Vegetables

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

**Melons.**
Continue to scout all early-planted melons for aphids, cucumber beetles, and spider mites. The threshold for mites is a 20-30% infested crown with 1-2 mites per leaf. If populations of mites explode and adult mites are the predominant life stage, Capture or Danitol should be used. If the population is a mixture of eggs, immature mites and lower levels of adult mites, Agri-Mek should be used. If dimethoate has provided very poor mite control. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf. Fulfill, Lannate and Thiodan are labeled on melons and will provide melon aphid control. **Dimethoate will not control melon aphids.**

**Peas.**
As the earliest peas bloom and set pin pods, be sure to sample for aphids. Although levels have been generally low, we are starting to see an increase in populations. The warmer weather could result in a rapid increase in populations. On small plants, you should sample for aphids by counting the number of aphids on 10 plants in 10 locations throughout a field. On larger plants, take 10 sweeps in 10 locations. A treatment is recommended if you find 5-10 aphids per plant or 50 or more aphids per sweep. Dimethoate or Lannate will provide aphid control. Be sure to check the labels for application restrictions during bloom.

**Potatoes.**
The first Colorado potato beetle adults and egg masses have been found in the earliest emerged fields. Actara, cryolite, Spintor or Provado will provide control. **To avoid the development of resistance to Actara or Provado, fields treated with Admire, Platinum or Tops MZ Gaucho at planting should not receive foliar treatments of Provado or Actara.** Corn borer counts remain below one per night except in the Bridgeville, Greenwood, Laurel and Seaford areas where catches are at one per night. Be sure to check our website (http://www.udel.edu/IPM/traps/latestblt.html) for the most recent moth catches in your area. In general, we tend to see an increase in moth populations as soon as temperatures increase after a period of cool rainy weather.

**Sweet Corn.**
Be sure to watch fields planted under plastic for European corn borer larvae. A treatment should be applied if 15% of the plants are infested. The best timing for a treatment is just as the tassels are emerging from the whorls. In recent years, Baythroid, Mustang, Penncap or Warrior have provided effective control. You should also continue to watch for black cutworm and flea...
beetle activity. Damage from both insect pests has been observed in early-planted sweet corn.

**Sinbar Receives Section 18 Label for Watermelons** – Ed Kee, Extension Vegetable Crops Specialist; kee@udel.edu

The EPA has approved Sinbar for preemergence use on watermelons at the rate of 3 to 4 ounces per acre. Sinbar has become an important weed control tool since it received its first Section 18 approval several years ago.

**Pickling Cucumber Weed Control** – Ed Kee, Extension Vegetable Crops Specialist; kee@udel.edu

Planting for pickling cucumbers began last week on the Eastern Shore of Maryland and in Delaware. Curbit and Command can be considered as an effective standard treatment for preemergence use. On the earliest plantings, we recommend 1.5 pints/acre of Curbit and 4 ounces/acre of Command. When the soil is warmer, there is merit in increasing the rate of Curbit to 2 pints per acre to improve broadleaf weed control when there is less risk of crop stunting as the weather warms.

Strategy is a jug-mix of Curbit and Command. 1.5 pints of Strategy delivers 1 pint of Curbit and 4 ounces of Command. We would recommend adding ½ pint of Curbit to the mix, if Strategy is used. One pint should be added as the weather warms to reflect the same recommendation stated above.

Sandea is also available for preemergence and post emergence treatments. It is especially useful for nutsedge and other broadleaf weeds. The rate in either case is 0.5 to 0.66 ounces per acre. Read the label and the Commercial Vegetable Recommendation Guide for further details on timing, use of surfactants and other important information. Do not use if organophosphate insecticides have been applied to the crop. Check the label for plant back or carry-over restrictions for subsequent plantings.

Select 2EC and Poast 1.5 EC are also labeled for post-emergence grass control. Again read the label for complete directions.

Mechanical cultivation is still an important component of a pickle weed control program. If the tractor-mounted harvesters will be used, it is important to minimize soil ridging from the cultivator operation. The ridges prevent the harvester pick-up reel from getting low enough to gather all pickles.

**Sandea On Melons** - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

Gowan has a label for Sandea use on watermelons and cantaloupes. However, the label is not the same for both. The use pattern on watermelons is row middles only at 0.5 to 1 oz/A. For cantaloupes, the use pattern is preemergence for direct seeded melons only. Postemergence applications can be made post-transplant only to bare-ground (not for melons grown on plastic). Sandea does have a label for pre-plant under plastic, with at least a 7-day interval between application and transplanting. (I personally do not have experience with this use.) Finally, Sandea can be used on row middles of cantaloupes.

**Vegetable Crop Diseases** - Bob Mulrooney, Extension Plant Pathologist, bobmul@udel.edu

**Snap beans.**

Apply Ridomil Gold 4E or UltraFlourish in a 6 in. band over the row at planting to control damping-off caused by *Pythium*. If *Pythium* and
**Rhizoctonia** are a problem apply Ridomil PC 11G at planting.

Research work last season on lima beans demonstrated improved stands from Rhizoctonia control if lima beans were treated with Maxim seed treatment at the 0.08 fl. oz/cwt. rate. The implication is that the same would be true for snap beans.

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**Field Crops**

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

**Alfalfa.**
Continue to sample fields for alfalfa weevil. In general, populations are low throughout the state and early cutting should be the best control option for most fields. If you were approaching economic levels before cutting, you should sample for weevil larvae and adults within one week of cutting. In recent years, we have found adults causing as much damage as larvae. No treatment should be needed after the first cutting unless you can find 2 larvae and/or adults per crown and they are feeding on the regrowth.

**Field Corn.**
Black cutworm moth activity and egg laying significantly increased throughout the state this past week (http://www.udel.edu/IPM/traps/currentbcwtrap.html). Be sure to watch for cutworms feeding above and below ground. We have had reports of cutworms feeding below the soil surface. Although we did not get a positive identification on the species, the size of the worm indicates that it may have been variegated cutworm. The early signs of leaf feeding and occasional cut plant from small black cutworms indicates that cutting is happening earlier than the degree-day model predicted, so be sure to watch fields carefully. A treatment in 1-2 leaf stage should be applied if you find 3% cut plants or 10% leaf feeding. The threshold in 3-4 leaf stage corn increases to 5% cut plants. A pyrethroid or Lorsban will provide the best control. Fields should be scouted through the 5th leaf stage for cutworm damage. If cutworms are feeding below the soil surface, it will be important to treat as late in the day as possible, direct sprays to the base of the plants and use at least 30 gallons of water per acre. We are also seeing bird damage in early emerging corn. 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, so do not confuse it with cutworm damage. In general, birds will pull plants out of the ground instead of cutting.

**Soybeans.**
As you plan to plant your first no-till full season beans, be sure to consider a treatment for seed corn maggot. In no-till fields, seed corn maggot will remain a problem through May. Flies continue to lay eggs and maggots will be present at the time of seed germination. Kernel Guard Supreme and KickStart VP are both labeled on
soybeans. The active ingredient in both products is permethrin.

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

**Wheat.**
**Powdery mildew** is still the most prevalent disease on susceptible varieties. Disease pressure is increasing, so check fields regularly especially once the flag leaf emerges. Be aware that some of the newer varieties have levels of resistance that express themselves by producing a few powdery mildew lesions or spots throughout the canopy, but the level of infection remains low. These are hard to judge whether or not to apply a fungicide, but if you check the disease reactions from our variety trials you may get an idea of the varieties reaction here.

I have seen several samples of a tan, zonate spot only on the upper leaves of wheat in both Sussex and New Castle counties. They are not numerous (maybe 1-2/leaf), but look like a fungus disease. As of this writing, I believe they are some type of physiological spotting or environmental. Isolations have not produced a pathogenic fungus although some of the spots are colonized by fungi that live on dead tissue like *Cladosporium*, which causes sooty mold later on heads that are damaged by drought, freezing, or other problems.

The **spot blotch form of net blotch** continues to be found on susceptible barley cultivars. This disease produces oval, reddish-purple spots on the leaves.

* Please note-Correction
In the April 25th, Issue 5 of Weekly Crop Update, I reprinted an article on wheat fungicides from Don Hershman in Kentucky which included this statement: “In contrast, Tilt (propiconazole), and Stratego, which contains propiconazole, must be applied to the crop before 50% crop flag leaf emergence”.

**This is not true for Delaware and Maryland,** Tilt has a 24-C label that allows for application up to head emergence. I am sorry that I did not catch this statement before I submitted it for the newsletter and for any confusion it may have caused our readers.

**Alfalfa.**
Spring black stem can be a problem for Delaware growers. Look for dark brown to black lesions on the stem that can be several inches long, and coalesce to cover most of the stem when severe. Infections can also occur on leaflets. Typically these appear as small dark brown to black spots; just a few of these can cause the leaflets to turn yellow and fall off. If the disease continues to develop, cut and bale the growth early if possible. Even if you normally wait until early flowering, a severe outbreak of spring black stem can justify cutting during the bud stage. By leaving the crop in place, it will continue to defoliate (costing a producer loss in yield and in forage quality). By cutting early, producers will capture whatever yield is available, and it will allow sunlight and wind movement to penetrate to the new crown buds that will break dormancy when the disease gets severe enough.

The recommendation is to cut alfalfa when it is ready, not to wait for a forecast of 3-4 days of sunny, dry conditions. Advancing maturity causes substantial loss of forage quality anyway, and this would only be made worse if spring black stem is active. Thus, waiting for dry weather can cost as much or more than rain damage to the hay.

**Where Does the Lime Go?** - Richard W. Taylor, Extension Agronomist; rtaylor@udel.edu

Thanks to an invitation from one of the area’s crop consultants, I got to visit a wheat field in Sussex County today that is showing unusual patterns, but thanks to tissue and soil test results we at least understand what the problem is if not the underlying cause. The soil pH results
indicated a pH of 5.9 in the good areas and 5.1 in the bad areas and more importantly showed that both calcium (Ca) and magnesium (Mg) base saturations were well below recommended levels despite the field having received a substantial application of wet lime (Hi-Mag lime as well) in the past year. Tissue tests indicated all nutrients were adequate except for Mg that was right at the critical (deficient) level.

If you examine Photos 1, 2, and 3, you can see potential soil patterns (bottoms of hills greener—possibly from higher cation exchange capacity) (Photo 1), possible equipment-made patterns in Photo 2, and a yellowing stripe that follows the lane and then moves out into the field where an irrigation well is located (Photo 3).

The wheat was very close to heading out being in the late boot stage of growth and normally you might not consider any rescue treatment because much of the yield potential has been determined. In this case with fertigation possible using the center pivot system in the field, the consultant and I were recommending the use of Po-Mag (potassium magnesium sulfate) that can be applied in a light irrigation and quickly, we think, green up the plant. Many of the lower leaves were turning yellow as the Mg is mobilized by the plant and sent to the growing point and flag leaf. The treatment should be relatively inexpensive to apply requiring only a small increase in yield to make the treatment cost effective. The additional chlorophyll produced when Mg is applied should lead to that much yield increase even at this late stage of growth.

Dual Injury on Corn - Richard W. Taylor, Extension Agronomist; rtaylor@udel.edu; Greg Binford, Assistant Professor, University of Delaware, binfordg@udel.edu

The unusually hot and cold spring weather is beginning to cause interesting symptoms to show up in some corn fields. Photo’s 1 through 3 show classic acetanilide injury symptoms on corn planted in a conventional seedbed when soil was very moist. The corn also received in-furrow fertilization with 2.5 gal/A of 8-20-0 (plus the
labeled rate of Regent) and a 2 X 2 banded fertilizer application of 12 gal/A of an 8-20-5. The herbicide treatment was a preemergence application of 5 pt/A of Lumax that provides a higher rate of safened Dual than is normally used with Bicep. Lumax at 5 pt/A provides 1.76 pt of Dual while Bicep II Magnum at 2 qt/A provides 1.25 pt/A of Dual. The very moist conditions and the little bit of rain received since planting may have been adequate to activate the Dual which is very water soluble.

The unusual weather and other conditions may have contributed to this field problem. The stand appears to have been reduced by about 10 to 15 percent from the number of seed planted per acre, but after calculating in the expected germination percentage the number of affected seedlings is closer to 5 to 10 percent. This particular stand was still adequate for near maximum yields.

These symptoms are similar for all chloroacetamide herbicides (Dual, Lasso, Outlook, and Harness). Cool, wet soils increase the likelihood of injury. Soil crusting and insect damage can also cause this type of symptom as well.

Consultants should closely observe fields for the above symptoms and especially those fields with light sandy soil with low organic matter levels if they have been treated with Lumax. Please pass along your observations to Dr. Mark VanGessel at the University of Delaware, or Dr. Ron Ritter at the University of Maryland.

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

Wet Planting Conditions Rallies Corn
The weather market has entered into play in the corn market early this year. Severe, wet weather events across the corn belt this past week are providing impetus to the current rally. Spurred by fund buying, with over 14 thousand contracts bought during yesterday’s trading session, the corn market is expected to remain volatile at least until more is known regarding new crop planting and development. The extent of the rally, which has Dec corn futures bidding at $2.42 per bushel ahead of the open this morning, will not be known until several factors are known; the weekly crop conditions and planting progress reports must show a decline and a slowing, and nearby resistance must be broken in the trading pit.
Although the bulls are attempting to bid a weather premium into new crop corn futures much depends upon next Monday's USDA Supply and Demand Report. A key to the current rally continuing is likely to stem from whether ending corn stock estimates are dropped below the 1 billion bushel mark in the May crop report. This morning's weekly export sales report for U.S. corn is viewed as non supportive due to the drop in bushels exported from the previous week and the four week average.

**SARS Concerns Mount**
On Wednesday, May 7, 2003, U.S. government health officials reported that the severe acute respiratory syndrome (SARS) is likely to have originated in livestock such as poultry or swine and is transmissible to humans. Research is underway to either confirm or dispel this contention. The SARS scare is more prevalent in Asia than in the U.S. In China, the alleged species crossover happens where humans live in close proximity to fowl and pigs. The U.S. does not typically import meat from Asia. The coronavirus associated with SARS, is a type of the virus of animal origin that has not been previously identified. It is also important to note that most meat for human consumption is cooked and processed which kills viruses.

The connection to the soybean market is directly related to the demand for meat, particularly in Asia where it is likely to be reduced due to the SARS 'scare'. This in turn is likely to decrease the demand for soybeans. Commodity trader concerns about the impact that SARS may have on soybean trade were confirmed this morning when it was announced that China has canceled 49,800 tons of soybean imports from U.S. sources. Thus far, it is believed that China has cancelled no more than two U.S. originating cargoes of soybeans and six to eight shipments of South American shipments.

**Marketing Strategy**
The soybean market is taking a big hit this morning, down 6 cents per bushel for new crop Nov '03 futures. With initial sales for soybeans taken last week, it is always difficult to want to advance sales in a dropping market.

New crop Dec '03 corn futures are currently only 3 cents per bushel higher than last week. Corn futures are expected to remain volatile for the near term. Current pricing objectives should be placed at $2.50 or better for Dec '03 corn futures before considering advancing new crop corn sales.

The new crop Jul '03 futures price has increased 18 cents per bushel since last week and is now bidding at $3.03 per bushel. The new crop wheat price rally is expected to continue in the near term.

**UPCOMING EVENTS:**

**Annual Strawberry Twilight Meeting**

**Location:** University of Maryland  Wye Research and Education Center, Queenstown MD

**When:** Thursday May 22, 2003
Program begins at 6:00PM
Directional signs will be posted to program area

**What will be seen:** All Strawberry research conducted as plasticulture production
- Herbicide trial
- Plug pre-plant conditioning trial
Fall vs Spring planted systems
Evaluation of Web-based weather forecasting service
Advanced breeding selections from Maryland and Canadian programs

Experts from Maryland and USDA will be in attendance. For more information and/or directions contact:

Debby Dant 410-827-0831 or
Mike Newell 410-827-7388

Spring Crops Twilight Tour

Location: University of Maryland’s Wye Research Center, Queenstown, MD

When: Thursday, May 22nd, at 6:30 PM.

This will be an opportunity to observe and discuss some of the research projects involving spring planted crops and small grains at the Center.

Some of the current research projects to see and talk about are:
- Corn stalk management with no-till wheat
- Hard wheat nitrogen rate management
- Barley and wheat variety testing
- Disease resistance screening
- Foliar fungicides

As always, we hope to be able to address any pest or management topics that are of current concern. The format is for a casual, informal discussion on any relative topic.

For topic suggestions or questions, contact Mark Sultenfuss at 410-827-7388 or msulten@umd.edu

Refreshments provided by the Maryland Crop Improvement Association.

*Note this is also the same date and time as the Strawberry Twilight Tour.

Pesticide Container Recycling

In cooperation with the Agricultural Container Research Council (ACRC), the Pesticides Section provides an empty pesticide container recycling program in the State of Delaware. This program has collected and shredded for recycling, over 70,000 HDPE (high density polyethylene) plastic containers since its inception in 1993. For more information, please visit the Agricultural Container Research Council (ACRC) web site: http://www.acrecycle.org/.

Each container is closely inspected for cleanliness (they must be triple rinsed or equivalent), chipped and bagged for storage and transport. Container chips are combined with those collected in similar programs across the country and processed into pallets, park benches, new pesticide containers, or converted into fuel.

Containers are collected at the Sussex Conservation District, Maintenance Yard, Shortly Road, Georgetown, DE, and at the large commercial applicator sites. The Sussex Conservation District site is open 6 months out of the year and the dates and times for collections are:

- May 15, 2003
- June 19, 2003
- July 17, 2003
- August 21, 2003
- September 18, 2003

Collection hours are from 9:30 a.m. – 1:30 p.m. For more information, contact Bill Milliken at 1-800-282-8685
### 2003 Black Cutworm Pheromone Trap Counts

**Trapping Date: April 29-May 5, 2003**

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<td>Delmar</td>
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<td>Milford</td>
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<td>Little Creek</td>
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**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

**Weeks of May 1 to May 7, 2003**

**Rainfall:**
- 0.02 inches: May 5
- 0.01 inches: May 6
- 0.23 inches: May 7

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

**Air Temperature:**
- Highs Ranged from 81°F on May 1 to 56°F on May 5.
- Lows Ranged from 60°F on May 2 to 33°F on May 5.

**Soil Temperature:**
- 61°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](http://www.rec.udel.edu)

**Compiled and Edited By:**
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*Extension Associate - Vegetable Crops*