



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Vegetables

Pea Irrigation - Ed Kee, Extension Vegetable Crops Specialist; kee@udel.edu

The relatively dry weather we are experiencing brings up the need for irrigating peas. As temperatures reach the 80°F's or higher, peas in blossom and pod fill can use 0.25 inches of water per day through evapotranspiration. Maintaining adequate soil moisture as the crop goes into its reproductive and pod-filling stage is critical for obtaining profitable yields.

For the most part, the pea crop looks promising at this point. Growers should not delay irrigation if dry conditions persist. Of course, as harvest approaches, irrigation should be stopped to facilitate harvest operations.



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

Melons.

Continue to scout all melons for aphids, cucumber beetles, and spider mites. We have seen an increase in the number of fields with economic levels of melon aphids and spider mite populations are building in a few fields. The threshold for mites is 20-30% infested crowns with 1-2 mites per leaf. Acramite, Capture,

Danitol, Agri-Mek or Kelthane will provide control, but should be rotated to avoid the development of resistance. The treatment threshold for aphids is 20% infested plants with at least 5 aphids per leaf. Actara, Fulfill, Lannate and Thiodan are labeled on melons and will provide melon aphid control. You should also watch carefully for cucumber beetles. We have found a number of fields with high levels and beetles can be found in most fields.

Peas.

Continue to sample for aphids. A treatment will be needed 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.

Colorado potato beetle (CPB) adults, egg masses and the first small to medium size larvae can be found in fields where an at-planting CPB material was not used. A treatment should not be needed for adults until you find 25 beetles per 50 plants and defoliation has reached the 10% level. Once larvae are detected, the threshold is 4 small larvae per plant or 1.5 large larvae per plant. Avaunt + PBO, Actara, cryolite, Spintor or Provado will provide control. Corn borer catches remain low to moderate; however, ECB egg masses can be found in the earliest planted potatoes. A corn borer spray may be needed 3-5 days after an increase in trap catches or when we reach 700-degree days (base 50). Be sure to check our website <http://www.udel.edu/IPM/traps/latestblt.html>

for the most recent moth catches in your area. Avaunt, Ambush, Baythroid, Furadan, Penncap, Pounce or Spintor will provide control. If you are scouting for infested terminals, the first treatment should be applied when 20-25% of the terminals are infested. Furadan or Monitor will provide the best control if you are waiting until you see infested terminals. We have found our first potato leafhopper adults, but populations remain light. As a general guideline, controls should be applied if you find ½ to one adult per sweep and/or one nymph per every 10 leaves. A pyrethroid, Actara or Provado will provide control.

Sweet Corn.

Flea beetles and cutworms are still active in seedling stage sweet corn. The treatment threshold for flea beetles is 5% infested plants. The cutworm threshold is 3% cut plants or 10% leaf feeding. Continue to sample any corn in the whorl stage or any corn planted under plastic where tassels have emerged for European corn borer larvae. A treatment should be applied if 15% of the plants are infested. In recent years, Avaunt (whorl stage only), Baythroid, Mustang, Penncap, Spintor or Warrior has provided effective control. If economic levels of corn borers are present in pretassel to tassel stage corn, two sprays spaced 3-4 days apart are often needed.



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

Potatoes.

Late blight Advisory.

We are using the E-WEATHER SERVICE from SkyBit, Inc. as we have in the past. The service determines specific requested weather parameters (temperature, relative humidity and rainfall) at Joe Jackewicz's farm based on calculations of data from the nearest National Weather Service stations. This weather data is used in the WISDOM software program for predicting late blight and making spray recommendations.

Disease Severity Value (DSV) Accumulation as of May 19, 2004 is as follows:

Location: Joe Jackewicz Farm, Magnolia, DE. Greenrow: April 25, 2004

Remember that 18 DSV's is the threshold to begin a spray program

Date	Total DSV	Spray Recommendation
5/2	4	none
5/3	12	none
5/9	14	none
5/16	15	none
5/18	17	none

Disease severity values have been accumulating slowly so far this season. The threat of late blight from seed infection is still low, but more of a potential problem than last year.

Remember that these values are for potatoes that would have about 50% emergence and made a row that you can see on or before April 25th. Any fields that emerged after May 3 have only accumulated 5 DSV's so far.

Growers who do not want to rely only on the DSV calculations for scheduling fungicide applications should apply at least 1-2 sprays of mancozeb (Dithane, Pencozeb, Manex II) or Bravo before plants canopy down the row. Late blight has not been a problem here in Delaware for many years and unless you have seed from an unknown source the risk of late blight is very low.



Field Crops

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

Grasshoppers in Field Crops.

The first grasshopper nymphs have been observed in no-till fields and along field edges. Be sure to watch fields carefully at emergence for grasshopper activity. As a general guideline, non-crop areas should be treated if you find 20 or more grasshoppers per square yard. In corn and sorghum, a treatment is justified if you find 5-8 grasshoppers per square yard. In soybeans, the threshold is one per sweep and 30 percent defoliation. In all 3 crops, dimethoate, Lorsban, Asana and Warrior will provide control, but multiple applications may be needed. Furadan is also labeled on corn and soybeans and has provided good grasshopper control.

Alfalfa.

Since the first leafhoppers have migrated into our area, be sure to check all fields for leafhoppers within one week of cutting. You should also sample all spring planted fields since they are very susceptible to damage. Once the damage is found, yield loss has already occurred. The treatment thresholds are 20 per 100 sweeps on alfalfa 3 inches or less in height, 50 per 100 sweeps in 4-6 inch tall alfalfa and 100 per 100 sweeps in 7-11 inch tall alfalfa. Baythroid, dimethoate, Mustang or Warrior will provide effective control. There have also been reports of delayed regrowth. In past years, regrowth has been delayed in fields where adults and/or larvae are found feeding in the crown. Be sure to examine the crowns and treat if you find 2 or more adults and/or larvae per crown.

Field Corn.

We continue to find cutworm leaf feeding and cut plants in no-till fields, so continue to sample for cutworms through V-5 stage corn.

We have also found our first true armyworms feeding in the whorls of no-till corn. Be sure to carefully sample no-till fields where a grass cover or volunteer small grains were burned down at planting. The treatment threshold for armyworms in corn is 25% infested plants with larvae less than one-inch long.

Similar to 2003, we have found a few fields with corn leaf aphids feeding on spike to 2 leaf stage corn. In all cases, it was once again related to the presence of volunteer grain and/or heavy populations of annual bluegrass present at the time of planting. Midwestern research indicates that plants infested in the coleoptile to two-leaf stage were the most sensitive to aphid feeding. Aphids feeding at these stages can result in delayed plant development, reduced plant height, and delayed pollen shed and silking. Although no thresholds have been established, aphid populations of 15 or more per seedling plant may warrant a treatment, especially in seed production fields.

Small Grains.

Continue to scout all fields for cereal leaf beetle (CLB), aphids, grass sawfly and armyworms. We are still finding fields with economic levels of cereal leaf beetle. If economic levels of CLB are present, sprays will be needed until the grain reaches the hard dough stage. At this time, the cereal leaf beetle treatment threshold is 0.5 larvae per stem. In general, aphid and sawfly populations are low. We are starting to see an increase in armyworm activity, especially in barley. Remember, armyworms will clip heads quicker in barley so the threshold is lower compared to the wheat threshold.

The treatment threshold for aphids is 20-25 per head with low beneficial activity (less than 1 per 50 aphids). In both wheat and barley, the treatment threshold for sawflies is 2 per 5 foot of row innerspace or 0.4 per foot of row. The armyworm threshold is one per foot of row in barley and two per foot of row in wheat. If multiple pests are present in barley, your only control option is Lannate. In wheat, your options include Lannate, Mustang, or Warrior.



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

Wheat.

From a disease viewpoint, wheat looks very good. The lack of rain downstate compared to last season is contributing to the lack of diseases. There are just a few speckled leaf blotch symptoms caused by *Septoria tritici*, appearing now on wheat that has already flowered. Powdery mildew is beginning to appear on unsprayed susceptible wheat varieties such as 'Roane' in New Castle County. There is a slight chance of head scab in the northern parts of the state if the present weather pattern holds. In drought prone areas of Sussex County, wheat foliage is firing (drying up) from the base of the plant to the head. The contrast from last year is quite remarkable. Wheat looks very good at this point.

Soybeans.

I recently attended a southern region meeting on soybean rust where meteorologists who study air movements that could carry spores of Asian soybean rust (SBR) to North America from infected areas in South America, mainly Brazil, made some interesting predictions. Fortunately for us, the equator is a natural boundary that keeps large numbers of rust spores from southern Brazil from being carried north of the equator to North America. However, there are unconfirmed reports at this time that soybean rust was found in northern Brazil, north of the equator this season. If that is confirmed, it may take several more seasons for soybean rust to

increase to the point that enough spores are produced north of the equator that could make their way north to the USA. This delay would provide us more time to prepare for the inevitable introduction of Asian soybean rust into North America. Research on developing resistant varieties is continuing as well as research on fungicide control programs. USDA including Extension, the United Soybean Board, and the ASA are involved in minimizing the impact that SBR will have in the U.S. I will be writing updates on this developing disease as the season progresses. For the present, the prediction is that it is unlikely that SBR will arrive in the U.S. naturally this season. We still need to be vigilant, because it could be introduced accidentally or intentionally (Ag Bioterrorism). We were also assured that soybean meal imported from Brazil poses no threat because it is heated and the rust spores do not survive the treatment. At the present time, imported soybean seed is considered a minimal risk provided seeds are highly cleaned and treated with a fungicide. Commodity soybeans are considered a moderate threat but unlikely to be a threat. There is still research to be done on this issue. We were told that handling of whole seed in Brazil reduces dust and foreign matter to 1% or less before shipping. This along with drying would remove or reduce spores to levels that possibly would not be a source for field infections. This still needs to be researched. If you would like more information on soybean rust:
<http://www.ipmcenters.org/Newsalerts/soybeanrust/>



Grain Marketing Highlights - Carl German,
Extension Crops Marketing Specialist;
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Commodity Markets React to Weather and Fund Liquidation.

Excellent weather and liquidation of fund longs are being credited for most of the sell off in commodity futures this week. Commodity speculators appear to be currently enamored with what is thought to

be nearly 'ideal' growing conditions in the corn belt. Talk of consolidation is being mentioned in both the corn and soybean pits, meaning that these markets may well find support at current levels. Favorable forecasts in the Midwest are likely to keep these markets range bound for the next week to ten days. Volatility hasn't gone anywhere and can be expected to be with us for the foreseeable future.

Market Strategy.

With commodity futures down so hard this week, place further new crop corn, soybean, and/or wheat sales on hold. We are likely to get a better picture of the impact that the weather is having with the release of the next USDA crop progress report which is due out Monday, May 24th.



UPCOMING MEETINGS:

Agronomic Crops Twilight Session

When: Wednesday, June 2, 2004

Where: UD Cooperative Extension Research and Demonstration Area (3/4-mile east of Armstrong Corner, on Marl Pit Rd. - Rd 429, Middletown)

Time: 6:00 PM

Join your fellow producers and the UD Extension team for an interactive and hands-on experience as we discuss **demonstration trials** and address **in-season production issues** in small grains, corn, and soybeans. We will focus on:

- **Small grain variety comparisons,**
- **Insect, weed, and disease management,**
- **A Grain Marketing Update.**

We will apply for DE Pesticide re-certification credit.

This meeting is free and everyone interested in attending is welcome. **To register, for more information or special consideration in accessing this meeting, please call our office in advance, at (302) 831-2667.**

See you there! Carl P. Davis, Extension Agent, Agriculture

Weather Summary
http://www.rec.udel.edu/TopLevel/Weather.htm
Week of May 14 to May 19, 2004
Rainfall:
0.56 inches: May 17 0.01 inches: May 19
Readings taken for the previous 24 hours at 8 a.m.
Air Temperature:
Highs Ranged from 87°F on May 14 to 80°F on May 19.
Lows Ranged from 67°F on May 15 to 62°F on May 16 & 17.
Soil Temperature:
77°F average.
(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>

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