatment with Asana, levels in the interior were above threshold. In general this pest pressure is now too low for concern. One of the most active weevil sites seen this season which was not treated is now almost at 0 levels due to flower bud development, and probably some help from cool temperatures.

Plum Curculio (PC): The first PC adult was seen on a beating tray sample on 4/16 in Atlantic County. During the past 7 days, 5% of beating tray samples have been positive for PC.

Worms/Leps – Leafrollers and Spanworms: About 2% of beating tray samples have been positive for worms. Levels that are present are too low for concern at this time.

DISEASES
By Peter V. Oudemans, Ph.D.
Associate Professor and Extension Specialist
Plant Pathology, Rutgers University

Blueberries will start blooming this week and mummy berry may need to be managed. Remember scouting for Mummy Berry should precede any decision to spray since it continues to be quite rare in this state. Scout for open cups in wet areas of the fields and for strikes in the areas around open cups. Even though the disease has been very scarce that is not a reason to ignore it! Applications of Indar or Quash may be beneficial if mummy berry is present. This is the time to evaluate your Phomopsis twig blight control. The most common symptom is the drying up of buds as the wood below turn’s dark brown, cutting off moisture and nutrients. Weymouth, Sierra, Elliott, Earliblue, Coville, and Berkeley often have severe infections and are rarely entirely free of this disease, whereas Jersey is occasionally moderately damaged by it. Scouting for the disease during bloom will help identify areas prone to the disease in the following season. Fungicides such as Indar and Quash made during early bud break can be evaluated now.
A. Immediate pre-bloom (approx. 5-7 days until bloom).

B. Primary mummy strike on an inflorescence bud (B) and a leaf shoot (C).

An example of Phomopsis Twig Blight taken during the pre-bloom period.

**Root rot** was severe in some fields last season and those fields should be treated with a Phytophthora fungicide soon. Since the blueberry plant is starting to produce new roots and the disease could be severe in areas with poor drainage. If *Phytophthora* was present last season, improve drainage in the field as a first step. There are two types of fungicides labeled for Phytophthora management. Phosphite fungicides labeled for blueberry include: Aliette, K-Phite, Phostrol, Prophyte and Rampart. Phosphites are not fertilizer and DO NOT provide a significant source of phosphorous. Other compounds marketed as fertilizer do not have sufficient active ingredient to provide disease control and may cause phytotoxicity if concentrations are increased. Phosphites may have phytotoxic effects when not sufficiently diluted (50 gallons/acre) and if the spray water is below pH5.5. Ridomil is labeled for soil applications only. Phosphites (same active ingredient as Aliette) are systemic fungicides with both downward and upward mobility. In other words these products may be applied as a foliar spray and the active ingredient will move into the root zone when leaves are present. At this time of year both types may be applied to the soil since there is insufficient leaf material present to absorb the fungicide.
STINGER LABELED FOR BLUEBERRIES 2013

By Dr. Bradley Majek, Specialist in Weed Science
NJAES, Rutgers University

Stinger has been labeled for weed control in stone fruit orchards, including peaches, nectarines, apricots, plums, and cherries. The weeds controlled fall into two botanical plant families, composites and legumes. Common composite weeds found in our orchards include Canada thistle and other thistles, goldenrod species, aster species, common dandelion, mugwort (wild chrysanthemum), horseweed (marestail or stickweed), and ragweed species. Legume weeds include vetch species and clover species.

The maximum labeled rate of Stinger per application is one-third of a pint per acre (0.125 lb ai/A), and the maximum rate per year application is two-thirds of a pint per acre (0.25 lb ai/A), but the rate needed varies, depending on the target species. Two fluid ounces per acre (0.047 lb ai/A) will control seedling annual weeds such as common ragweed and annual vetch. Three to four fluid ounces per acre (0.070 to 0.094 lb ai/A) are needed to control perennial clover species, horseweed, and groundsel. Most other susceptible perennial weeds require the full rate of one-third of a pint per acre (0.125 lb ai/A).

Mugwort (wild chrysanthemum) in Blueberries

Optimum results controlling deep rooted and hard to control perennial weeds, including Canada thistle, perennial asters, goldenrod species, and mugwort (wild chrysanthemum) will be obtained if the Stinger application is split. Apply one third of a pint per acre Stinger in late April when the weed is emerging in the spring. Some weeds can “survive” for months on established existing foliage even though Stinger suppresses all new growth. Tank-mix with Gramoxone to increase the spectrum of weeds controlled and kill existing foliage of perennial asters, goldenrod species and mugwort. Some weeds, especially mugwort, can “survive” for months on established existing foliage even though Stinger suppresses all new growth. Be sure to spray adjacent sod and row middles as well as the weed free strip under the blueberries. Mark the treated rows.

The application of Stinger timed to match the emergence of the perennial weed in the spring coincides with the time of year when the carbohydrate food reserves in the plant are at the lowest point. Treatment at this time reduces the weed’s chance of recovery and survival.

Apply another one third pint of Stinger to the marked rows, or sections of rows immediately after harvest in mid summer. No growth of the target weed may be observed at the time of the second application. Spray the second application even though no growth of the target weed is evident. The second
application is essential for the elimination of the hard to kill established perennial weeds. If the second application is skipped, expect to see the weed re-emerge in late August or September. Time all applications to maintain a 30 day PHI (PreHarvest Interval).

Stinger is both a postemergence foliar absorbed herbicide and a residual herbicide. The initial twisting and curling observed after application to susceptible species is due to the foliar absorption. Control of established perennials is due to residual Stinger in the soil which prevents regrowth from the roots. In certain species such as mugwort, Stinger prevents regrowth but does not kill the mature leaves. The plant will survive unless another herbicide such as Gramoxone or glyphosate is used to defoliate the plant.

Do NOT apply Stinger in a hand held sprayer used to “spray until wet”. Stinger is a residual herbicide that must be applied on a rate per acre basis. When treating “patches” of perennial weeds, apply the recommended rate per acre with a calibrated sprayer. Treat ten to fifteen feet beyond the weed “patch” on all sides. Spray the sod or row middles adjacent to the weed “patch” in the row.
FIFRA 24(c) Special Local Need Label (SLN)
For Distribution and Use Only in the State of New Jersey

Stinger®

EPA Reg. No. 62719-73
SLN NJ-120001

This label expires and must not be distributed or used in accordance with this SLN registration after December 31, 2017.

Directions for Use

• It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
• This state-specific Section 24(c) labeling must be in the possession of the user at the time of application.
• Follow all applicable directions, restrictions, and precautions on the EPA registered label for EPA Reg. No. 62719-73.

Refer to the product label for Precautions and Restrictions, Mixing Instructions and Application Directions.

Postemergence Broadleaf Weed Control in Blueberry

Special Conditions and Risks of Use

USE OF Stinger® (THE “PRODUCT”) ON BLUEBERRY (THE “CROP”) MAY RESULT IN CROP INJURY, CROP YIELD REDUCTION AND/OR CROP LOSS. READ AND UNDERSTAND THESE SPECIAL CONDITIONS AND RISKS OF USE BEFORE USING THE PRODUCT ON THE CROP.

Dow AgroSciences makes the Product available for use in the manner described in this Supplemental Labeling on the basis that, in the sole opinion of the user, the benefits and utility derived from the use of the Product on the Crop outweigh the potential risk of Crop injury or loss. The decision to use this Product in the manner described in this Supplemental Labeling must be made by each individual user on the basis of anticipated benefits versus (i) the risk of Crop injury, Crop yield reduction and Crop loss, (ii) the severity of the target pest infestation, (iii) the cost and availability of alternative pest controls, and (iv) any other relevant factors.

By purchasing the Product for use, or using the Product, in the manner described in this Supplemental Labeling, you acknowledge and accept that:

(1) You assume all risk of Crop injury, Crop yield reduction and/or Crop loss;
(2) Dow AgroSciences does not make, and does not authorize any agent or representative to make, any representations or recommendations regarding the use of this Product on the Crop other than the statements on this Supplemental Labeling;
(3) Dow AgroSciences does not make, and does not authorize any agent or representative to make, any warranties, express or implied, with respect to the use of the Product on the Crop and disclaims all warranties, express or implied, including any implied warranties of fitness for a particular purpose or merchantability;
(4) Dow AgroSciences disclaims all liability for any damages, losses, expenses, claims or causes of actions arising out of or relating to inability to sell the Crop, Crop injury, Crop yield reduction and/or Crop loss;
(5) These Special Conditions and Risks of Use supersede any contrary representations or recommendations by Dow AgroSciences, its agents or representatives, and any provisions in or on any Product literature or labeling including any provisions on the label affixed to the Product container.
If these Special Conditions and Risks of Use are not acceptable, the unopened Product may be returned to the seller for a refund or used for a different labeled use in accordance with the label affixed to the Product container. These Special Conditions and Risks of Use are required by Dow AgroSciences and not specified by the U.S. EPA or the State of New Jersey.

<table>
<thead>
<tr>
<th>Target Broadleaf Weeds, Application Rate, and Use Restrictions:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target Weeds</strong></td>
</tr>
<tr>
<td>beggartick</td>
</tr>
<tr>
<td>common ragweed</td>
</tr>
<tr>
<td>giant ragweed</td>
</tr>
<tr>
<td>wild bean</td>
</tr>
<tr>
<td>annual sowthistle</td>
</tr>
<tr>
<td>(suppression)</td>
</tr>
<tr>
<td>aster species</td>
</tr>
<tr>
<td>Canada thistle (suppression)</td>
</tr>
<tr>
<td>clover species</td>
</tr>
<tr>
<td>dandelion</td>
</tr>
<tr>
<td>joe-pye weed</td>
</tr>
<tr>
<td>narrow-leaved golden rod</td>
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</tbody>
</table>

**Application Timing:** Blueberry plants are more sensitive to Stinger applied in the spring prior to bloom, before and/or during the crop’s annual flush of growth, than after bloom. Do not apply Stinger from one week prior to bloom until one week after bloom. After bloom, apply Stinger up until 30 days prior to harvest. Stinger can be applied after harvest. Determine the rate of Stinger based upon the targeted weed species and whether one or two sprays will be applied during the growing season. **Note:** Stinger is a residual herbicide and applications must be made based upon accurate rate per acre calibrations. Applications of Stinger can injure the blueberry plant and significantly reduce yields depending upon rates used, timing of application, and environmental conditions.

**Application Rates:** Apply Stinger at 2.67 to 5.3 fl oz per acre directed to the soil from the blueberry plants to the row middle without contacting the foliage or woody portions of blueberry plants. Apply with ground broadcast equipment, backpack sprayer, or wipe applicator in a total spray volume of a minimum of 10 gallons per acre. Hand-held sprayers may be used for spot applications. Refer to the package label for conversion rates, mixing, and application directions for hand-held sprayers.

Use the lower rate in the rate range for young succulent growth for sensitive weed species. Use the higher rate in the rate range for less sensitive weed species, perennials and under environmental conditions where target weeds are less susceptible. Make a maximum of two applications with the total usage of Stinger from all types of applications not to exceed 10.6 fl oz per acre or 2/3 pint per acre (0.25 lb ae clopyralid per acre) per year.

**Wipe Treatments:** For wipe treatments, apply a 2% solution of Stinger in water (2.5 fl oz or 75 mL per gallon). Make a maximum of two applications with the total usage of Stinger from all types of applications not to exceed 10.6 fl oz per acre or 2/3 pint (0.25 lb ae clopyralid) per acre per annual growing season. Do not permit Stinger to contact desirable foliage or crop injury will result.

Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, Indiana 46268
1-800-992-5994 (option #4)

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R043-056
Approved: 01/07/13
Initial printing.
Pesticide Applicator or Dealer Storage Inventory and Cover Letter Submittal Due May 1st to Fire Department

All licensed pesticide applicators, as well as dealers, who store pesticides are required by law to send a copy of their storage inventory(ies) with an explanatory cover letter to the local fire company by May 1st each year. In New Jersey, all licensed pesticide applicators and dealers who store pesticides are required per N.J.A.C. 7:30-9.5 to maintain a list of the pesticides stored or likely to be stored during the license year. A storage inventory is required to be kept separate from the actual storage area (although you certainly may keep a copy there as well.)

The Rutgers NJAES Pest Management Office 'Records & Forms' webpage provides two editable templates for submittal to the Fire Department that meet the minimum regulatory requirements. See the webpage at www.pestmanagement.rutgers.edu/PAT/record_forms.htm. You may also devise your own format that suits your needs as long as it meets the requirements of N.J.A.C. 7:30-9.5.

1. **Pesticide Storage Inventory Form**- The purpose of the inventory is to provide local fire departments with an accurate description of things stored by location in case of fire or other emergencies. We suggest filling out a form per storage address of your establishment.

2. **Cover Letter**-- All licensed pesticide applicators and dealers who store pesticides are required by law to send a copy of their storage inventory(ies) with an explanatory cover letter to the local fire company. Specifically, NJDEP regulations provide: "The cover letter shall explain that this list has been sent pursuant to N.J.A.C. 7:30-9.5(b).4".

3. Revisions to the New Jersey regulations now require a written description or diagram depicting the exact location of the area on the property where the pesticide is stored. Our template cover letter provides a space to write that description or indicate that a diagram is enclosed.

Submittal to the fire department is required annually by May 1st of each year (this does not pertain to pesticides stored for personal use, or to those storing pesticides at loading or application areas for less than 7 days). Applicators and dealers must keep the cover letter on file for a minimum of three years and should have it available for NJDEP upon request.

Patricia D. Hastings  
Pesticide Safety Education Program Coordinator  
Rutgers New Jersey Agricultural Experiment Station  
Cooperative Extension  
Pest Management Office  
93 Lipman Drive  
New Brunswick, NJ 08901

☎ 848-932-9802  
☎ 732-932-9751  
✉ hastings@njaes.rutgers.edu  
🔗 www.pestmanagement.rutgers.edu
If you have any comments about this newsletter, please make them in the space below and mail to:
Dr. Gary C. Pavlis, County Agricultural Agent
Rutgers Cooperative Extension of Atlantic County
6260 Old Harding Highway, Mays Landing, NJ 08330

I would like to see an article on the following subjects:______________________________________________________

I would like to comment on the following articles:____________________________________________________________
Title:_________________________________________________ Date:______________________________________________________
Comment:________________________________________________________________________________________
________________________________________________________________________________________________