Soybean Rust Update

Just reported is the second detection of soybean rust on soybean. Ed Sikora from Auburn University reports “Soybean rust was confirmed on soybeans in Alabama. This is the second report of soybean rust on soybeans in the United States in 2006. The disease was detected on leaves collected from the Baldwin County soybean sentinel plot in Fairhope on June 27th. The leaves were incubated for 48 hours and we observed the pustules and spores typical of this pathogen. A total of 5 soybean rust lesions were observed on three leaves. The disease was detected on Pioneer 93M90 (maturity group III) at the R5-R6 growth stage. The disease was not observed on a maturity group IV variety (Pioneer 94M80) at the R4 growth stage planted adjacent to the 93M90’s. Leaves were also collected from three commercial soybean fields in Baldwin County but no rust was observed.”

There was one additional new report of soybean rust on kudzu in Brooks County, GA in same location where infected plants were confirmed and destroyed this winter, so they’re calling this a new infection. Tropical Storm Alberto is the possible culprit. Rust is also spreading within Georgia’s Miller County kudzu site.

Conditions may be more favorable later on this week in FL and GA but the disease is increasing very slowly in the South. MS, LA and TX are very dry once more and conditions are not good for rust at the present time in those areas.

Locally our Group III soybeans in the sentinel plots have reached the R2 stage of growth (early flowering and small pods forming) and are being checked weekly. Surveying will intensify as the soybeans progress into the susceptible reproductive stages of development. Keep up to date by visiting the PIPE website http://www.sbrusa.net

Bob Mulrooney

Vegetables

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

Melons
Continue to scout all melons for aphids, cucumber beetles, and spider mites. The recent rains may have helped to hold back populations but with the increase in temperatures we could see an increase in populations. We are also seeing grasshoppers feeding on both vines and the rinds of fruit. Although no thresholds are available, a treatment may be needed if you see significant defoliation and/or they are feeding on the rinds.

Peppers
In fields with small fruit, corn borer treatments will be needed. In areas where corn borers are being caught in local traps and pepper fruit is ¼ inch or more in diameter fields should be
sprayed on a 7 day schedule for corn borer control. Be sure to check local moth catches in your area at http://ag.udel.edu/extension/IPM/traps/latestblt.html. You will also need to consider a treatment for pepper maggot.

**Potatoes**
Continue to scout fields for Colorado potato beetle (CPB), leafhoppers and aphids. As a general guideline, controls should be applied for leafhoppers if you find ½ to one adult per sweep or one nymph per every 10 leaves. We have also started to find economic levels of green peach aphids. A control will be needed 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 half.

**Snap Beans**
We continue to see economic levels of leafhoppers and thrips activity, so continue to scout all seedling stage fields for these 2 insects. At this time, 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. Acephate can be used at the bud and pin stages on processing beans but remember it has a 14 day wait until harvest. 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 information to make a treatment decision in processing snap beans (http://ag.udel.edu/extension/IPM/traps/latestblt.html and http://ag.udel.edu/extension/IPM/thresh/snapbeancbthresh.html). Once pins are present on fresh market snap beans and corn borer trap catches are above 2 per night, a 7-10 day schedule should be maintained for corn borer control.

**Sweet Corn**
The first silk sprays will be needed for corn earworm as soon as ear shanks are visible. Be sure to check trap catches for the current spray schedule since trap catches 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/silkspaythresh.html). You can also call the Crop Pest Hotline for current trap catches (in state: (800) 345-7544; out of state: (302) 831-8851). We continue to find fall armyworm larvae in whorl stage sweet corn. 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.

**Rain Rain Rain** - Ed Kee, Extension Vegetable Specialist; kee@udel.edu

Southern Delaware and the neighboring counties in Maryland received anywhere from 4 to 13 inches of rain over the weekend through Tuesday. Wheat harvest was disrupted, as were all other field operations. Some pickling cucumbers were lost because of the inability to harvest in the extremely wet conditions. Watermelon production is reduced by at least five percent due to spots that were underwater. If the plants weren’t killed, their ability to grow and produce was seriously compromised.

Vegetable growers need to begin fungicide sprays as quickly as possible to control diseases. Growers and consultants should refer to the Vegetable Crop Recommendations Guide for specific recommendations for each crop as well as current and previous articles in this newsletter.

Watermelon and other vine crop producers need to begin fungicide sprays. Again, watermelon growers should refer to the resources above to develop combinations that cover gummy stem blight, anthracnose, other foliar diseases, and phytophthora.

AS FOR PICKLING CUCUMBERS, DOWNY MILDEW HAS NOT BEEN SEEN IN THE CAROLINAS. DESPITE OUR RAINY WEATHER, AN OUTBREAK HERE IS NOT IMMINENT. HOWEVER, GROWERS, CONSULTANTS, AND SCOUTS SHOULD BE
VIGILANT IN SCOUTING FOR THE DISEASE. See previous newsletters for control measures. As always, the North Carolina State Downy Mildew website is helpful in tracking the potential progression of the disease. The web address is http://www.ces.ncsu.edu/depts/pp/cucurbit/index.php or to hear the current forecast call the Forecast Center’s toll-free number (888) 835-2583.

**Potato Disease Advisory #15 - June 29, 2006, Bob Mulrooney, Extension Plant Pathologist**

**Late blight Advisory**

Disease Severity Value (DSV) Accumulation as of June 28, 2006 is as follows:

**Location:** Byfield Farms field east of Magnolia, DE. **Greenrow:** April 23, flower buds present May 24. **Remember that 18 DSVs is the threshold to begin a spray program for late blight.**

<table>
<thead>
<tr>
<th>Date</th>
<th>Daily DSV</th>
<th>Total DSV</th>
<th>Spray Recs</th>
<th>Accumulated P days*</th>
</tr>
</thead>
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<tr>
<td>6/4-6/5</td>
<td>2</td>
<td>15</td>
<td>7-day</td>
<td>323</td>
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<tr>
<td>6/5-6/8</td>
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<td>16</td>
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<td>351</td>
</tr>
<tr>
<td>6/8-6/9</td>
<td>1</td>
<td>17</td>
<td>10-day</td>
<td>361</td>
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<tr>
<td>6/9-6/11</td>
<td>0</td>
<td>17</td>
<td>10-day</td>
<td>378</td>
</tr>
<tr>
<td>6/12-6/14</td>
<td>1</td>
<td>18</td>
<td>10-day</td>
<td>406</td>
</tr>
<tr>
<td>6/14-6/15</td>
<td>2</td>
<td>20</td>
<td>10-day</td>
<td>415</td>
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<tr>
<td>6/15-6/18</td>
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<td>20</td>
<td>10-day</td>
<td>438</td>
</tr>
<tr>
<td>6/18-6/20</td>
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<td>10-day</td>
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<tr>
<td>6/20-6/21</td>
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<td>21</td>
<td>10-day</td>
<td>460</td>
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<td>10-day</td>
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<td>7-day</td>
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<td>37</td>
<td>7-day</td>
<td>516</td>
</tr>
</tbody>
</table>

Continue to make fungicide applications for late blight and early blight control. **Fungicide rates should be at the high end of the rate range at this time of the season.**

There have been no new reports of late blight in the region.

The high rainfall events along with high humidity are very favorable for late blight infection if the fungus is present. Once the weather clears fungicide applications should be made if no fungicide has been applied in the last 7 days. If you have kept up with your preventative sprays continue with a high rate of chlorothalonil (Bravo or a generic) or mancozeb (Dithane, Manzate, Penncozeb, etc). Conditions are very favorable for late blight but the threat is low just because we have not seen any or have had any in the region on potato. Late blight fungicides such as Curzate, or Previcur Flex combined with a protectant can be used if late blight is detected in the region or locally. A very conservative approach would be to apply a late blight fungicide at this time since the conditions are very favorable. For other choices see the Veg Production Recs EB137.
Pythium and Rhizoctonia on Snap Bean - Bob Mulrooney; Extension Plant Pathologist; bobmul@udel.edu

Pythium and Rhizoctonia can infect pods where they touch the ground. The warm temperatures, high soil moisture and high humidity will be ideal for infection if beans are present. Quadris and Headline can be applied for Rhizoctonia pod rot if applied when pins are present or before the beans get large enough to contact the soil. Nothing is currently labeled for Pythium that I am aware of. Otherwise use varieties that have an upright architecture or possibly plant in narrow rows to keep the plants upright and the beans off the ground.

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

All the rain has spurred lots of questions about Phytophthora blight of pepper and cucurbits. The following is our best recommendations on this disease based on research conducted throughout the US in recent years. Several newly registered products are available for managing these diseases. Below is a summary of research results. Please note that there are relatively few successful trials and that often only a few products are included in each trial. Therefore it is difficult to compare products with each other. However, the need for the information is so great; we thought a summary was in order.

Peppers - Where resistance to Ridomil does not exist, the following treatments were effective in the mid-Atlantic.

1) For the crown rot phase - Ridomil Gold 1 qt/A broadcast at planting (or banded over the row) and two additional post planting directed applications of Ridomil Gold 1 pt/A to 6 to 10 inches on either side of the plants at 30 day intervals

2) Or For the fruit rot phase - Ridomil Gold/Copper 2.5 lb/A applied 3 or 4 times at 10 to 14 day intervals.

Several recent studies also had good results with the following treatments:

1) Ridomil Gold 1 pt/A at transplanting followed by ProPhyt at 6 pt/A plus Kocide 2000 at 2.25 lb/A applied at weekly intervals

2) ProPhyt pre-transplant spray followed by ProPhyt at 6 pt/A at. Forum 6 oz/A plus Kocide 2000 2.25 lb/A

3) Phostrol pre-transplant spray followed by Phostrol 5 pt/A at. Forum 6 oz/A plus Kocide 2000 2.25 lb/A

Good treatment in Ranman evaluations:

1) Ranman 6 fl oz/A at transplanting followed by Ranman at 2.5 fl oz/A plus Aliette 2.5 lb/A

2) Ranman 6 fl oz/A at transplanting followed by Ranman at 2.5 fl oz/A plus Ridomil Gold Copper 2.5 lb/A

This disease is extremely difficult to control because under high inoculum pressure or favorable weather the disease will overcome even the best spray program. Also, it is important to spray weekly, and not stretch the spray interval.

Pumpkin and Squash - Again, few studies have provided statistically significant results, reminding us that high disease pressure will overcome the best currently available fungicide combinations. Here are spray programs that looked good in the studies:

1) Tanos 8-10 oz/A plus Manex 1.6 qt/A plus Kocide 2000 0.8 lb/A alternated with Forum 6.2 fl oz/A plus Kocide 2000 0.8 lb/A

2) Ranman 2.75 fl oz/A plus Cuprofix Dispers 2.5 lb/A (note: Ranman should be alternated with a fungicide with a different mode of action)

3) Reason 5.5 fl oz at transplanting followed by Previcur Flex 1.2 pt/A alternated with Previcur Flex 1.2 pt/A plus Reason 5.5 fl oz/A

Processing Cucumber In addition to the recommendations of either Forum, or Gavel or Tanos or Ranman all applied with copper there are some other possible programs to consider. Again, few pickling cucumber studies have provided significant results. However, the following treatments gave good results in one or two trials.
1) Tanos 12 oz/A plus Kocide 2000 1.5 lb/A plus Manzate 2 lb/A (1 inch fruit) and Gavel 2 lb/A plus Kocide 2000 1.5 lb/A (3 inch fruit) and Forum 6.2 fl oz/A (5 inch fruit).

2) Forum 6.2 fl oz/A plus Kocide 2000 2 lb/A

In addition, young fruit are more susceptible than older fruit. Cucumber fruit are most susceptible in the first ten days following pollination. Therefore application of fungicides to protect the very young fruit is important. Applications can be made as soon as several days from pollination when Phytophthora capsici is present. Fungicides are often not effective in situations where downpours have resulted in flooded fields and floating pickles. Unfortunately the rainfall that we have experienced can overcome the best preventative plans including the fungicide programs that we currently have.

Other Cucumber Fruit Diseases - Bob Mulrooney; Extension Plant Pathologist; bobmul@udel.edu

Belly Rot caused by the soilborne fungus Rhizoctonia can also cause pickle growers problems. Cucumber fruit are infected on the underside and the fungus produces water-soaked, tan to brown lesions, which become sunken, cratered, irregular and dried as they enlarge. The fungus can infect over a wide temperature range with the optimum being 80ºF. High humidity near the soil surface under dense foliage promotes infection. Fungicide control has been inconsistent over the years. Fungicide sprays of Quadris (11-15.4 fl. oz/A) at the 1-3 leaf stage and a second at vine tip-over or 10-14 days later is labeled for belly rot control. Rotate away from pickles for 3 years. Deep plowing will also help bury any fungus residing on the soil surface or in debris from a previous crop.

Cottony leak caused by Pythium is a troublesome disease as well. It flourishes when the weather is hot and humid and soil conditions are wet. Infection begins where the fruit touches the soil. Plant fields that drain well. Leak can be a serious problem when pickles follow pickles. Preventing and controlling Pythium fruit rot with fungicides is difficult. Apply Ridomil Gold or UltraFlourish in a 7 in. band after seeding.

ALS-Resistant Pigweed - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

There are fields in Delaware where Pursuit, Raptor, or Sandea herbicides are not effective in killing pigweed. These fields have a history of vegetable production and repeated use of Pursuit or one of these other herbicides. The level of pigweed resistance to these herbicides is quite high, so more Pursuit, Raptor, or Sandea will have no effect on these plants.

Agronomic Crops

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

Soybeans

Grasshoppers continue to be the predominant insect pest found in soybeans. Extremely low levels of the first soybean aphids have also been detected in New Castle and Kent counties. You will need to look at the entire plant when sampling for aphids. The action threshold - developed in the Midwest - is an average of 250 aphids per plant on plants sampled throughout the field. You may also want to consider “speed scouting” -- a 10-minute on-line “Breeze” presentation about speed scouting for soybean aphids was developed by Ames Herbert et al. You may view the presentation at: http://breeze.ag.vt.edu/speedscouting. To determine if an aphid population is actively increasing, check over several visits. Conditions that favor aphid population growth are cool temperatures, plant stress, particularly drought stress, and a lack of aphid predators.

Intrepid 2F (from Dow) recently received a new Section 3 supplemental label for use on soybeans for the control of armyworms, green clover worm, salt marsh caterpillar, soybean loopers and velvet bean caterpillar. Please refer to the label for use rates and restrictions (http://www.cdms.net/ldat/ld61K020.pdf).
Agronomic Crop Diseases - Bob Mulrooney; Extension Plant Pathologist; bobmul@udel.edu

Soybeans
The extreme soil moisture levels and high humidity will favor leaf diseases such as downy mildew, frog-eye leafspot and Septoria brown spot, which was beginning to appear before the wet weather started. Under normal conditions they are generally not yield limiting and it is probably too early to know if a fungicide application would be justified. If the weather dries out and returns to normal patterns, foliar diseases may not be important unless conditions favor soybean rust later. Phytophthora stem rot is usually not a problem here except in very wet areas of fields. Phytophthora on soybeans is a different fungus that the one that infects many vegetable crops, but flooded soil will favor infection if the fungus, Phytophthora sojae is present in soybean fields. Look for blackened stems at the base of the plant in wet spots in the field. New plantings of double crop beans or replanted beans whenever they are made should not be affected by Phytophthora seed decay and damping off, but plant seeds with seed treatments that include Apron for Pythium and Phytophthora combined with other fungicides for Rhizoctonia and Fusarium to prevent damping-off and aide emergence especially if planting into wet soils.

Wheat
Delayed harvest due to the wet conditions on top of the rain and high humidity could lead to black head mold. Late season applications (from head emergence to flowering) of the fungicides Quadris, Quilt, Tilt, Stratego or Headline that were made for disease control should provide some control of the saphrophytic fungi that could infect mature heads and cause black sooty head molds. None of these fungi produce mycotoxins but do discolor the heads and sometimes reduce quality of the grain. Be on the lookout for sprouting as a result of the excessive moisture as well as possible reductions in seed quality and storability.

Corn
For the sake of repetition I am including what I wrote for the June 22 edition of WCU and wanted to expand on some of the points. Most field corn will be tasseling soon, which brings up the issue of applying strobilurin fungicides such as Quadris and Headline in the absence of disease for plant health benefits. Many growers have done this or may be experimenting with it. From the labeling and experience in this area, generally a single application is made at tassel emergence through tasseling for the best effect. The real question is whether the corn will respond with a yield increase to pay for the treatment. For many growers that is a question only they can answer for themselves. Experimental work has shown that corn does respond in many cases, but not all the time. We conducted three separate trials in 2004 and saw a slight reduction in disease in one test but no significant yield increases. There is so much that determines yield and profitability that it is not a sure thing. Irrigated corn with high inputs may respond if diseases become a limiting factor later in the season. Hybrid selection may play a role as well as many other factors such as stress, fertility, plant population, etc. The lowest rate that I have seen used in this area is 6 oz/A for Headline and 6.2 oz for Quadris (lowest label rates for corn) and would not expect to see a response at lower rates unless someone can show you that information. The bottom line is to try it and see if it improves your bottom line.

With the rain that we have had there may be more concern about diseases and the chance for diseases to appear later if you have hybrids that are susceptible. Fungicides applied now would help later if the hybrid were susceptible to whatever showed up. The disease control issues aside, there are the physiological effects that have been documented for the strobilurins on corn and they include reduced respiration, reduced ethylene production and increased nitrate reductase production. In a nutshell, reducing respiration lets the plant keep more of the manufactured sugars for grain fill rather than burning them up during respiration when the plant takes in oxygen and produces carbon dioxide, usually at night. Reducing ethylene delays maturity so the plants stay green longer which has the potential to increase ear fill by keeping the plant green longer= photosynthesis goes longer. Nitrate reductase increase means
that the roots have the potential to convert more nitrate to nitrite which the plant can absorb if it is limiting. These are pretty simplified explanations to pretty complex biochemical processes that affect corn and other plants. All three physiological responses added to the potential disease control benefits can result in the yield increases, stay-green and standability that have been seen with applications of strobilurins. It may be worth a try in strips on your own farm. Do your own test but in a manner that lets you compare treated and non-treated corn. It is also important to realize that if you tried it once and got a response, you may not get the same level of response the next time.

It is also important to note that the best response is coming from the strobilurin fungicides. Prepacked blends of strobilurins with other fungicides such as Quilt and Stratego, have a lower rate of the strobilurin component and thus have been less likely to produce a response in the absence of a disease.

If the fungicides are applied strictly for disease control the rates are a little different depending on the diseases that are controlled. Quadris is labeled at 6.2 - 9.2 oz/A for common rust control and the other diseases are labeled at 9.2 to 15.4 fl oz/A. Headline is labeled at 6-9 oz for common rust, southern rust and gray leaf spot control. For control of the other diseases the rate is 9-12 fl oz/A for northern and southern corn leaf blight, anthracnose, and a few others. In most seasons we have not needed fungicides for field corn foliar diseases unless the hybrid had little resistance to a particular leaf disease which resulted in stalk rot and lodged corn. With input from Dr. Arv Grybauskas, Extension Plant Pathologist, University of Maryland.

Understanding Soybean Growth Stages: VI. R2 – Full Bloom - Richard Taylor, Extension Agronomist; rtaylor@udel.edu

The R2 or Full Bloom stage is illustrated in Photo 1. Full bloom occurs when an open flower occurs at one of the two uppermost nodes on the main stem with a fully developed leaf. At least half the plants in the field must be at this stage for the field to be called in full bloom. Stresses of any type become critical at this and later stages since they can severely limit the number of flowers, pods, or seeds set by the crop. When and where possible, stress factors should be eliminated prior to bloom. Maximum yield potential generally occurs if canopy closure occurs ten days to two weeks prior to the bloom stage.

Regional Agronomist Newsletter Available Online - Richard Taylor, Extension Agronomist; rtaylor@udel.edu

The agronomists from across the mid-Atlantic region have recently begun publishing a quarterly newsletter with information and articles on agronomic issues. The current issue has been posted on two web sites and the addresses are as follows:

http://www.nrsl.umd.edu/extension/crops/home.cfm -- Bob Kratochvil’s cropping site at the University of Maryland (under “Newsletter”)
The topics covered include articles about a study on the probability of residual nitrogen availability for a small grain cover crop; appropriate seeding rates for hulless barley, ponding effects on corn; patching in poor corn stands; uneven plant height effect on corn yield; organic grain production for corn and soybeans; and a series of articles on understanding soybean growth stages. Finally, there is a list of some of the important meetings scheduled in the region. Take a few moments and visit one of the above sites for some useful information.

Horseweed Control in Soybeans - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

A number of people have asked about controlling horseweed in full-season soybean. Most of the plants were not controlled prior to planting and have been treated at least once with glyphosate. The options are not good. In most cases, it is probably not worth trying to re-spray them because First-Rate is the only herbicide that will have an effect on these plants; and the best you can hope for is some suppression. Also, with all the moisture we have, soybeans will tolerate a few more weeds and the soybeans will eventually catch up to the horseweed and do a pretty good job of outcompeting the horseweed.

Poor Common Lambsquarters Control with Glyphosate - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

There are some fields that have been treated with glyphosate and the common lambsquarters were not controlled. Most of these fields were treated a few weeks ago and there is concern about poor control. In almost all cases, another application of glyphosate controlled/suppressed most of the plants. The second glyphosate application was at 1.25 to 1.5 times the normal application rate. I suspect the lambsquarters were not controlled initially since they had undergone some moisture stress early in the year. I am not sure if a higher rate had been used initially if those plants would have died, but I suspect that it is so. In a strip trial we ran in one of these fields, the addition of Harmony GT to control these escaped lambsquarters did not provide additional control over glyphosate alone. So if common lambsquarters was not effectively controlled with glyphosate and a second application is necessary, consider increasing the rate to 1.25 - 1.5 times the normal use rate.

10 Useful Rules for Fungicide Application - Kate Everts; Vegetable Pathologist, University of Delaware and University of Maryland; keverts@umd.edu

Dr. Dan Egel, Purdue University, wrote the following article. It is a great summary to review for foliar fungicide applications. I have briefly edited the information for Delaware and Maryland.

10 Useful Rules for Fungicide Application - (Dan Egel) - Rules 1 through 7 are listed in no particular order; however, I saved the most important three for last.

1. Apply fungicides prior to the development of disease. Most fungicides do not have a “kick back” action. That is, they do not effectively eradicate diseases after they have started. And by the time a single disease lesion is observed in the field, many more lesions too small to observe are already working at your crop.

2. Use shorter spray intervals during weather conducive to plant disease. Each plant disease has its own “personality” and thus prefers different weather. However, most plant diseases require leaf wetness. Therefore, during periods of rain and heavy dews, more frequent fungicide applications are a good idea. The normal range of spray applications is every 7 to 14 days. Muskmelon and watermelon growers have the guesswork taken out of this process.
3. **Apply fungicides before a rain if possible.** Water is necessary for most fungal spores to infect a leaf or stem and for the splash dispersal of many spores. Therefore apply fungicides before a rain if it appears that the fungicide will have a chance to dry before the rain. It is not necessary to apply fungicides again after every rain. Most modern fungicides have a good sticker and will persist through rains pretty well.

4. **Avoid applying fungicides in the heat of the day.** It is possible for any foliar applied chemical to cause some plant damage if applied under conditions of heat and direct sunshine. Also remember that if fungicides and insecticides are applied together, make the applications so that bees are unharmed.

5. **Timing of fungicide applications is more important than nozzle type and spray pressure.** Studies in several areas of the country have found that nozzle type and spray pressure doesn’t make as much difference as we once thought.

6. **Some diseases cannot be managed by foliar sprays.** Problems caused by soil borne fungi or nematodes (such as Fusarium wilt and root-knot nematode) cannot be controlled with foliar fungicides. Also, be certain that the problem you observe is really a disease. No amount of fungicide will improve a problem caused by soil fertility.

7. **Do not apply foliar fungicides to the soil.** Although fungicides may kill or inhibit the growth of fungi which cause plant diseases, the application of those same fungicides to the soil will be wasteful and off label. Foliar fungicides are designed to protect the surfaces of plants.

8. **Make certain the fungicide matches the crop and disease.** That is, READ THE LABEL. The label is the law. Plus, considerable time and money was spent to test each fungicide with a particular crop and disease. Off label applications also waste your time and money.

9. **Double - check the label for the current rate per acre.** Rates may vary widely based on label changes and different formulations. While you are checking the rate, also check to make sure your application method is labeled.

10. **Play it safe.** Always adhere to the Post-Harvest Intervals, Re-Entry Intervals and Worker Protection Standards listed in the label. No one wants an accident or lawsuit. Besides, the label is the law.

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**Announcements**

**2006 Delaware Weed Day**
Thursday July 6, 2006  8:15 a.m.
Carvel Research and Education Center
Georgetown, DE

Due to excessive rains at the UD-Research and Education Center the UD Weed Science Field Day was rescheduled for July 6.

The day will begin with registration at 8:15 a.m. and opening remarks at 8:30 a.m. at the Picnic Grove near the farm buildings and new office building on the north side of Rt. 9.

A variety of herbicide programs for conventional tillage and no-till are being evaluated. Almost all registered corn herbicides are included, as well as evaluation of reduced rates of soil-applied corn herbicides, herbicide evaluation for watermelons, sweet corn tolerance to newer herbicides and a number of studies with traditional soybean herbicide programs.

For more information contact Mark VanGessel at (302) 856-7303
Weather Summary
http://www.rec.udel.edu/TopLevel/Weather.htm

Week of June 22 to June 28, 2006

Readings Taken from Midnight to Midnight

Rainfall:
0.58 inch on June 23
0.02 inch on June 24
5.26 inches on June 25
0.07 inch on June 26
1.20 inch on June 27
1.06 inch on June 28

Air Temperature:
Highs Ranged from 90°F on June 22 to 80°F on June 23.
Lows Ranged from 73°F on June 27 and June 28 to 68°F on June 22 and June 25.

Soil Temperature:
76°F average.
(Soil temperature taken at a 2 inch depth, under sod)

The Weekly Crop Update is available online at http://www.rec.udel.edu/TopLevel/Publicat.htm

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