Vegetables

Vegetable Crop Insects - Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

Reminder - Warrior II is now present in the market place so be sure to read the label to be sure you are applying the correct rate. This new formulation is twice as active (2.08 lbs of active ingredient per gallon) as the old Warrior (1.04 lb of active ingredient per gallon) so be sure to read the label for the correct rates as well as restrictions. (http://www.cdms.net/LDat/ld8JD000.pdf).

Lima Beans
Be sure to watch carefully for spider mites. Economic levels are being detected and controls are only effective if treatments are applied before populations explode. Labeled materials include bifenthrin and dimethoate. We are staring to see an increase in stinkbug and plant bug populations. As soon as pin pods are present, be sure to watch carefully for plant bug and stinkbug adults and nymphs. As a general guideline, treatment should be considered if you find 15 adults and/or nymphs per 50 sweeps. Bifenthrin (Brigade and a number of generics), Mustang MAX, Proaxis and lambda-cyhalothrin (Warrior and a number of generics) are labeled for both insects. The higher labeled rates will be needed if stinkbugs are the predominant insect present.

Melons
Continue to scout all melons for aphids, cucumber beetles, and spider mites. We have heard reports of beet armyworms feeding on the rinds of watermelons. Since this insect is difficult to control, be sure to select a material that is labeled for beet armyworm on melons such as Spintor, Radiant, or Intrepid. The pyrethroids will not provide effective BAW control.

Peppers
As soon as the first flowers can be found, be sure to consider a corn borer treatment. Depending on local corn borer trap catches, sprays should be applied on a 7 to 10-day schedule once pepper fruit is ¼ - ½ inch in diameter. Be sure to check local moth catches in your area by calling the Crop Pest Hotline (in state: 1-800-345-7544; out of state: 302-831-8851) or visiting our website at http://ag.udel.edu/extension/IPM/traps/latestbtl.html. You will also need to consider a treatment for pepper maggot. Be sure to watch carefully for beet armyworm larvae since they can quickly defoliate plants. In addition, be sure to use a material that provides beet armyworm control - the pyrethroids will not control this insect.

Potatoes
Continue to scout fields for Colorado potato beetle (CPB), aphids and leafhoppers. Controls will be needed for green peach aphids if you find 2 aphids per leaf during bloom and 4 aphids per leaf post bloom. This threshold increases to 10 per leaf at 2 weeks from vine death/kill. If
melon aphids are found, the threshold should be reduced by ½.

Snap Beans
Continue to scout for leafhopper and thrips activity in seedling stage beans. As a general guideline, once corn borer catches reach 2 per night, fresh market and processing snap beans in the bud to pin stages should be sprayed for corn borer. Sprays will be needed at the bud and pin stages on processing beans. Additional sprays may be needed after the pin spray on processing beans. Since trap catches can change quickly, be sure to check our website for the most recent trap catches and information on how to use this data to make a treatment decision in processing snap beans after bloom (http://ag.udel.edu/extension/IPM/traps/latestblt.html and http://ag.udel.edu/extension/IPM/thresh/snapbeanecbthresh.html). Once pins are present on fresh market snap beans and corn borer trap catches are above 2 per night, a 7 to 10-day schedule should be maintained for corn borer control.

Sweet Corn
Continue to sample seedling stage fields for cutworms and flea beetles. You should also sample all fields from the whorl through pre-tassel stage for corn borers, corn earworms and fall armyworm. A treatment should be considered when 12-15% of the plants are infested. Since fall armyworm feeds deep in the whorls, sprays should be directed into the whorls and multiple applications are often needed to achieve control. The first silk sprays will be needed for corn earworm as soon as ear shanks are visible. Be sure to check both blacklight and pheromone trap catches for silk spray schedules since the spray schedules can quickly change. Trap catches are generally updated on Tuesday and Friday mornings (http://ag.udel.edu/extension/IPM/traps/latestblt.html and http://ag.udel.edu/extension/IPM/thresh/silkspraythresh.html). You can also call the Crop Pest Hotline (in state: 1-800-345-7544; out of state: 302-831-8851).

Air Pollution Injury in Vegetable Crops
Gordon Johnson, Extension Ag Agent, Kent Co.; gcjohn@udel.edu

With the hazy, hot, humid weather of late June and early July we are seeing signs of air pollution damage to susceptible crops including potatoes, watermelons, cantaloupes, beans, pumpkins, and squash. Air pollution injury can be easily misdiagnosed as mite injury, pesticide phytotoxicity, or deficiencies. Atmospheric oxidants including ozone, nitrogen oxides, and peroxyacyl nitrates are the main causes of this injury, with ozone damage the most common. Ozone is formed by the action of sunlight on products of fuel combustion. It is moved from areas of high concentration (cities, heavy traffic areas) to nearby fields by wind.

Air pollution injury in susceptible vegetable varieties develops under the following conditions or situations:

- Ozone levels over 80 ppb for four or five consecutive hours, or 70 ppb for a day or two when vegetable foliage at a susceptible stage of growth.
- High levels of automobile exhausts. Crop injury is often visible on fields in close proximity to roads, especially with heavy summer weekend traffic.
- Humid conditions with cloudy, hazy overcast days and little breeze.
- High concentration of pollutants at ground level and in low lying areas. High pollution indexes in Baltimore and Washington are a good indication that this is occurring.
- Foggy conditions and heavy dews.

In potatoes, symptoms of ozone damage occur on the most recently emerged leaves and can be seen as a black flecking. Crop stage is also a factor with potatoes being most susceptible during the tuber bulking stage. Plant stress will predispose potato plants to ozone injury. Potato varieties vary in their susceptibility with Red Norland being very susceptible. Yukon Gold will also show ozone injury.
Ozone injury on potato

Injury on watermelon leaves consists of premature chlorosis (yellowing) on older leaves. Leaves subsequently develop brown or black spots with white patches. In muskmelons and other melons, the upper surface of leaves goes directly from yellow to a bleached white appearance. Watermelons are generally more susceptible than muskmelons to ozone damage and damage is more prevalent when fruits are maturing or when plants are under stress. Injury is seen on crown leaves first and then progresses outward. There are great differences in variety susceptibility with some older varieties such as Sugar Baby and Crimson Sweet watermelon and Superstar muskmelon being very susceptible. Seedless watermelon varieties tend to be more resistant to air pollution injury than seeded varieties, so injury often shows up on the pollenizer plants first. Ozone damage ratings were done on 60 diploid (seeded) and triploid (seedless) watermelon cultivars at North Carolina State University in 2000-2001. A large number of these varieties are still being used here on Delmarva. Pictures and ozone damage ratings from this research can be found at http://apsjournals.apsnet.org/doi/pdf/10.1094/PDIS.2003.87.4.428. Injury on squash and pumpkins is intermediate between watermelon and cantaloupe starting with yellowing of older interior or crown leaves. These leaves subsequently turn a bleached white color with veins often remaining green.

In snap and lima beans, ozone causes small bleached spots giving a bronze appearance on upper leaf surfaces and pods. Leaves may ultimately turn chlorotic and senesce (drop).

The key to avoiding air pollution injury is to plant varieties that are of low susceptibility and to limit plant stresses. Certain fungicides such as thiophanate methyl (Topsin and others) offer some protection against ozone damage. Antioxidants such as ascorbic acid and EDU (ethylene diurea) have been tested as protectants against ozone damage and some have shown promise.
Potato Disease Advisory #16 - July 10, 2008  - Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu

Disease Severity Value (DSV) Accumulation as of July 9, 2008 is as follows:
Location: Broad Acres, Zimmerman Farm, Rt. 9, Kent County
Greenrow: April 27

<table>
<thead>
<tr>
<th>Date</th>
<th>LATE BLIGHT</th>
<th>EARLY BLIGHT</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Date</td>
<td>Total DSV</td>
</tr>
<tr>
<td>6/15–6/18</td>
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<tr>
<td>6/19–6/22</td>
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</tr>
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</table>

*P days* - We use the predictive model WISDOM to determine the first fungicide application for prevention of early blight as well. The model predicts the first seasonal rise in the number of spores of the early blight fungus based on the accumulation of 300 physiological days (a type of degree-day unit, referred to as P-days) from greenrow. To date, 536 P-days have accumulated at the site.

The recent thunder showers and increased humidity have produced conditions favorable for both late blight and early blight. Maintain fungicide applications. There have been no reports of late blight on either potato or tomato in the region.

Early dying was confirmed this past week. One-sided brown discoloration was present and the causal fungus, Verticillium, was isolated from the discolored areas. Lesion nematodes can often be present as well which can greatly increase the symptoms and reduce yields. As most of you know ‘Superior’ is pretty susceptible to early dying. Resistant varieties, long rotations away from potatoes or fumigation are the most recommended treatments. There is some evidence that using Sudan grass in the rotation can reduce early dying as well.

For specific fungicide recommendations, see the 2008 Delaware Commercial Vegetable Production Recommendations Book.

Phytophthora Blight Management in Cucumber - Kate Everts, Vegetable Pathologist, University of Delaware and University of Maryland; keverts@umd.edu and Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu

Heavy localized rainfall in our region has resulted in pockets of Phytophthora blight, especially on cucumber. While there is no way to avoid these rain events, there are practices and products that can alleviate some of the losses to Phytophthora blight. Management of Phytophthora blight should be based on cultural practices that minimize standing water on the crop. This means planting only in fields with good drainage, not planting in low areas, subsoiling fields before planting, avoiding over-irrigation, etc.
Several fungicides are registered for managing Phytophthora blight. While the labels may say “control”, it is more accurate to say these fungicides will “suppress” Phytophthora blight because the control is easily overcome if the weather favors disease development. The organism that causes Phytophthora blight is related to the one that causes downy mildew, therefore some of the fungicides can be used to target both diseases.

Below is a table that indicates which products are effective on downy mildew, and have some suppression on Phytophthora blight. Relative efficacy is not listed for Phytophthora blight because little comparison data exists.

### Fungicide Efficacy on Downy Mildew and Phytophthora Blight

<table>
<thead>
<tr>
<th>Product</th>
<th>FRAC Code</th>
<th>Efficacy on downy mildew</th>
<th>Registered for Phytophthora blight suppression</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Ranman</td>
<td>21</td>
<td>Very Good</td>
<td>Yes</td>
<td>Use 2.75 fl.oz./A for Phytophthora blight</td>
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<tr>
<td>Presidio</td>
<td>43</td>
<td>Very Good</td>
<td>Yes</td>
<td></td>
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<tr>
<td>Previcur Flex</td>
<td>29</td>
<td>Very Good</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Tanos</td>
<td>11 + 27</td>
<td>Good - Very Good</td>
<td>Yes</td>
<td>Use higher rate 8 to 10 oz./A for Phytophthora</td>
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<tr>
<td>Forum</td>
<td>40</td>
<td>Poor</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Revus</td>
<td>40</td>
<td>Poor</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Gavel</td>
<td>22 + M3</td>
<td>Good</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Prophyt/Phostrol</td>
<td></td>
<td>Poor</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Curzate</td>
<td></td>
<td>Good</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Ridomil Gold combinations</td>
<td>4</td>
<td>Resistance</td>
<td>Foliar formulations not labeled</td>
<td>Soil applications can be used for Phytophthora suppression where no resistance occurs</td>
</tr>
<tr>
<td>Reason</td>
<td>11</td>
<td>Resistance</td>
<td>Not labeled</td>
<td></td>
</tr>
</tbody>
</table>

### Troubleshooting Pole Lima Beans

Pole lima beans are a very profitable crop for market gardeners and produce growers across Delaware. However, a number of problems can come up that can limit yield potentials. Some information follows.

Heat is the major factor in reducing yields in pole lima beans. Hot days and especially hot nights will cause flower and small pod abortion and reduced summer pod sets. It will also cause reduced seed numbers in pods or pods with underdeveloped seeds (flat pods). This is especially a factor in large seeded pole lima bean types (such as Dr. Martins). One strategy to partially avoid this problem is to plant as early as practical in May using plastic mulches to warm soils and providing protection to plants against cold snaps using covers. Early and quick starts will allow for plants to mature and set pods quickly and get some July and early August production before heat really starts to reduce sets. Irrigation in hot weather is critical so that plants are not under any water stress. Misting plants with low volume sprinklers during the middle of the day in hot weather may help but also sets up conditions for downy mildew.

Stink bugs and tarnished plant bugs are a major problem in many areas of the state and can reduce lima bean yields significantly. We have
seen an increase of stink bugs in recent years. Stink bugs and tarnished plant bugs pierce young pods with their needle-like stylets, sucking sap out of the pods/young seeds. This causes misshapen seeds or, if severe enough, pod drop. Insecticide sprays are used for control, including a number of pyrethroids. Be careful with some of the pyrethroids because they can cause mite populations to explode by reducing natural controls (predators). See the Commercial Vegetable Recommendation book for recommended products (web link http://ag.udel.edu/extension/vegprogram/pdf/DEvegrecs2008.pdf). Options are limited for non-commercial producers.

Two-spotted spider mites will build up in hot dry weather and can cause leaf bronzing and leaf drop if severe by feeding in leaves with piercing/sucking mouthparts. To detect mites early scout for mite damage on the oldest leaves. The key to reducing mite injury is proper irrigation to keep plants healthy. Mite control materials are available but are limited. See the Commercial Vegetable Recommendation Book for recommended products. Mite control options for non-commercial producers are very limited.

In late July through August, pole lima beans often start to yellow because they are running out of nitrogen. Even though lima beans are legumes, we grow them using nitrogen fertilizers because they tend not to produce enough nitrogen with the nitrogen fixing bacteria. An August side-dressing of nitrogen fertilizer will often be necessary to keep these vigorous vining plants growing and setting pods.

Pod feeding insects such as European corn borer and corn earworm can be problems and may have to be controlled with insecticides. Other insect pests such as thrips, Mexican bean beetle, and leafhoppers can be problems at times.

The major summer disease problems in pole lima beans are downy mildew when the weather is wet, as well as occasional outbreaks of anthracnose and Phomopsis pod blight. Keep informed by reading the Weekly Crop Update on the potential for downy mildew and start controls if advised that weather conditions are favorable.

Air pollution can cause bronzing of lima beans in hot, stagnant conditions with air inversions or in areas with a lot of vehicle traffic.
**Downy Mildew Alert** - Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu and Kate Everts, Vegetable Pathologist, University of Delaware and University of Maryland; keverts@umd.edu

Downy mildew was observed on cucumber in our sentinel plots on Wednesday, July 9 near Georgetown, DE by Emmalea Ernest. She found several small spots on 3-4 leaves on the susceptible slicing variety ‘Straight Eight’. This indicates that we had a transport event of spores from the South over the weekend as predicted by the NC State Plant Disease Forecast Center. We are recommending that cucumbers be sprayed at this time to protect plants that are at a vulnerable stage of development. We are recommending fungicide programs that utilize fungicides that have provided very good control in the past several years. Previcur Flex or Ranman combined with Bravo and alternated with Tanos combined with mancozeb or Bravo have done well in regional trials. Ranman/Bravo alternated with Previcur Flex/Bravo has also been a very effective combination. Other fungicides that are good alternating partners have been Curzate and Gavel. Another very good product that was just registered is Presidio from Valent. It had very good activity against downy mildew in tests conducted in North Carolina and could be used in a program as you would Previcur Flex or Ranman, or in alternation with these products. Presidio also needs to be tank mixed with a protectant fungicide. Be sure to check the labels for specific instructions and resistance management strategies.

For other cucurbit crops we are suggesting that you wait until the disease is seen on crops other than cucumbers. Be sure to be checking your fields daily especially in areas that had heavy rainfall Sunday. Our sentinel plots have other cucurbits including cantaloupe, pumpkin, watermelon and winter squash. To repeat, downy mildew was only seen on cucumber near Georgetown, DE and it is not present on any crop in the sentinel plots in Salisbury, MD. To track disease development visit the Downy Mildew Forecast website often http://www.ces.ncsu.edu/depts/pp/cucurbit/

**Agronomic Crops**

**Agronomic Crop Insects** - Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

Reminder - Warrior II is now present in the market place so be sure to read the label to be sure you are applying the correct rate. This new formulation is twice as active (2.08 lbs of active ingredient per gallon) as the old Warrior (1.04 lb of active ingredient per gallon) so be sure to read the label for the
correct rates as well as restrictions. (http://www.cdms.net/LDat/ld8JD000.pdf).

Alfalfa
If you have not been scouting fields, be sure to keep a close watch for leafhoppers. Although the recent rains can help to get alfalfa growing ahead of damage, we continue to see an increase in adult and nymph activity. Remember, the nymphs can quickly cause damage and once yellowing is present significant damage has already occurred both in season as well as to the long term health of the stand. During extended periods of hot, dry weather you may need to reduce treatment thresholds by one-third to one half.

Field Corn
We are starting to see an increase in Japanese beetles and corn rootworm beetles feeding on corn silks. Both of these insects can potentially interfere with pollination. However, silk feeding by these beetles will not reduce pollination if they cut the corn silks after pollination has already taken place. As a general guideline, an insecticide treatment may be needed if two or more Japanese beetles or corn rootworm beetles are present per ear and silks are clipped to less than ½ inch prior to pollen shed. As far as stinkbugs, we have no thresholds for our area; however, the following is information from Georgia:

“Corn is most sensitive to stink bug injury during ear elongation before pollen shed. The treatment threshold at this stage is 1 bug per 4 plants (25% infested plants). Once pollination occurs, feeding though the husk causes damage to individual kernels. Kernels are susceptible to damage up until the milk stage (R3) and possibly early dough stage (R4). The threshold at this time is 1 bug per 2 plants (50% infested plants).”

Soybeans
In areas receiving rain it appears to be helping soybeans to grow ahead of some of the defoliators. However, in areas that have not received adequate rain or if conditions become hot and dry again, you will need to keep a close watch on defoliation levels. We have a wide variety of defoliators present in fields including Japanese beetles, green cloverworm, grasshoppers, blister beetles and silver spotted skipper. The best way to make a treatment decision in full season soybeans is to estimate defoliation. With the increased value of soybeans, you should consider using a lower defoliation threshold to make a treatment decision. As a general guideline, you may want to reduce thresholds by at least 1/3. As full season beans enter the reproductive stages, the defoliation threshold also drops. Remember that double crop soybeans can not tolerate as much defoliation as full season beans so be sure to watch newly emerged fields carefully.

As full season beans start to set pods in the next week to 10 days, you will also need to consider stink bugs. We have started to see an increase in both brown and green stink bug populations. Economic damage is most likely to occur during the pod development and pod fill stages. You will need to sample for both adults and nymphs when making a treatment decision. Available thresholds are based on beans that are in the pod development and fill stages. We are currently following the same guidelines that are being used in Virginia. Thresholds are also based on numbers of large nymphs and adults, as those are the stages most capable of damaging pods. As a general guideline, current thresholds are set at 1 large nymph/adult (either brown or green stink bug) per row foot if using a beat sheet, or, 2.5 per 15 sweeps in narrow-row beans, or 3.5 per 15 sweeps in wide-row beans.

Spider mites can still be found in fields throughout the state. In many cases, if economic levels are still present after a rain it would be a good time to treat, especially with dimethoate, since the plants are actively growing and will be more able to benefit from the systemic action of dimethoate. As a reminder, dimethoate is very susceptible to alkaline hydrolysis (chemical breakdown from high pH water) so pH of water is an important factor to consider with dimethoate applications.
**Soybean Disease Update** - Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu

**Soybean Cyst Nematodes**
The first soybean cyst nematode sample came into the lab this week. Plants were stunted and in some patches dying. White and yellow females were very evident on the infested roots. High initial egg populations in the soil and droughty conditions soon after planting can result in these symptoms. Other problems can look like SCN. The only way to be sure is to look at the roots or take a soil sample that includes some plants as well.

**SCN damage often shows up as random spots in the field.**

**Soybean Rust**
A few more counties in Florida have been added to the map this week. Both finds were soybean rust infecting kudzu. The disease is still moving slowly down South. Be sure to keep up-to-date on the latest info by visiting www.sbrusa.net or http://sbr.ipmpipe.org

**July Supply and Demand Report Highlights** - Carl German, Extension Crops Marketing Specialist; clgerman@udel.edu

**Corn Analysis**
USDA projected an increase in '08/'09 ending stocks for U.S. corn to 833 million bushels, above the average pre-report guess of 820 mb and 160 mb more than last month's estimate. This report incorporated the June harvested acreage estimate of 78.9 million acres and cut average yield from the June estimate by one half bushel to 148.4 bushels per acre, resulting in estimated production of 11.715 billion bushels. This is 20 million bushels less than the June production forecast. Feed and residual use was cut 100 mb for '07/'08 but was raised 50 mb for the '08/'09 marketing year. Ethanol use was cut 50 mb for both the '07/'08 and '08/'09 marketing years. Exports were left unchanged for both years. The season average farm price estimate was increased by 20 cents per bushel on both ends of the price range, now placed at $5.50 to $6.50 per bushel.

World ending stocks of corn were projected at 105.31 mmt, 2.02 mmt larger than last month.

**Soybean Analysis**
U.S. soybean stocks are projected to decline to 140 million bushels for the '08/'09 marketing year, down 35 million bushels from the June report. Harvested acreage is placed at 72.1 million bushels (taken from USDA's June 30 Acreage Report). The yield estimate was decreased by one half bushel per acre from the June estimate and is now placed at 41.6 bushels per acre. U.S. soybean production is now forecast at 3 billion bushels for the '08/'09 marketing year, 105 million bushels less than the June estimate. Adjustments to ending stocks for the '07/'08 marketing year were left unchanged due to counterbalancing adjustments to exports and residual use. For the '08/'09 marketing year, crush was cut 10 mb, export projections were reduced 50 mb and residual use was cut 6 mb. The season average farm price projection was increased $1.00 per bushel on both ends of the
price range, now placed at $12.00 to $13.50 per bushel.

World ending stocks for soybeans were reduced 1.54 mmt from last month and are now placed at 48.87 mmt.

Wheat Analysis
All U.S. wheat production is forecast at 2.461 billion bushels, an increase of 29 mb from the June estimate and below the average of pre-report estimates. U.S. ending stocks for all wheat for the '08/'09 marketing year, now projected at 537 million bushels, are 50 million bushels larger than last month. The season average farm price was unchanged from the June estimate at $6.75 to $8.25 per bushel.

Global wheat production is projected at a record 664 million tons. World ending stocks are now placed at 133.06 million metric tons, reflecting a 1 mmt increase from the June estimate.

Marketing Strategy
There are currently two primary driving forces that are influencing commodity prices: the price of crude oil (currently trading at $146.40 per barrel) and the lateness of the growing season which suggests that any yield estimates being made at this point in time are basically educated guesses with the outcome not likely to be known until harvest. We can expect commodity prices to remain extremely volatile throughout the summer.

Dec '08 corn futures are currently trading at $7.02 per bushel; Nov '08 soybeans at $15.93; July '08 SRW wheat at $8.17; and Dec '08 SRW wheat at $8.43 per bushel.

For technical assistance on making grain marketing decisions contact: Carl L. German, Extension Crops Marketing Specialist

Announcements

UD Watermelon Twilight Meeting
Wednesday, August 13, 2008   6:30 p.m.
Carvel Research and Education Center
16483 County Seat Hwy, Georgetown, DE

Watermelon Disease Control
Kate Everts – See Fusarium wilt control trials and learn about results from recent fungicide trials for gummy stem blight. Discuss Pristine resistance as it relates to the Delmarva.

Watermelon Weed Control
Mark VanGessel – See experiments on general weed control, experimental fumigant for under plastic mulch and recovery and response of watermelons to herbicide drift.

Watermelon Insect Update
Joanne Whalen

2008 Watermelon Variety Trial
Emmalea Ernest - See and sample varieties from the trial.

Meet at the picnic grove near the farm shop to board the wagon and begin the tour at 6:30 p.m. Stay to enjoy dessert and taste some of the varieties from the variety trial afterwards.

Please pre-register on or before August 11, 2008 by contacting Karen Adams at adams@udel.edu or (302) 856-2585 x 540.
Recent Topics:
Is it too Late for Fungicides in Corn?
Recent Rainfall
Pumpkin Spray Programs
Downy Mildew
Green Cloverworms
Current Pest Alerts
Improving Glyphosate Performance
By Local, Increased Transportation Costs Give Eastern Growers an Edge
Doing Good On-Farm Tests
Pole Lima Beans
Dairy – Importance of Getting Cows Bred
Poultry – Evaporative Cooling Does Not Help at Night

Weather Summary
Carvel Research and Education Center Georgetown, DE
Week of July 3 to July 9, 2008
Readings Taken from Midnight to Midnight

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<tr>
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<tr>
<td>0.15 inch: July 8</td>
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<tr>
<td>0.07 inch: July 9</td>
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<table>
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<th>Air Temperature:</th>
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<tr>
<td>Highs ranged from 88°F on July 3 and July 4 to 80°F on July 9.</td>
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<tr>
<td>Lows ranged from 71°F on July 7 to 66°F on July 3.</td>
</tr>
</tbody>
</table>

Additional Delaware weather data is available at http://www.deos.udel.edu/monthly_retrieval.html and http://www.rec.udel.edu/TopLevel/Weather.htm

Weekly Crop Update is compiled and edited by Emmalea Ernest, Extension Associate - Vegetable Crops
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