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

Asparagus.
Asparagus beetle adults can be found laying eggs on spears. A treatment is recommended if 2% of the spears are infested with eggs. Since adults will also feed on the spears, a treatment is recommended if 5% of the plants are infested with adults. Sevin, Lannate, Ambush, or Pounce will provide control.

Cabbage.
Continue to sample for imported cabbageworm and diamondback larvae in cole crops. A treatment is recommended if you find 5% of the plants infested. The following products will provide excellent worm control: Avaunt, the Bt insecticides, Proclaim and Spintor.

Melons.
Seed corn maggot flies can be found laying eggs in fields, especially where chicken manure or green manures have been recently plowed under. A seed corn maggot control should be considered in all fields planted through the end of May. A broadcast application of diazinon before planting has provided control. The use of Admire or Platinum through the drip or applied to transplants before seeding in the field can also provide suppression of seed corn maggot.

Peas.
As soon as fields start to bloom, it is important to sample fields on a weekly basis for pea aphids. You should sample for pea aphids by taking 10 sweeps in 10 locations and counting the number of aphids per sweep. A treatment is recommended if you find 50 or more aphids per sweep. Dimethoate or Lannate will provide aphid control. Be sure to check the labels for application restrictions during bloom.

Thoughts on Spinach – Ed Kee, Extension Vegetable Crops Specialist; kee@udel.edu

Spinach grown for processing has been produced in Delaware for decades. It is planted in March and April for harvest in May and early June, in late August for fall harvest, and in early October for overwintering and subsequent harvest the following spring. In the past 15 years, the acreage has increased. Often called the “crisis crop,” it demands good management and attention to detail on all aspects from seeding to harvest. Delaware producers have done a great job with this demanding crop.

Spinach is a cool season crop. Its vegetative growth is optimized in the 60-65 degree F range. Germination is also temperature dependent, see the table below:
The rate of germination increases with temperature, although if soil temperatures reach 86° F, germination does not occur. This fact may explain occasional erratic stands in August plantings, that is, the seed just doesn’t germinate when exposed to high temperatures.

Spinach goes into its reproductive stage in response to day length and temperature. As day length approaches 12-15 hours, depending on variety, seed stalk formation takes place, known as “bolting.” This is accelerated as temperatures get warmer. Bolting is accentuated if the spinach has been exposed to low temperatures, and then long days with high temperatures. This climatic condition can occur with our cool springs followed by a hot month of June. Producers have done a great job of being ahead of the curve, harvesting before bolting begins.

### Onions for Processing on Delmarva? – Ed Kee, Extension Vegetable Crops Specialist; kee@udel.edu

Several small, trial plantings of onions for processing were planted last fall and this spring with growers and at the UD Research & Education Center. Currently, eastern processors ship raw product from the western states for freezing or other processing. Due to climatic advantages, western growers can usually obtain higher tonnage and excellent quality. Increased sunlight, controlled irrigation, and lower humidity all combine to set the stage for better germination, better growth rates, and less disease. As a result, yields per acre and the solids content of the onion are generally higher for onions grown in the west. The critical economic question is can eastern yields and quality be competitive with the higher yields of the west. While freight is another expense associated with bringing western onions to the east, experience to date has indicated that eastern yields have not been competitive despite freight advantages.

An onion bulb is essentially a group of concentric swollen leaf bases. At bulb initiation, basal sheaths begin thickening. New leaves being produced gradually produce smaller and smaller blades until only bladeless sheaths are produced. Bulb enlargement is the result of the thickening of those sheaths which become the bulb scales. The outer sheaths lose moisture as they mature, making the paper thin skin we are familiar with. The inner leaf bases thicken. The ultimate yield of onion is determined by the number of leaves that form prior to bulbing.

In 1923, Garner and Allard of the USDA, discovered that bulbing is a long day, photoperiod response. Long days are required for bulbing to occur. If the photoperiod is shorter than the critical photoperiod, bulbing will not occur. Cultivars differ in minimum length of day required to induce bulbing. Some require as few as 10-12 hours and some up to 16 hours. Long day onions planted under short days will never bulb; short day onions planted under long days will produce very small bulbs. Onions planted on Delmarva would require long day onions, to trigger bulbing for growth in the summer. Onions started from seed require longer photoperiods than those started from sets or transplants.

This explains, in part, the yield differential between regions. Our cool springs delay germination and growth, thus limiting the number of leaf sheaths formed prior to bulbing. Thus the size of the bulb may be naturally limited by climatic conditions. Newer, better adapted varieties may reduce this limitation, thus the trials that are on going.
Vegetable Diseases  - Bob Mulrooney, Extension Plant Pathologist, bobmul@udel.edu

Steve Johnston. This region lost a very valuable member of the agricultural community on April 16th. Steve died as the result of an accident while cutting down a tree with a friend. He was the Extension Vegetable Specialist located at the South Jersey Research and Extension Center near Centerton, NJ. Steve was a nationally known and well-respected plant pathologist as well as a wonderful human being as many of you know and he will be sorely missed. He had an extensive field program and was known for his work on Fusarium crown rot on asparagus, Phytophthora blight on pepper, leafspot on carrots, and many more. Steve was the disease control section editor and coordinator for the Commercial Vegetable Production Recommendations EB 137 that is widely used in the Mid-Atlantic region.

Potatoes.
The threat of late blight for Delaware growers is almost non-existent again due to the absence of late blight in the seed growing areas where our seed is grown. Except for a few scattered spots in Canada, that never resulted in tuber infections, late blight has dropped off the radar screen once again. So what diseases do we see that need to be prevented? Soil born diseases such as pink rot and Rhizoctonia can now be controlled with in-furrow applications of Ridomil or UltraFlourish for pink rot and Rhizoctonia stem canker can be prevented with Maxim seed treatment and/or Quadris applied in-furrow. Blocker can be applied in a band over the row at planting as well for Rhizoctonia stem canker control. The most common fungal diseases we see in Delaware are early blight on the leaves and black dot on the stems. For early maturing varieties with resistance to early blight, fungicides may only be needed late in the season, when weather conditions become more favorable for infection for later maturing varieties that are more susceptible to early blight like ‘Norkotah Russet’ more sprays would be necessary. Black dot is a problematic disease for us because it is very common and has been found in every field where I have looked for it. In spite of this, black dot causes little or no damage to our potatoes unless conditions are stressful for the crop such as high humidity and temperature. In areas where harvest is delayed, black dot can cause some tuber discoloration but it is minor. Early blight is controlled with Dithane or other mancozeb fungicide, SuperTin, or Bravo and when pressure increases later in the season Bravo, or the strobilurin fungicides Quadris, Headline or Gem are very effective especially on early blight susceptible varieties. The three strobilurin fungicides are also effective at preventing black dot. I would suggest a foliar disease control program that would target early blight and possibly black dot that would include sprays beginning around flowering and continuing at 7-10 day intervals with mancozeb or Bravo. An alternative that would provide excellent control of both diseases would include an application of a strobilurin (Quadris, Headline or Gem) around flowering followed by mancozeb or Bravo 7-14 days later, then another strobilurin. That should be all the strobilurin fungicide that you should need. Late maturing varieties including russets may need additional sprays, and are the most likely to benefit from the increased level of control provided by the strobilurins. Do not alternate between these strobilurins thinking they are different fungicides. They all have the same mode of action and need to be alternated with fungicides in a different class such as mancozeb, Bravo, or SuperTin. To prevent resistance developing in the fungus that causes early blight, do not make sequential applications of these strobilurin fungicides.
Field Crops

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

Field Corn.
Black cutworm catches have significantly increased in the Frederica, Leipsic, Lewes, Middletown, Milford and Smyrna areas (see trap catch table on the last page or look at our web-page at http://www.udel.edu/IPM/traps/currentbcwtrap.html). As soon as corn emerges, watch for early signs of leaf feeding which could appear as small pinholes when larvae are small. This damage often provides an indication of where you will see cut plants in the next week. No treatment will be needed until you find 10 % leaf feeding or 3% cut plants on 1-2 leaf stage corn. On 3-4 leaf stage corn, the treatment threshold is 5% cut plants. A pyrethroid or Lorsban will provide cost-effective control. Since cutworms are nocturnal, applications applied later in the day or in the evening will provide the best control.

As corn emerges, you should also watch for bird damage. You can distinguish bird damage from cutworm damage by the pattern in the field: generally longer strips of damaged plants, plants pulled out of the ground, and/or plants cut high that are compressed at the base of the stems. Although birds can cut plants off at the soil surface, they tend to pull plants out of the ground. In addition, if you look closely you will see "bird prints" near the missing plants or holes were birds have pulled plants out of the ground so do not confuse it with cutworm damage.

We can also find numerous slug eggs under last year's crop residues. Although we have no new products to control slugs, the use of trash cleaners and starter fertilizers can help corn to emerge quickly and grow ahead of the damage. Metaldehyde baits (e.g. Deadline MPs and TrailsEnd LG) or the use of liquid nitrogen at the spike to one leaf stage also helps to reduce slug activity buying time to enable the crop to outgrow the problem.

Small Grains.
Cereal leaf beetle adults, eggs and larvae can be found in barley and wheat fields in Kent and Sussex counties. No treatment is needed until you find either 0.5 larvae per stem or 25 eggs and/or larvae per 100 tillers and 50% of the eggs have hatched. In the next 7-10 days, you should also start sampling the most advanced fields for grass sawfly and armyworm larvae. Remember, armyworm larvae are nocturnal so look for larvae at the base of the plants during the day. The threshold is one per foot of row for barley and 2 per foot of row for wheat. Once sawfly larvae are detected, sample 5 foot of row inner space in 5-10 locations in a field to make a treatment decision. You will need to shake the plants to dislodge larvae that feed on the plants during the day. No treatment will be needed until you find 2 larvae per 5 foot of row inner space or 0.4 larvae per foot of row. If both are present, the threshold for each should be reduced by one-half. In barley, your control options for all 3 insect pests include Lannate or Parathion. In wheat, your options include Lannate, Mustang, Parathion or Warrior. Remember, Parathion can only be applied by air and has numerous set back restrictions. Also, all uses of ethyl parathion end October 31, 2003.

2003 Black Cutworm Pheromone Trap Counts

Found on page 10.
**Field Crop Diseases** - *Bob Mulrooney, Extension Plant Pathologist, bobmul@udel.edu*

Wheat. Powdery mildew was seen this week on wheat in Sussex County. The wheat I saw had 6-7 spots on the oldest leaves, so it was not bad. Remember that spraying for powdery mildew control should be delayed until at least the flag emerges unless mildew is rampant. Now that most wheat is jointed (Growth stage 6) it should be scouted regularly for powdery mildew. As always planting the best yielding resistant varieties is the best control strategy, but if mildew threatens to rob yields later, fungicide control is the best control measure.

The following article was reprinted from Kentucky Pest News written by Dr. Don Hershman, and accurately reflects conditions here. Only the fungicide prices may vary.

**HEADLINE FUNGICIDE ADDED TO WHEAT DISEASE CONTROL ARSENAL**

In September 2002, BASF Corporation received an EPA Section 3 registration for the foliar fungicide, Headline. This is important news for Kentucky's wheat producers because it adds yet another "tool" to the wheat disease control "tool box". Headline contains the active ingredient pyraclostrobin (23%). Pyraclostrobin is a strobilurin in the same chemical class as the active ingredient in Quadris (azoxystrobin), and one of the two active ingredients in Stratego (trifloxystrobin). Headline will be available for sale and use on wheat (and barley) this spring.

Headline is a valuable addition to the wheat fungicide arsenal because, like Quadris, it may be applied until the crop begins to flower, post head emergence. In contrast, Tilt (propiconazole), and Stratego, which contains propiconazole, must be applied to the crop before 50% crop flag leaf emergence. This is an important distinction since research and experience with fungicides in Kentucky indicate that fungicides are usually most effective when applied during early to late head emergence. An exception is when powdery mildew is a problem; in those cases, flag leaf and earlier applications may be appropriate.

Headline, Quadris, Stratego, and Tilt are all excellent fungicides. I came to this conclusion after reviewing published research reports from seven different states for 1999-2002. The bottom line is this: assuming proper timing, rate, and method of application, there is very little practical difference in disease control achieved between the different products (see Table 1). Quadris, and to a lesser extent Headline and Stratego, have somewhat less activity against powdery mildew compared to Tilt, and the opposite is true for leaf rust (i.e., Tilt has somewhat reduced activity compared with Headline, Quadris, and Stratego). Nonetheless, I have not seen any data which indicates that any one fungicide is "head and shoulders" above the others as long as sufficient rates of active ingredient are applied at the proper time, and sufficient disease pressure exists.

<table>
<thead>
<tr>
<th>Product</th>
<th>Powdery mildew</th>
<th>Leaf/glume blotch</th>
<th>Leaf rust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headline</td>
<td>++(+))</td>
<td>+++</td>
<td>++++</td>
</tr>
<tr>
<td>Quadris</td>
<td>++(+)</td>
<td>+++</td>
<td>++++</td>
</tr>
</tbody>
</table>
Stratego      ++(+)        +++        +++
Tilt          +++        +++        +++

Very good control = ++; excellent = +++; superior = ++++; (+) = Control at higher use rates.

Cost is a big factor in making wheat foliar fungicide selection decisions. Recently, we called various ag dealerships in different parts of the state and conducted a limited price comparison survey for the different foliar fungicides available for use on wheat. The results are as follows:

<table>
<thead>
<tr>
<th>Product</th>
<th>Ave. retail price/gal</th>
<th>Price range</th>
<th>Cost per rate applied*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headline</td>
<td>$209</td>
<td>$200-$229</td>
<td>6.0 fl. oz. = $9.80 / 9.0 fl. oz. = $14.70</td>
</tr>
<tr>
<td>Quadris</td>
<td>$271</td>
<td>$250-$289</td>
<td>6.2 fl. oz. = $13.12 / 8.2 fl. oz. = $17.36 / 10.8 fl. oz = $22.90</td>
</tr>
<tr>
<td>Stratego</td>
<td>$140</td>
<td>$137-$143</td>
<td>10.0 fl oz = $10.98</td>
</tr>
<tr>
<td>Tilt</td>
<td>$341</td>
<td>$295-$380</td>
<td>4.0 fl oz = $10.66</td>
</tr>
</tbody>
</table>

*Based on average retail price at different use rates. Does not include cost of additives or application.

As can be seen in the above table, the price-competitiveness of Headline and Quadris, compared with the industry standard, Tilt, is dependent on the rate applied. Because of the newness of these fungicides, I do not yet feel qualified to recommend a specific use rate for either fungicide. This, obviously, is an important decision with great potential for economic impact. Thus, I suggest you consult your company sales rep for specific use rate recommendations for both Quadris and Headline.

Anytime you decide to spray a foliar fungicide, it is always a good idea to leave a small amount of wheat unsprayed for comparison purposes.

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**Rootworm – Resistant Bt Corn Hybrids and Buyer Acceptance** - Richard W. Taylor, Extension Agronomist; rtaylor@udel.edu

EPA approval without global approval (especially by the European Union) of the new rootworm-resistant Bt corn technology brings to mind the Starlink GMO issues of corn segregation or identity-preservation and of buyer acceptance of corn known to be mixed with the new technology. Dr. R. L. (Bob) Nielsen with the Agronomy Department at Purdue University recently published an article entitled “Corn Segregation: A Necessary Evil in Today’s Biotech Age?” at the Chat’n Chew Cafe, 23 April 2003. The web address for the article is listed below and should be read by those considering using the new rootworm-resistant Bt corn technology.

**URL:**
http://www.kingcorn.org/news/articles.03/GMO_Segregation-0423.html

**Additional Comments on Rescue Inoculation of Alfalfa** - Richard W. Taylor, Extension Agronomist; rtaylor@udel.edu

Jim Lewis, Caroline County Extension Ag Agent, in Maryland was kind enough to suggest another
method of rescue inoculation when an initial nodulation failure occurs on alfalfa. In general, Jim reports no problem with spring seeding dates but has seen five cases of inoculation failure with fall seeding dates over the last seven years. He had recommended to the grower to apply about 50 lbs of nitrogen (N) per acre either immediately or after the first cutting. In all five cases, this was a successful strategy and in three of the five cases the fields had been planted to alfalfa before.

The lack of a problem with spring seeding dates may have to do with the cooler storage temperatures for the seed between inoculation by the seed supplier and the planting date. For late-summer and fall seeding dates, the seed likely experienced some months of high ambient temperatures as well as be nearly at the end of the life expectancy of the Bradyrhizobia. That combination likely leads to more failures.

The approach of N fertilization is likely to work best in fields with some history of alfalfa. The surface few inches of our soils can become very hot during our summer weather and after a few years the Bradyrhizobia population in the surface soil may be too low to adequately nodulate alfalfa. In part, that is why we recommend always using inoculated seed. When a failure occurs, the addition of N helps the alfalfa develop a deeper and more extensive root system that will likely nodulate as the N supply decreases again. Alfalfa seeded in a field that never has been planted to alfalfa can be nodulated in this fashion if the bacteria have been blown in from nearby fields or otherwise transported to the field. Some strains of Bradyrhizobia can also form effective or ineffectual nodules on alfalfa. If partially effective, the field will appear to recover, but may never be very productive. I would suggest that unless there is a history of alfalfa in a field where a failure has occurred, the best option is to try one of the methods discussed in last week’s Weekly Crop Update. This will ensure that an effective strain of Bradyrhizobia nodulates alfalfa in these questionable fields.

My thanks again to Jim Lewis for his insight on the problem.

Thinking of Early Planted Soybeans - Richard W. Taylor, Extension Agronomist; rtaylor@udel.edu

What do I mean by early-planted soybeans? I am talking about planting group IV and V soybean varieties in late April or the first week of May and group III varieties in early to mid-May.

Why plant so early? Early-planted beans have a higher yield potential than beans planted the usual time of early June. In fact, early planted soybeans often yield 5 to 15 bu/A more than traditional early-June planted beans, depending on the growing season. Early-planted beans mature on schedule while June-planted beans, especially those varieties from maturity group V, often do not mature until or after the first-killing frost in the fall.

Do you need to worry about late spring frosts killing early-planted beans? In general, this should not be a problem. In a study that Bob Uniatowski and I conducted, beans planted on April 15 tolerated a frost on May 7 one year that killed corn in a nearby field. Other agronomists also have noted cold tolerance in young soybean plants.

There are several cautions that I should mention. Since many growers still will be planting corn, it may be more time consuming and costly to switch to soybeans and will cause too much of a delay in finishing the rest of the corn acreage. Try this first on a limited number of acres to see how it fits into your program. Vary your planting dates and maturity selections to reduce your risk of one dry spell hurting bean yields. If you try early-planted beans, consider using beans that have been treated with either Captan and thiram or Apron if the following conditions occur: the field has a history of Phytophthora problems, it will be planted no-till and soil conditions are wet and cold, or it
will be planted conventional but you expect the field to stay wet and cold for some time.

Grain Marketing Highlights - Carl German, Extension Crops Marketing Specialist; clgerman@udel.edu

Comments Sought on Trade Adjustment
USDA has invited public comments on proposed regulations for the Trade Adjustment Assistance For Farmers program. Under the program, USDA is to provide funds to eligible producers of raw agricultural commodities when the Secretary of Agriculture determines that increased imports have contributed to a specific price decline over five preceding marketing years. The request for public comments was published in the Federal Register on April 24th and can be viewed on the web at http://www.fas.usda.gov/info/fr/notices.html.

The Trade Act of 2002 established the program and the procedures for producers to petition for 'certification of eligibility' to apply for adjustment assistance payments. Comments on the proposed rules must be received on or before May 23, 2003.

Comments should be mailed or delivered to Jean-Louis Pajot, Import Policies and Programs Division, Foreign Agricultural Service, 1400 Independence Avenue SW, STOP 1021, U.S. Department of Agriculture, Washington, DC 20250-1021 or email to Jean-Louis.Pajot@usda.gov. Comments can be reviewed between 10 a.m. and 4 p.m. weekdays in room 5541-S, Independence Avenue SW, Washington, DC 20250-1021.

USDA Announces New Sign-Up for CRP
Agricultural Secretary, Ann Veneman has announced sign-up is to begin May 5th for the Conservation Reserve Program (CRP). A general CRP sign-up is slated for May 5-May 30th. Producers will be able to register at local USDA Farm Service Agencies. The 2002 Farm Bill authorized USDA to maintain CRP enrollment up to 39.2 million acres.

In addition to the general sign-up, there is a continuous sign-up program that remains in effect. USDA has reserved two million acres for the continuous sign-up program, which represents the most environmentally desirable and sensitive land. Current participants with contracts expiring this fall, can make new contract offers. Start dates for those contracts can be for either October 1, 2003, or October 1, 2004. One other general sign-up will be offered through 2007.

General Market Comments
Corn planting in the U.S. is progressing well with last week's report indicating 12% complete which is about 5 points better than the long term average. At the current rate we could be nearing 30% complete by the end of this week. Market analysts will be watching weather developments as we enter the growing season. Planting progress is expected to be at the 50% level by May 9th.

Old crop soybeans have declined about 20 cents per bushel from their recent highs along with a general weakening of the basis both locally and nationally. Soybean harvest is 75% complete in Brazil and 50% in Argentina. It is extremely encouraging that we experienced a soybean price rally in the wake of the Southern Hemisphere harvest. Some analysts now believe that it is possible to see 02/03 marketing year ending stocks for soybeans to close out under 100 million bushels. The SARS scare has cast a negative tone over the soybean market this past week. The situation is not likely to change at least until more is known about the impact to the industry from SARS. SARS is the only factor in the soybean market that has not been fully factored into price. It has the potential to take a good bit out of both the Asian and World economy. Therefore, it appears to be advisable to sell any remaining old crop soybeans.

Export sales for corn, soybeans, and wheat for last week were within the range of pre-report
estimates, although not viewed as price motivating.

**Think of All the Angles When Using Clopyralid (Stinger) - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu**

Stinger (clopyralid) and products containing Stinger such as Confront have precautions about use of compost and residues in the plant materials. If grass clippings or plant materials treated with clopyralid are used as a mulch in landscaping or a garden, sensitive plants can be killed. There are a number of instances when a lawn treated with Confront was cut and the clippings used as a mulch around tomatoes and the tomatoes died. As a result, Dow AgroSciences has precautions on the label about not using hay or straw from treated areas, or manure from animals that have been grazed or fed forage from clopyralid treated areas for composting or mulching. There is also a precaution to not transfer livestock from treated grazing areas to sensitive broadleaf crop areas without allowing 7 days of grazing on an untreated pasture, because the urine may contain enough clopyralid to cause injury to sensitive plants. The small amount of clopyralid in the treated pasture or hay is not harmful to livestock, but it is at a high enough concentration to injure sensitive plants. As a result, fields cut for hay and sold should not be treated with clopyralid since that hay or the manure of the animals could be used for compost.

**Soil-applied Herbicides Need To Be Moved Into the Soil - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu**

Herbicides applied to the soil surface require rainfall or irrigation or mechanical incorporation to move them into the soil where the plants will absorb them. The amount of water needed to “activate” these herbicides depends on the water solubility of the herbicide and moisture content of the soil. Even with good soil moisture like we have, it still will require some rain or irrigation to move the herbicide into the soil. Most soil-applied herbicides require 0.5 to 0.75 inches to be moved in the soil if the soil is “dry” (less water if the soil is moist). Princep requires 0.75 to 1.0 inches of water to become “activated”. If you have irrigation and your corn herbicides have been applied but you have not received at least 0.5 inches of water, you should consider applying that amount with your system. Mechanical incorporation with a field cultivator, set no more than 3 to 4 inches deep, will physically move the herbicide into the root zone. A field cultivator set any deeper will cause the herbicides to become too diluted. A field cultivator will mix the soil to half the depth it is set (set to 4 inches – soil mixes to 2 inches). This is one situation where spending a little money now could save money later. For instance, if your residual grass herbicide is not moved into the soil and grass control is poor, you are looking at a postemergence application of Option, Steadfast, or Accent-containing pre-mix. Control of crabgrass with postemergence herbicides is only fair. Spending the money to irrigate and activate the herbicides could save a high herbicide bill later.
2003 Black Cutworm Pheromone Trap Counts

Trapping date: April 15 - 21, 2003

<table>
<thead>
<tr>
<th>Location</th>
<th>Moths</th>
<th>Location</th>
<th>Moths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridgeville</td>
<td>7</td>
<td>Magnolia</td>
<td>3</td>
</tr>
<tr>
<td>Delmar</td>
<td>5</td>
<td>Middletown</td>
<td>8</td>
</tr>
<tr>
<td>Ellendale</td>
<td>0</td>
<td>Milford</td>
<td>16</td>
</tr>
<tr>
<td>Felton</td>
<td>5</td>
<td>Millsboro</td>
<td>1</td>
</tr>
<tr>
<td>Frederica</td>
<td>8</td>
<td>Milton</td>
<td>7</td>
</tr>
<tr>
<td>Georgetown (UD REC)</td>
<td>6</td>
<td>Sandtown</td>
<td>4</td>
</tr>
<tr>
<td>Greenwood</td>
<td>6</td>
<td>Seaford</td>
<td>0</td>
</tr>
<tr>
<td>Harrington</td>
<td>6</td>
<td>Selbyville</td>
<td>3</td>
</tr>
<tr>
<td>Kenton</td>
<td>1</td>
<td>Smyrna</td>
<td>8</td>
</tr>
<tr>
<td>Laurel</td>
<td>7</td>
<td>Townsend</td>
<td>3</td>
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<tr>
<td>Leipsic</td>
<td>27</td>
<td>Wyoming</td>
<td>1</td>
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<tr>
<td>Lewes</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lincoln</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Little Creek</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE:
(1) Moth catches of 9 to 15 moths per 7-day period =mod. to high potential for outbreaks.
(2) You can expect to see cutting activity around 300 degree-days, base of 50 degree F from peak moth activity.

Weather Summary

http://www.rec.udel.edu/TopLevel/Weather.htm

Weeks of April 17 to April 24, 2003

Rainfall:
0.09 inches: April 18

Readings taken for the previous 24 hours at 8 a.m.

Air Temperature:
Highs Ranged from 71°F on April 22 to 46°F on April 18.
Lows Ranged from 53°F on April 22 to 38°F on April 20.

Soil Temperature:
55°F average for the week.
(Soil temperature taken at a 2 inch depth, under sod)

Web Address for the U of D Research & Education Center:
http://www.rec.udel.edu

Compiled and Edited By:

Tracy Wootten
Extension Associate - Vegetable Crops

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Weekly Crop Update: 10