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

Seed Corn Maggot (SCM) in Spring Planted Vegetables
Be sure to continue to consider seed corn maggot control in all spring planted crops. We have started to find maggots infesting earlier planted peas. With the recent rainy, cooler weather, seed corn maggot flies continue to lay eggs. Adult flies prefer to lay eggs in recently plowed fields, especially if cover crops were plowed under, as well as in manured fields. Control options can include commercial applied seed treatments, hopper box treatments or soil insecticides; however, not all options are available for all crops. Please refer to the labels as well as the following link for control options - http://ag.udel.edu/extension/vegprogram/publications.htm

Diazinon
The following EPA documents provide the most recent information on diazinon use on agricultural crops:
(1)http://www.epa.gov/REDs/factsheets/diazinon_cancellation_fs.htm
This January 2007 document lists all the cancelled uses of diazinon. All seed treatment uses have been cancelled.
(2)http://www.epa.gov/fedrgstr/EPA-PEST/2006/December/Day-06/p20429.htm

Sweet Corn Response to Callisto and Accent - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

We have looked at multiple sweet corn hybrids for tolerance to Accent and Callisto as part of a multi-state project. The study was designed to tell us which hybrids were more sensitive to either of these products. Forty-three hybrids were included in two years of testing, while a total of 157 hybrids were included over the two-year study. Please note that this study was designed to determine relative sweet corn hybrid tolerance to Callisto or Accent at twice labeled rates. Yield was not recorded in these trials.

The results are available at: http://www.rec.udel.edu/weed_sci/WeedFacts/SweetCorn%20Trial%20Summary.htm
Bonus was is not in the data base, but based on comparative trials, I would rate it as Tolerant for Accent and Intermediate for Callisto.

Agronomic Crops

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

Alfalfa
Economic levels of alfalfa weevil larvae and larval damage can be found in numerous fields throughout the state. Be sure to sample fields as soon as possible since damage can occur quickly. In many cases, you can find a combination of large and small larvae resulting from both fall and spring laid eggs. As a general guideline, treatment should be considered if you can find the following population levels: up to 11 inches tall - 0.7 per stem; 12 inches tall - 1.0 per stem; 13 - 15 inches tall - 1.5 per stem; 16 inches tall - 2.0 per stem; and 17 - 18 inches tall - 2.5 per stem. Cutting should only be considered as a management option if you can cut within 3-5 days of finding an economic level. Numerous pyrethroids are now labeled for alfalfa weevil including Baythroid, Mustang MAX, permethrin, Proaxis and Warrior. Furadan, Imidan, Lorsban, Lannate and Steward are also labeled for alfalfa weevil control. As you get close to harvest, be sure to check labels carefully for time between application and harvest.

Field Corn
As corn emerges from the ground, you will want to watch for cutworm activity as well as slugs. As a result of the wet spring, we can easily find slug eggs and newly hatched juveniles under surface trash especially where corn stalk residue is present. Knowledge of slug biology, conditions favoring outbreaks, scouting practices and potential management options can help reduce slug problems.

Biology of Slugs: Most slugs pass through a single generation per year. Although they generally overwinter in the egg stage, we can often find juveniles and adults all winter, especially if conditions are warm. Since slugs may live 12 to 15 months and eggs are laid both in the early spring and fall, overlapping generations of adult and juvenile stages may be observed. In the winter, adult slugs may enter a state of hibernation, and in the dry and hot summer conditions they enter a similar inactive state. A combination of one or more of the following factors favors slug outbreaks: no-tillage field crop production practices; development of dense weed cover or addition of organic matter such as manure; mild winters which increase the number of overwintering stages, especially adult slugs; prolonged periods of favorable temperatures (63 to 68 degrees) combined with evenly distributed rainfall that maintains soil moisture at 75% saturation; high pH (6.3 - 6.7); over fertilization with nitrogen; and cool growing conditions which delay crop development and extend the period of susceptibility of the crop to slug injury.

Scouting for Slugs: You can still identify fields with the potential for problems before planting by using a shingle or covered pit to provide a humid, sheltered hiding place for slugs. Slugs tend to congregate in large numbers in these shelters. As a rule of thumb, you can expect problems in a field if you find one to five slugs per trap. Once a field is planted, you should examine fields with a potential for damage on a weekly basis. Slug damage will appear as a shredding of the leaves since they feed by grating away the surface of the plant tissue. The presence of "slime trails" can also be used to distinguish slug injury. Look for slugs under dirt clods and surface trash around 5 plants in 10 locations in a field. Since slugs are nocturnal, sampling should be done in the evening or when weather is cloudy. As a general guideline, a treatment may be needed if conditions are favorable for slug development and you find 5 or more slugs around each plant from the spike to 3-leaf stage.

Slug Controls: Management options are still limited to the use of baits and cultural practices. If a number of factors are present which favor slug development, then a combination of cultural practices and baits may be needed. Cultural practices, including the use of "pop-up" fertilizer and trash whippers to remove residue over the seed furrow, can help corn grow ahead of the damage. When populations were extremely heavy in the spring of 2003, good
results were obtained with Deadline MPs (metaldehyde bait). The label states 10 - 40 lbs per acre
(http://www.cdms.net/LDat/Ld7CL000.pdf ). We saw good results with 10 lbs per acre broadcast applied with a cyclone spreader if the spreader was calibrated so you are getting at least 5 pellets per square foot. Also, the best results have been observed when applications were made and there was at least one day of sunny weather after an application. In general slugs stop feeding in 2-3 hours even though they may take 2-3 days to die. If conditions remain extremely wet, slugs sometimes can absorb enough moisture to compensate for the water lost in mucus production so a second application may be needed. Most baits as well as cultural practices only reduce the slug activity buying time to enable the crop to outgrow the problem.

Small Grains
With the warm temperatures last weekend and early this week, we have been able to find new cereal leaf beetle eggs in wheat and barley. The following information was taken from Dr. Ames Herbert’s fact sheet on cereal leaf beetle, which can be found at the following link: http://www.ext.vt.edu/pubs/entomology/444-350/444-350.html.

“Scout after peak egg laying and when up to 50% of eggs have hatched. If the population is mainly made up of eggs, then scouting should be at a later date when a minimum of 50% are small larvae. Samples should be taken at a minimum of 10 random sites in the interior of each field (avoid the edges). At each site, 10 tillers (stems) should be examined for eggs and larvae. This will result in 100 tillers (stems) per field being examined. Eggs may be on the leaves near the ground. Record the number of eggs and larvae counted at each sample site and calculate the total number of eggs + larvae found. Alternatively, stems can be examined at random while walking through the major portion of the field; again 100 stems per field should be examined. Because cereal leaf beetle is often unevenly distributed in the field, it is often necessary to determine if a portion of a field is above threshold. If the random sampling indicates an uneven distribution (lots in some samples but few in others), it may be necessary to subdivide the field into two or more parts and sample each part as an individual field. In instances of very high counts, the sampling can be abbreviated after the samples have exceeded the threshold- for instance, if after examining 30 tillers the scout has found 35 eggs + larvae, which exceeds the threshold for 100 stems. However, if this is done, the scout should realize that the portion of the field not scouted may not have high populations. Scouting Frequency: Once egg laying has reached a peak, many fields will need only a single scouting for eggs and larvae. If the proportion of eggs in the sample is 50% or greater, then sample again in 5-7 days. Economic Threshold: 25 eggs and/or small larvae total per 100 tillers. This threshold is based on the number of eggs and small larvae present, rather than large larvae. Proper use allows fields at risk to be identified and treated in time to prevent significant yield loss.”

Agronomic Crop Diseases - Bob Mulrooney; Extension Plant Pathologist; bobmul@udel.edu

Barley
The most common disease seen so far this season has been the spot blotch form of net blotch and now I have seen classical symptoms of net blotch as well. This disease is favored by wet, cool weather, which we had. The disease appears to be widely distributed but not causing severe symptoms. As mentioned last week, I do not think that the disease will cause any economic damage as long as the upper two leaves are not spotted or only lightly. See the picture below for the comparison of spot blotch form of net blotch and true net blotch.

The left two barley leaves have symptoms of the spot blotch form of net blotch, and the two on the right have classic symptoms of net blotch.
Wheat  
Be on the lookout for leaf rust. It is very early to be warning you about leaf rust. Usually this disease is seen late in the season and has no impact on plant health. Unfortunately it has been seen both at the Virginia Tech research farm in Warsaw, VA and just two days ago at the University of Maryland Research and Extension Center at Wye Mills, MD on susceptible cultivars. We have not had enough leaf rust since 2000 or 2002 to rate wheat varieties for resistance to this disease under our conditions. I am not talking about stripe rust which we saw two years ago but the old leaf rust that most of us were used to seeing. When leaf rust occurs early, before or at flag leaf emergence, the potential for serious losses is high for susceptible varieties if the weather is favorable for infection.

Management recommendations: First it is important to know what cultivar of wheat is being grown. There are plenty that have good resistance to leaf rust. The resistant cultivars are unlikely to need any fungicide but we need to scout them in case there is a new race appearing. The only recent ratings of resistance to the likely race of rust that is prevalent are from the Virginia program. McCormick, Sisson, Roane, SS 550, SS MPV57 and USG 3209 appear to be quite susceptible.

Susceptible cultivars could benefit from a fungicide application if rust begins to develop. You don’t want to spray right away if there is no obvious threat in the field or neighboring field. Fungicides will only last about 3 weeks, and for a single application to give the most bang for the buck, you need to protect the flag leaf for as long as possible. The application window is flag leaf through heading, if rust is a threat. If less than 3% of the plants are infected, any registered product will work well (Tilt, Quilt, Quadris, Headline, or Stratego). If there is more than 3% infection, then you need to move quickly and use a triazole or mixture that includes a triazole fungicide (Tilt, Quilt, Stratego, Proline).

This is just a warning not a recommendation to spray, but you should scout your wheat acreage and look for symptoms of leaf rust.

Thanks to Dr. Arv Grybaskas, Extension Field Crop Plant Pathologist at the University of Maryland for the warning and management recommendations presented here.

Leaf rust - note the raised orange-red pustules scattered on the leaf surface.

A New Agricultural Legend  - Richard Taylor, Extension Agronomy Specialist; rtaylor@udel.edu and Cory Whaley, Sussex County Extension Agriculture Agent; whaley@udel.edu

Everyone is aware of so called “urban legends,” many of which move around the internet today, and are perhaps reminiscent of “old wife’s tales” from a previous generation. Apparently agriculture is not immune from such tales. An agricultural legend apparently was recently broadcast over RFDtv. The legend/information/program stated that you should not see above ground nodal roots on corn (what we refer to as brace roots) or you could be losing from 2 to 10% of your yield potential. The legend/information further indicated that the appearance of brace roots is influenced by seeding depth. The advice offered was that the recommended planting depth should be >2.5 inches to try and keep these roots underground.

In checking this legend out, we communicated with Dr. Bob Nielsen from Purdue University. Bob suggested that the legend is probably borne from someone’s logical assessment that roots above ground do the plant no good and therefore must surely represent a wasteful use of plant resources. Bob stated that this reminded him of a quote from one of his colleagues, “Logic can be
a systematic way of going wrong with confidence."

Along the lines of that wonderfully accurate quote, let’s review a few things about brace roots and their function in corn. First, with respect to seeding depth, do not plant corn > 2.5 inches deep or you will probably find yourself replanting the corn in three or four weeks. With the cold, wet soil conditions so far this spring, planting deeper than about 1.5 inches could pose a significant challenge for corn emergence as well as delay emergence and that means more risk of disease, pest injury, or crusting. Delayed uneven emergence can reduce yield potential in corn.

The first question that comes to mind is whether brace roots are any different from the other nodal roots that happen to form below ground? No, the roots that form at nodes above the soil surface and to which we refer to as brace roots are essentially identical to other nodal roots that form below ground since they all develop from the stalk nodes. Even the original seminal or seed roots technically originate from the scutellar node.

Brace roots that form at the above ground stalk nodes closest to the soil surface often successfully penetrate the soil and proliferate. Later in the season try pulling a plant or two out of the soil and you’ll be able to see a large proliferation of root mass from these brace roots. They will provide the plant with both nutrients and water and function just like roots from the stalk nodes that form below ground.

If the brace roots fail to reach the soil surface because their root tips dry out too quickly, the roots simply shrivel up and do not wastefully consume any further plant resources.

Lastly, seeding depth has little to no effect on the depth at which the nodal roots first originate. The depth of seeding actually affects the mesocotyl length since its elongation is a red-light mediated/controlled process. The red-light effect determines the depth at which mesocotyl elongation stops and this (depth) is fairly constant. Thus, the crown of the corn plant which is located immediately above the top of the mesocotyl will be located at a fairly constant depth no matter what the seeding depth. Planting too deep, however, can cause corn to fail to emerge from the soil.

For more information about corn root development, please refer to an article that Dr. Bob Nielsen wrote entitled “The Roots of the Matter”. Bob’s article can be found on the internet at: http://www.kingcorn.org/news/articles_04/Roots-0511.html

Jagged Chickweed - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

I have gotten a few phone calls about plants not controlled with Harmony Extra when applied this spring. It looks a lot like a chickweed (similar flowers, opposite leaves); but it has more gray coloration and the leaves are longer. It appears to be jagged chickweed (Holosteum umbellatum); same family as mouseear (Cerastium vulgatum) and common chickweed (Stellaria media), but a different genus.

Field experience is showing that Harmony Extra applied in the spring will not control it, but I do not know how it would respond to 2,4-D or dicamba or other small grain herbicides. It is flowering now, so look for it in fields you intend to plant small grains this fall to help your decision on future field selection and herbicide programs. This is not a new species to Delaware, but it appears it’s becoming more prevalent in small grain fields. For more information see: http://www.illinoiswildflowers.info/weeds/plants/jagged_chickweed.htm
Revised Table: Pre-packaged Mixtures for Corn - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

[Note this table ran in last week’s issue, but the ratio for Guardsman Max was for a lower rate; this is the corrected table]. There have been changes in formulation and ratios of products for many pre-packaged herbicides over the past few years. As a result, check the label for your product of choice since often the new formulations recommend lower use rates than what was previously labeled. Below is a chart on rates of the most common pre-packaged mixtures used in the area, general use rate, and the amount of products they are providing:

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Rates</th>
<th>Atrazine</th>
<th>Chloroacetamide (grass herbicide)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicep II Magnum</td>
<td>1.6 qts</td>
<td>1.24 qt</td>
<td>1.0 pt Dual II Magnum</td>
</tr>
<tr>
<td>Fultime</td>
<td>3.0 qts</td>
<td>1.2 qt</td>
<td>2.25 qt Topnotch</td>
</tr>
<tr>
<td><strong>Guardsman Max</strong></td>
<td>2.0 qts</td>
<td>1.6 qt</td>
<td>18 oz Outlook</td>
</tr>
<tr>
<td>Keystone</td>
<td>2.6 qts</td>
<td>1.5 qt(^1)</td>
<td>2.4 qt Topnotch(^2)</td>
</tr>
<tr>
<td>Harness Xtra 5.6L</td>
<td>1.7 qts</td>
<td>1.1 qt</td>
<td>0.76 qt Harness</td>
</tr>
<tr>
<td>Lumax</td>
<td>2.5 qts</td>
<td>0.625 qt</td>
<td>1.76 pt Dual II Magnum AND 5.4 oz Callisto(^3)</td>
</tr>
<tr>
<td>Lexar</td>
<td>3.0 qts</td>
<td>1.3 qt</td>
<td>1.3 pt Dual II Magnum AND 5.4 oz Callisto(^3)</td>
</tr>
</tbody>
</table>

\(^1\)The atrazine formulation in Keystone is not available in other products.
\(^2\)Not a true comparison since Topnotch is a capsule suspension formulation and the acetachlor in Keystone is a suspo-emulsion formulation.
\(^3\)Callisto is not a chloroacetamide

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

Executive Summary
Commodity prices for corn, soybeans, and wheat rebounded sharply the past couple of days after having lost ground at the beginning of this week. New crop corn and soybean prices are slightly softer than last week’s levels as of this writing: $3.76 Dec ’07 corn futures; $7.60 Nov ’07 soybean futures. New crop July ’07 wheat futures are currently at $5.18 per bushel, 18 cents higher than a week ago. Crop planting progress is creating uncertainty in these markets and renewing fund buying interest. We can expect high volatility and large price swings to continue occurring until ’07 U.S. row crop planting progress begins to be made in earnest.

Crop conditions across the Corn Belt are relatively unchanged from a week ago. Wet weather and cold soil conditions have landed corn planting progress at 11% as of April 23rd compared to 22% for the same time last year. It is also being reported that some of the corn already in the ground in the Southern states may be subject to replant and/or is being replanted. It is now becoming more apparent that, although catch-up in planting progress is still possible, the 10-day weather forecast is not indicative that will happen any time soon. It is likely to be mid-May before conditions become more conducive to making good planting progress for U.S. corn.

The weekly export sales report released this morning for the week ending April 19, 2007 was bullish for U.S. corn, soybeans, and wheat.

The extent of wheat crop loss due to early April freeze damage is not yet known. Traders will be attempting to decipher how many wheat acres are switched to corn plantings within the next four weeks.

For technical assistance on making grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.
Water is Needed to “Activate” Soil-Applied Herbicides - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

Herbicides applied to the soil surface require rainfall or irrigation to move them into the soil where the plants will absorb them; or they need to be mechanically incorporated (field cultivator). The amount of water needed to “activate” these herbicides depends on the water solubility of the herbicide and moisture content of 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. 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 Steadfast or Option. And, 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.

Solubility is measured in parts per million (ppm) as how many milliliters of the herbicide will dissolve in 1 liter of water. The less soluble the herbicide, the more moisture (rain or irrigation) needed to incorporate (activate) the herbicide. The relative moisture to activate the herbicide is a guideline for rainfall or irrigation needed within a short time after application to move the herbicide into the root zone. Amount of moisture needed also depends on the soil moisture level at time of application.

<table>
<thead>
<tr>
<th>Herbicide</th>
<th>Solubility (ppm)</th>
<th>Relative moisture required to activate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atrazine</td>
<td>33</td>
<td>+++</td>
</tr>
<tr>
<td>Callisto</td>
<td>1500</td>
<td>+</td>
</tr>
<tr>
<td>Define</td>
<td>56</td>
<td>+++</td>
</tr>
<tr>
<td>Dual II Magnum / Cinch</td>
<td>488</td>
<td>++</td>
</tr>
<tr>
<td>Harness / Degree</td>
<td>223</td>
<td>+++</td>
</tr>
<tr>
<td>Lasso / Micro-Tech</td>
<td>242</td>
<td>+++</td>
</tr>
<tr>
<td>Outlook</td>
<td>1174</td>
<td>+</td>
</tr>
<tr>
<td>Princep</td>
<td>5</td>
<td>+++</td>
</tr>
<tr>
<td>Prowl / other pendimethalin formulations</td>
<td>1</td>
<td>+++</td>
</tr>
<tr>
<td>Topnotch</td>
<td>223</td>
<td>+++</td>
</tr>
</tbody>
</table>

Premixes and Their Components

<table>
<thead>
<tr>
<th>Premix</th>
<th>Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bicep II Magnum / Cinch ATZ</td>
<td>Dual II Magnum (or Cinch), Atrazine</td>
</tr>
<tr>
<td>Bicep Lite II Magnum</td>
<td>Dual II Magnum, Atrazine</td>
</tr>
<tr>
<td>Bullet</td>
<td>Micro-Tech, Atrazine</td>
</tr>
<tr>
<td>Field Master</td>
<td>Harness, Atrazine, Roundup</td>
</tr>
<tr>
<td>Fultime / Keystone</td>
<td>Topnotch, Atrazine</td>
</tr>
<tr>
<td>Guardsman Max</td>
<td>Outlook, Atrazine</td>
</tr>
<tr>
<td>Harness Xtra / Degree Xtra</td>
<td>Harness (or Degree), Atrazine</td>
</tr>
<tr>
<td>Lumax / Lexar</td>
<td>Dual II Magnum, Callisto, Atrazine</td>
</tr>
</tbody>
</table>

1 in unbuffered distilled water
2 Relative moisture ranges from little (+) to high amount of moisture (++++). ppm <100= +++; 100-250= ++; 250-500 ppm= +; >500= +
NOTE: “++++” does not need 4X the moisture as “+”; it is used to demonstrate herbicides with more + signs need more moisture for incorporation (activation).
New Labels from FMC - Joanne Whalen, Extension IPM Specialist; jwhalen@udel.edu

We received the following information from FMC on their new labels (including supplemental labels) for Mustang MAX and Capture LFR. I did check with the Delaware Department of Agriculture and they have received these labels. Bob Hooten from FMC indicated the following:

“The supplemental labels are for product that has the old label on the container. It allows the product to be used for the new crops. New labels will be put on new manufactured product and contain both the supplemental crops as well as the past labeled crops. For Mustang Max we are now allowed alfalfa, mixed stand alfalfa, grasses, and legume crops. In addition Mustang Max can be used on pastures, sunflowers, grapes, berry crops, cucurbit crops, canola, pome fruits, leafy vegetables, peanuts, root and tuber group, including potatoes, stone fruits, and tree nuts. Capture LFR is now labeled for planting time use on peas and beans, brassicas, cucurbits, head lettuce, eggplant, peppers, tomatoes, spinach, okra, cilantro, coriander, dried peas and beans, leafy brassicas, tuberous and corm vegetables (including potatoes) and tobacco.”

If you want to use product that has the old label on the container, you will need a copy of the supplemental label in your possession. You will need to get a copy from your dealer or the Delaware Department of Agriculture. The following are links to the new labels that will be on new product. Please refer to the labels for use directions for both products.
http://www.cdms.net/LDat/ld67J024.pdf
http://www.cdms.net/LDat/ld7DQ002.pdf

Planters and Stand Emergence in Large Seeded Crops - Gordon Johnson, Kent County Extension Agriculture Agent; gjohn@udel.edu

For highest yields in row crops such as field corn, uniform stand emergence and precise spacing is required. Often, problems associated with stand uniformity can be traced back to the planter. This includes improper spacing, lack of uniform spacing, gaps, doubles, delayed emergence, and uneven emergence.

Planter units must be attached properly to the tool bar and there should not be much play allowing units to move sideways or tilt at an angle. Worn bushings or bolt holes on parallel arms are a problem allowing for excessive play. Planter units should be running level and straight and should be checked when in the ground planting.

Problems can occur with seed metering devices (finger, cup, vacuum, or air). This is most commonly seen as planting gaps where seed was not delivered or was delivered irregularly. Properly performing seed monitors are essential to check meter delivery. Metering devices should be serviced and calibrated each year. Gaps in stands can also be related to the drive mechanism or transmission. Drive chains that have frozen links or that are loose so that skips can occur on the gear sprockets will result in seed gaps as the seed drive is interrupted.

The meter delivers the seed to the seed tube. The seed tube is designed to allow the seed to fall in a controlled manner to the seed furrow. It must be in the proper position to do this. If the planter is pitched forward by lowering the drawbar hitch, this changes the seed tube position relative to the seed furrow and seed will not drop as uniformly. Wear on the bottom of the seed tube or any obstructions in the seed tube will also cause seed bounce and will result in uneven stands.

Double disk openers must be operating properly to produce a good V seed furrow for the seed to fall into. If the disks have worn down so that the diameter has been reduced significantly, this will affect seed furrow formation. Other considerations include worn bearings and not having the proper amount of disc blade contact in the front. Gaps between the blades in the front will cause a W shaped seed furrow and result in variable planting depth. Gauge wheels need to be properly adjusted so that they contact the disk openers and won’t allow soil between. The gauge wheel depth control arms need to be able to pivot but should not have play so that they pull away significantly from the
disk openers. The gauge wheels are critical as they set the depth of the V seed furrow. Worn gauge wheel tires or worn gauge wheel bearings can also affect their performance and seed depth. One add-on device that can help improve stands is a seed firmer. This is a plastic device that slides along behind the seed tube and presses the seed into the bottom of the seed furrow.

Another area where problems can occur is with the closing wheels or press wheels. There must be adequate amount of down-pressure to firm the seed. However, excessive pressure can actually move the seed upward, affecting planting depth. Compaction can also be created with excessive down pressure. Too much play in closing wheels or wobble due to worn bushings or bearings will cause variable firmness and may lead to unevenness in stands.

No-till planters have additional considerations. There needs to be adequate down pressure for the no-till coulter to penetrate into the ground at the proper depth. Use of row-cleaners ahead of the planter unit has greatly improved stands in no-till situations, especially those that float with gauge wheels. Too much down pressure or improperly adjusted row cleaners can cause “plowing”, creating a trench ahead of the planter unit that can fill in with heavy rains, thus causing seed to be too deep.

USDA Has Money to Loan to Eligible Borrowers

The Farm Loan Program staff of USDA’s Farm Service Agency (FSA) in Georgetown, Delaware is reminding family farmers that a wide variety of farm loan assistance programs are now available to those involved in production agriculture.

FSA is committed to providing family farmers with loans to meet their farm related credit needs, especially to those having trouble getting the credit needed for their farming operation. FSA direct, guaranteed and joint participation loans are now available. Those who are in need of new or additional credit beyond what private or commercial credit is able to provide should apply early with FSA so that a loan request can be processed and funded timely.

It is also suggested that prospective borrowers ask their lender about an FSA loan guarantee, especially if they have experienced a setback or their lender is reluctant to extend or renew credit. In addition, most of FSA’s loan programs have special funding available for minority, female, and beginning farmers.

FSA’s farm loan officers will help applicants complete the necessary application and other forms as well as provide assistance in formulating a Farm Business Plan, relate analysis of credit issues and reports. They can often help with obtaining necessary information and provide information on where to find it, or who to contact to get it, etc.

To find out more about FSA loan programs, contact your local FSA Office. The Farm Loan Officers service several counties, but will schedule appointments in the applicant’s county to meet privately and discuss individual needs. In Delaware the Farm Loan Officer may be contacted at:
USDA, Farm Service Agency
21315 Berlin Road, Suite 1
Georgetown, DE 19947
(302) 856-3990 ext. 107
Announcements

Strawberry Twilight Meeting
Thursday May 24, 2007  6:00-8:00 p.m.
Wye Research and Education Center

HEAR:
- Dr. Anne DeMarsay, UM plant pathologist will discuss current disease control strategies and products.
- Dr. Harry Swartz, UM small fruit breeder will discuss current work.
- Mr. Michael Embrey, UM-WREC apiary specialist, will discuss pollinator concerns
- Mr Michael Newell, UM-WREC, will discuss fall production research and field plasticulture variety trials.

SEE:
- 19 varieties on plastic from California, Florida and USDA breeding programs as part of several research trials
- High tunnel fall production system using bag culture and 5 varieties.
- Living samples of strawberry insects and diseases if available. (Participants are asked to bring in samples.)

Light refreshments after the meeting

No pre-registration necessary

Questions? contact Mike Newell 410-827-7388 or email mnewell@umd.edu

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of April 19 to April 25, 2007

Readings Taken from Midnight to Midnight

Rainfall:
- 0.20 inch: April 19
- 0.06 inch: April 25

Air Temperature:
- Highs Ranged from 83 on April 23 to 52°F on April 19.
- Lows Ranged from 61°F on April 24 to 35°F on April 21.

Soil Temperature:
- 58°F average.

(Soil temperature taken at a 2” depth, under sod)
Additional Delaware weather data is available at 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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