



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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Last Issue of Weekly Crop Update for 2011

*Emmalea Ernest, Extension Associate -
Vegetable Crops; emmalea@udel.edu*

This is the last issue of Weekly Crop Update for the 2011 season. I hope that this newsletter has been a useful resource to you as you dealt with the challenges of this past growing season. My thanks to the Extension specialists and agents who have contributed articles this year – the WCU would obviously not be possible without them. My thanks as well to our office staff at the REC, who make sure the WCU gets to our fax and mail subscribers.

As editor of WCU, I appreciate your comments and suggestions for improvement of this publication. You can contact me at the email address above or at (302) 856-7303.

Best wishes for a safe and prosperous fall harvest season. I look forward to seeing many of you at meetings this winter.

Kind regards,

Emmalea



Vegetable Crops

Vegetable Disease Update - *Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu*

Lima Bean Downy Mildew

Downy mildew is present now in Delaware lima bean fields. Levels are not high but many have been sprayed to protect the crop. Keep scouting and apply fungicides when needed; see past issues and the [2011 Delaware Commercial Production Recommendations](#) for more information.

Fall Sanitation

In vegetable production it is not a good idea to leave old crop residue in the field any longer than necessary. If the crop is allowed to survive after harvest, fungi that cause many diseases continue to increase on the surviving plants. This allows higher numbers of the fungus to potentially survive until next season. Sanitation (plowing or disking the old crop) will help prevent pathogen carry-over.

Nematodes in Veggies

Fall is the best time to soil sample for nematode pests such as root knot, lesion, and other plant parasitic nematodes. After fall harvest but before any fall tillage is done take soil cores six inches deep between plants in the row. Samples should be taken in the root zone of the old crop. Twenty cores/ sample should be taken from random spots in the field and placed in a plastic bucket gently mixed, and a pint of soil

submitted for analysis. Large fields should be subdivided into blocks of 10-15 acres each and sampled separately. Nematodes are not uniformly distributed in the soil and it would be easy to miss significant numbers if a single sample of 20- 25 soil cores represented a large acreage. Nematode test bags and instructions are available for purchase from the county Extension offices. Samples cost \$10.00. Fall sampling for root knot nematodes is strongly recommended for fields that will be planted in cucumbers, watermelons, cantaloupes, lima beans or other high value vegetables where root knot could reduce production. Forms and instructions are also available on the web at <http://ag.udel.edu/extension/pdc/index.htm>.

New video on nematode sampling
"How to Sample for Nematodes" is a new video that was just produced to help growers with taking nematode samples in the fall to monitor plant parasitic nematode populations in their fields. The video features Bob Mulrooney, Extension Plant Pathologist at the University of Delaware explaining and demonstrating how to take soil sample for nematodes in row crops as well as narrow crop soybeans. The link for viewing is on the CANR You Tube server at http://youtu.be/x5HcY_L6aQk.

Processing Vegetable Year in Review -
Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu

2011 was a "mixed bag" for processing vegetable growers in Delaware. The pea planting season started out slow with a wet and cold March. April plantings went in on-time. There was a hot period in late May and early June that cause yield losses but the second half of June was more seasonable and yields were as expected.

Processing sweet corn yields were at or above average for earlier plantings. Later crops that were silking in the second half of July lost yield potential due to excessive heat.

So far the lima bean season has been disappointing. Early planted limas had very low yields due to the record breaking heat in July. Limas planted in the first half of June have had

their harvests delayed several weeks and are suffering split sets. On top of that, the excess rainfall in later August has caused yield losses due to diseases and brown beans. There is better promise for limas planted later in June and in July.

Snap beans yielded well up to July. As with last year, summer yields were low due to split sets. Summer planted snap beans for fall harvest were hurt badly by storm damage and excess rain from the hurricane and tropical storms and will have lower than expected yields.

Pickling cucumber yields for the first 2/3 of the season were excellent. Plantings for later August and September harvest were hurt by storm damage and excess rain. Late plantings also had higher levels of fruit diseases.

Optimistic for Vegetable Acreage in 2012 and Beyond - *Gordon Johnson, Extension Vegetable & Fruit Specialist; gcjohn@udel.edu*

There is potential for increased vegetable acreage in 2012, especially on the processing side. Market opportunities being presented to processors will likely mean increased pea, lima bean, and snap bean acreage. Processing sweet corn is more undecided and pickle acreage should remain about the same. There is also potential for picking up processing tomato acres for the first time in many years.

While processing vegetables do not compete well with corn at current prices, they still are competitive with soybeans and often offer double crop opportunities (soybeans after early sweet corn; soybeans or lima beans after peas; pickles or lima beans after small grain; lima beans, pickles, or soybeans after snap beans; snap beans after sweet corn; etc.).

Acres of processing lima beans are being lost in other regions, especially California. Land and water costs make lima beans less competitive than other higher value crops. Processors are very interested in having more Fordhook lima bean production on Delmarva. When we can get a more stable Fordhook lima variety for the East,

we can recapture almost all of that market from California.

On the fresh market side, 2012 watermelon acreage, should cycle back with fewer acres than 2011 with greater concentration on the early market. Fresh market sweet corn acres should remain steady or see a small increase. Fresh and processing potato acres should remain about the same. There should be a small but steady increase in other fresh market vegetables over the next few years. Proximity to markets makes Delmarva very competitive.

The next few years may also bring new opportunities with onions, broccoli, and oriental vegetables.

Cover Crops, Winter Annual Weeds and Spring Vegetables - Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

Using cover crops prior to early-spring vegetables like peas and sweet corn is becoming more common. One issue for growers who want to no-till into that killed cover is managing winter annual weeds, like henbit and chickweed. In this situation, glyphosate is usually used to kill the cover crops (such as barley, wheat, rye). But glyphosate often will not provide the necessary control of henbit or chickweed because the weeds have not started actively growing that time of year. One way around this is using a herbicide in the fall to "clean up the cover crop". Using a broadleaf herbicide such as Harmony Extra or 2,4-D in the fall will control many of the broadleaf weeds and not limit crop rotation in the spring (replant intervals are 1.5 to 3 months). Then, when burning down the cover crop in the spring, the concern is killing the cover crop, and not worrying about the winter annual broadleaves that can be tough to control that time of year.

Agronomic Crops

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

Soybeans

In looking at fields at the end of last week and early this week, one of the main insects that can be found are green stinkbugs - mainly nymphs. This comes as no surprise and you may want to re-read a very well written article by my colleague at the University of Maryland, Cerruti Hooks, where he talks about stink bug populations in soybeans (http://dorchester.umd.edu/files/August_18_2011.pdf). As indicated in past newsletter, you will need to consider scouting fields for stink bugs until the latest planted fields reach the R-7 growth stage.

Small Grains

Be sure to sample fields at emergence for aphids, true armyworm and fall armyworm feeding. In past years, we have seen economic damage from all three insect pests. We have seen fields destroyed by armyworms in past years, especially in no-till situations. In many cases it has been true armyworm, although fall armyworm can also cause damage. Although there is no threshold available, you will need to watch for larvae feeding on small plants.

You should also consider the following factors when making a treatment decision for aphids in small grains. In general, cooler summer temperatures with adequate rainfall followed by a warm, dry fall are conditions that favor aphid development in small grains, especially in early planted fields. Early fall infestations of the green bug aphid (which causes direct damage to small grains as well as vectors BYDV) are favored by cool, late summer conditions. The following link provides good pictures of the major species of aphids found in small grains in Delaware: <http://kentagextension.blogspot.com/2007/10/know-your-small-grain-aphids.html>.

The main reason one would consider aphid control in the fall (except for greenbug aphid that causes direct damage) is the potential for Barley Yellow Dwarf Virus (BYDV) transmission. In areas where you have seen BYDV in the past,

where you are planting early, or you have seen direct damage by green bug aphids, a seed treatment that control aphids (i.e. Cruiser and Gaucho) would be a good control option. Information from Kentucky indicates that planting date is the most important factor determining the intensity of an aphid infestation. If you have a history of aphids transmitting viruses in the fall and you plan to scout for aphids, data from the south indicates that the most important time for controlling aphids to prevent BYDV is the first 30 days following emergence. The second most important time is the second 30 days following emergence. The following link to a fact sheet from Kentucky provides more information on aphids and BYDV in wheat (<http://www.ca.uky.edu/entomology/entfacts/ef121.asp>).

Small Grain Disease Prevention - Bob Mulrooney, *Extension Plant Pathologist*; bobmul@udel.edu

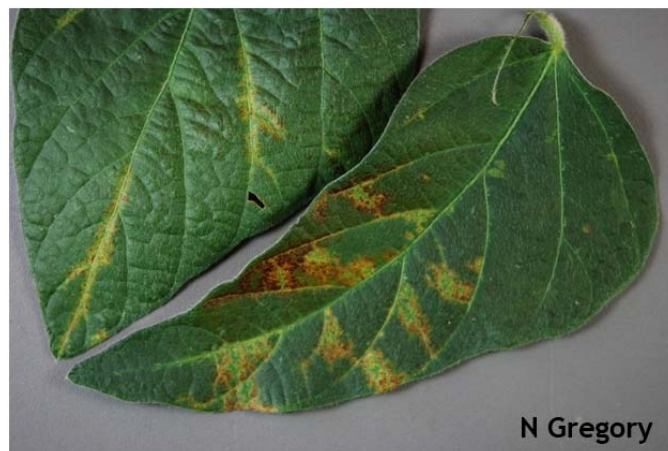
Be sure that you plant wheat and barley varieties with high levels of disease resistance. Select varieties with high levels of resistance to powdery mildew, leaf rust and stripe rust. Seed should be treated with Baytan, Raxil, Dividend or other labeled product to protect plants from loose smut and common bunt. Varieties that are susceptible to powdery mildew should be treated with Baytan, Dividend, or other seed treatment fungicide that will protect them from early infection.

Soybean Disease Update - Bob Mulrooney, *Extension Plant Pathologist*; bobmul@udel.edu

Soybean Vein Necrosis Virus

I just wanted to add a brief summary for our WCU readers that soybean vein necrosis virus has been seen in all three counties in Delaware and apparently is widespread in the surrounding states of PA, MD, and VA. We see it everywhere we look now but I am not sure how much effect it is having on yield at this point. Researchers in other parts of the country are also working on it and have a few more years experience with it. It

is premature to say too much about it other than we now know what is causing the symptoms we have seen this year and probably last year as well, but did not know what it was. By the time the winter meetings occur hopefully I will be able to share more hard facts about the disease and control options for our region.



Early symptoms of soybean vein necrosis virus (SVNV) from DE

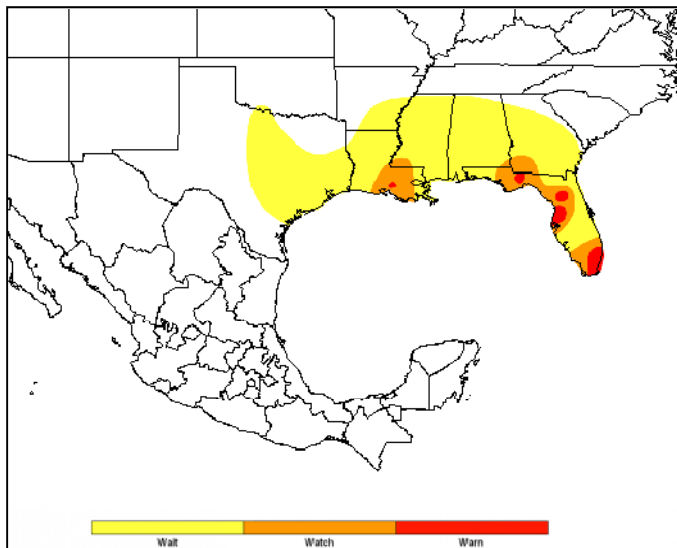
Soybean Cyst Nematode

Do not ignore **soybean cyst nematode**. Soil sampling after harvest before any fall tillage is recommended for fields to be planted next season to soybeans following this year's crop. Do not plant SCN susceptible varieties without soil testing first. Soil sample bags and information sheets are available from the county Extension offices for \$10/ sample bag.

Soybean Rust Risk Assessment (ZedX, Inc. & PSU)

Despite recent heavy rainfall along the Atlantic Coast and throughout the Northeast from the remnants of Lee and Hurricane Irene, source inoculum in the Southeast was likely still too low to cause widespread transport and deposition of spores further north. Soybean rust was, however, identified in extreme southwestern Georgia for the first time this season. Due to the ongoing drought in Texas and Oklahoma, the slow progression this season in the Southeast, and the fact that the primary soybean production season is in the later stages, it is unlikely that soybean rust will spread as far as it has in years past. As such, the risk area will remain rather minimal in spacial coverage (see map below). Double crop soybeans along the Gulf Coast could still be at risk for soybean rust

as the season progresses, but even double cropped soybeans are at a minimal risk.



The above image displays the current threat level of soybean rust. The yellow “wait” areas are considered slightly at risk, orange “watch” areas are at moderate risk, and red “warn” areas are at great risk or already identified positive for soybean rust. Risk areas are estimated based on meteorological factors affecting spore transport and deposition and factors conducive for further development within the canopy such as temperature and moisture. Biological factors such as host plant and crop phenology are also considered. Risk assessment maps are produced by the PSU Ensemble Field Crop Rust Forecasting Program.

Dealing With Corn Ear Rot Infected Grain - *Bob Mulrooney, Extension Plant Pathologist;* bobmul@udel.edu

We continue to get samples of stalk rot, and now ear rots in field corn. More samples of *Fusarium* ear rot caused by *Fusarium moniliforme* also known as *Fusarium verticillioides* have been received in the diagnostic lab this week. Hybrids that have been holding their ears vertical and have poor ear cover can be more susceptible to ear rots that benefit from moisture trapped in the ears. Ears that have been damaged by insects, particularly corn earworm, can also have more ear rot fungal infections. *Fusarium moniliforme* can produce mycotoxins called

fumonins. (see below), but not all isolates of the fungus produce fumonisins. Infected grain should be dried to 15% or below to prevent mold growth in storage.

When evaluating an ear rot problem, remember that certain ear rots are a warning sign to suspect toxins, but ear rots do not always lead to toxin problems. When potentially toxigenic ear rots are noticed in the field, grain can be managed to minimize toxin development. If more than 10% of ears have a significant amount of mold (25% of the ear or more), these fields should be harvested and the corn dried as soon as possible. The combine will remove some of the moldiest kernels.



Fusarium ear rot caused by *Fusarium moniliforme*

The best option for moldy grain is to feed it or sell it instead of storing it. However, it should be tested for toxins before feeding. Testing for mycotoxins can be done before putting the grain in storage. The best sampling method is to take a composite sample of at least 10 pounds from a moving grain stream, or to take multiple probes in a grain cart or truck for a composite 10-pound sample. If toxins are present, it is possible that it can be fed to a less sensitive livestock species, such as beef cattle (depending on the specific toxin and its concentration). A veterinarian or extension specialist can help with these decisions. If the grain is sold, there may be a reduced price due to mold damage.

Cleaning the grain removes fine particles that are usually the moldiest and most susceptible to further mold development. Good storage

conditions (proper temperature and moisture content, aeration, insect control, clean bins) and regular inspection are essential in preventing mold and toxin development in any stored corn. G. Munkvold (Iowa State Univ. Ext.)

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

Outside Market Forces Burden Commodity Markets

Corn Analysis

U.S. corn stocks are tight and they are expected to remain that way going into the 2012 growing season. Meanwhile, 2011 U.S. corn and soybean harvest is underway with mixed results being reported. This will not be a bumper crop year for U.S. corn, although with an estimated 92.3 million acres planted and a yield of 148.1 bushels per acre it could turn out to be the third largest crop on record. The question remains as to what will happen to the corn production estimate in the October and ensuing USDA reports? The estimated acres harvested could be revised, likely down, and the yield estimate could be changed, up or down. Those pending adjustments could cause corn prices to move higher or lower.

As outside markets collapse and the dollar rallies, investors are weighing in as to how they feel about the Fed's latest move to bolster the economy. As they ponder that question, the commodity markets are becoming oversold. With the short-term and long-term trends down in corn the path of least resistance continues to be lower. The weekly export sales report for corn, released this morning, was bearish. However, reports of strong purchases from South Korea this week of over 400,000 MT due to lower prices, and continued rumors of Chinese interest should allow support from both sides of the market (commercial and noncommercial) to emerge some point soon. Since last week's writing, Dec '11 corn futures have declined nearly 60 cents per bushel.

Soybean Analysis

It will be all about noncommercial long-

liquidation today as outside markets collapse and the dollar trades well over one point higher tied to growing concern over global economies. Wednesday saw the nearby November soybean futures contract close at its lowest level since June on the continuous weekly chart setting up further downside potential. While the weekly export sales report was reported to be bearish for soybeans, it is notable that a steady stream of announced sales continues to China with another 180,000 MT reported this morning. Nov '11 soybean futures have declined 95 cents per bushel since last week.

Wheat Analysis

Spillover pressure continues to come from the collapse in row-crops and the higher trending U.S. dollar index. Export sales and shipments were bullish as both numbers, reported sales and shipments, came in above the amounts needed to stay on pace with USDA's 1.025 billion bushel demand projection. However, if the dollar remains on the upswing, U.S. exports could suffer the balance of the 2011-2012 marketing year. July '12 SRW wheat futures have declined 33 cents per bushel since last Thursday.

Market Strategy

Commodity markets this past week were ruled by panic and mayhem. The Dow has been on a slippery slope downward since the markets learned of the Fed's recent move, losing nearly 800 points. Simply stated, the markets do not like the Fed's latest move. Hopefully, once the move is digested the commodity markets can respond to the oversold situation and return to seeking appropriate equilibrium prices. Any comeback in commodity prices will be dictated by the extent of the demand reduction that is taking place both at home and abroad. The September 30 Grain Stocks in all Positions report will give an indication as to the extent of the demand reduction.

Due to the tight U.S. corn supply, corn prices are expected to remain firm going into the '12/'13 marketing year. Domestically, the stocks-to-use ratio for U.S. corn is now calculated at 5.3%, as compared to 5.4% in August and 6.9% last year. For the world, the stocks-to-use ratio for corn was estimated at 13.6% in September, 13.2% in August, and 14.7% last year. The domestic soybean stocks-to-use ratio is similar 5.2% for

September, 4.9% in August, and 6.9% for the '10/'11 marketing year. World stocks-to-use estimates for soybeans were reported at 23.9% in September, 23.2% in August, and 27.2% last marketing year.

The heavy sell-off this past week is being attributed to the faltering U.S. and global economies. Commodity prices are expected to stabilize once the markets digest the Fed's recent actions and buyers begin to take advantage of lower commodity prices as buying opportunities. Considering the size of the sell-off this past week, it might make sense to hold up on advancing new crop corn and soybean sales at this point in time. Currently, Dec '11 corn futures are trading at \$6.64; Nov '11 soybean futures at \$12.93; and July '12 SRW wheat at \$7.27 per bushel.

For technical assistance on making grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist.

Announcements

2011 Harvest Festival at Delaware Agricultural Museum & Village

Saturday, September 24 10:00 a.m. – 3:00 p.m.
Delaware Agricultural Museum & Village
866 North DuPont Highway, Dover, DE

Delaware residents and visitors are invited to come and experience the 2011 Harvest Festival, a free family-oriented event about local agriculture.

The Harvest Festival is driven by USDA's "Know Your Farmer, Know Your Food" initiative which supports local farmers, strengthens rural communities, promotes healthy eating, and protects natural resources. According to Robin Talley, acting State Executive Director, with the USDA Farm Service Agency, there is a gap between many residents and their local ag community. "We hope that this event will help Delawareans understand where their food comes from and the importance of their local farmer and agriculture."

Visitors can enjoy a petting zoo, interactive agricultural demonstrations, live music, and most importantly local, farm-fresh food. The event is free and parking is free.

The Harvest Festival is sponsored by USDA in partnership with the Delaware Department of Agriculture, Delaware State University & University of Delaware Cooperative Extension, Delaware FFA, Kent Conservation District, and Fruit and Vegetable Growers Association of Delaware.

This is the second year for the Harvest Festival. Last year, the event was a success with more than 500 attendees participating in the interactive demonstrations and displays. For more information, visit www.agriculturalmuseum.org and click on Calendar.

2011 Wye REC Pumpkin and Sweet Corn Twilight

Tuesday, September 27, 2011 4:30-6:30 p.m.
Wye Research and Education Center
Queenstown, MD

University of Maryland specialists will discuss insect and disease control and various cultural practices.

You'll see 20 varieties of large & small pumpkin types; 10 varieties of winter squash; and taste 4 late season varieties of BT sweet corn.

A light meal will be available.

There is no charge to attend this program but we ask that you please pre-register with Debby Dant at (410) 827-8056 x115 or ddant@umd.edu. Contact Mike Newell at (410) 827-7388 for program information.

SARE Farmer Grant-Writing Workshop

Wednesday October 26, 2011 6:00-8:00 p.m.
DSU Outreach & Research Center
884 Smyrna-Leipsic Rd.
Smyrna, DE 19977

Do you have an innovative idea that could increase profits, improve farmer lifestyles or improve environmental conditions?

Learn how to get paid to do research on your farm!

RSVP by October 19 to Jason Challandes:
jchallandes@desu.edu or (302) 388-2241.

Delaware Agriculture Week

Monday, January 16 – Saturday, January 21, 2012

The University of Delaware Cooperative Extension, Delaware State University Cooperative Extension and the Delaware Department of Agriculture are again cooperating to organize a week of agriculture-related events.

The following General Agenda outlines the various meetings and events that are planned and their **approximate** times. Most will take place at the Delaware State Fairgrounds. The associated trade show will take place in the Dover Building from Tuesday, January 17 to Thursday, January 19.

The detailed session agendas will be available online at the end of November and the completed program will be mailed out in December. Delaware and Maryland Pesticide Recertification credits, Nutrient Management credits and CCA credits will be offered.

Ag Week General Agenda

Monday, January 16

Fruit & Vegetable Growers Assn. of Delaware Fruit Session

State Fairgrounds - 6 to 9 PM

Hay and Pasture Evening Session

State Fairgrounds - 6 to 9 PM

Tuesday, January 17

Fruit & Vegetable Growers Assn. of Delaware Annual Meeting

State Fairgrounds

- *General Session – 9 AM to Noon*
- *Fresh Market/Vine Crops – 1:30 to 4:30 PM*

Fruit & Vegetable Growers Assn. Banquet

Harrington Fire Hall – 6 PM

Hay and Pasture Day-Time Sessions

State Fairgrounds - 9 AM to 4:30 PM

Grain Marketing Session

State Fairgrounds – 9 AM to 4:30 PM

Equine Pasture & Nutrient Management Session

State Fairgrounds - 6 to 9 PM

Small Ruminant Session

State Fairgrounds - 6 to 9 PM

Forestry Session

State Fairgrounds - 6 to 9 PM

Wednesday, January 18

Fruit & Vegetable Growers Assn. of Delaware Annual Meeting

State Fairgrounds

- *Processing Crops Session - 9 AM to Noon*
- *Vegetable Tillage Session - 1:30 to 4:30 PM*
- *Direct Marketing Session - 9 AM to Noon*

Aquaculture Session

State Fairgrounds - 1 PM to 4 PM

Poultry Nutrient Management

Carvel REC, Georgetown – 9 AM to Noon

Poultry Nutrient Management

State Fairgrounds - 6 to 9 PM

Small Flock Poultry

State Fairgrounds - 6 to 9 PM

Beef Cattle Producers Session

State Fairgrounds - 6 to 9 PM

Thursday, January 19

Agronomy/Soybean Session

State Fairgrounds - 9 AM to 4:30 PM

DDA, FSA, Farm Credit – Young Farmer Loan Program

State Fairgrounds - 9 AM to 4:30 PM

Friday, January 20

Friends of Ag Breakfast

Harrington Fire Hall - 7 to 9:30 AM

Saturday, January 21

Market Gardener Roundtable

Paradee Center, Dover - 9 AM to Noon

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of September 15 to September 21, 2011

Readings Taken from Midnight to Midnight

Rainfall:

0.24 inch: September 17

0.02 inch: September 18

Air Temperature:

Highs ranged from 85°F on September 15 to 64°F on September 17.

Lows ranged from 55°F on September 15 and September 18 to 46°F on September 16.

Soil Temperature:

70.4°F average

Additional Delaware weather data is available at http://www.deos.udel.edu/monthly_retrieval.html and

<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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