



# WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

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## Vegetable Crops

**Vegetable Crop Insects** - *Joanne Whalen, Extension IPM Specialist*; [jwhalen@udel.edu](mailto:jwhalen@udel.edu)

### Lima Beans

We are starting to see an increase in stinkbug and plant bug populations. As soon as pin pods are present, be sure to watch carefully for plant bug and stinkbug adults and nymphs. As a general guideline, treatment should be considered if you find 15 adults and/or nymphs per 50 sweeps. With the recent increase in trap catches, you should also be sure to sample for corn earworm larvae as soon as pin pods are present. A treatment will be needed if you find one corn earworm larvae per 6 ft of row

### Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. We are starting to see an increase in aphid populations in a few fields so watch fields carefully and apply treatments before populations explode. We continue to find fields with beet armyworms and cabbage loopers feeding on the rinds of watermelons. Since beet armyworm (BAW) is difficult to control, be sure to select a material that is labeled for this insect on melons such as Avaunt, Coragen, Intrepid, Radiant, or Synapse. The pyrethroids will not provide effective BAW control. Be sure to check all labels for days between last application and harvest.

### Peppers

As soon as the first flowers can be found, be sure to consider a corn borer treatment. Depending on local corn borer trap catches, sprays should be applied on a 7 to 10-day schedule once pepper fruit is  $\frac{1}{4}$  -  $\frac{1}{2}$  inch in diameter. Be sure to check local moth catches in your area by calling the Crop Pest Hotline (instate: 800-345-7544; out of state: 302-831-8851) or visiting our website at:

<http://ag.udel.edu/extension/IPM/traps/latestblt.html>. You will also need to consider a treatment for pepper maggot. Be sure to watch carefully for beet armyworm larvae since they can quickly defoliate plants. In addition, be sure to use a material that provides beet armyworm control - the pyrethroids will not control this insect.

### Snap Beans

As corn borer and corn earworm populations start to increase, you will need to consider treatments for both insect pests. Sprays are needed at the bud and pin stages on processing beans for corn borer control. As earworm trap catches increase, an earworm spray may also be needed at the pin stage. You will need to check our website for the most recent trap catches to help decide on the spray interval between the pin stage and harvest for processing snap beans (<http://ag.udel.edu/extension/IPM/traps/latestblt.html>) and (<http://ag.udel.edu/extension/IPM/thresh/snapbeanecbthresh.html>). Once pins are present on fresh market snap beans, a 7 to 10-day schedule

should be maintained for corn borer and corn earworm control.

### **Sweet Corn**

Be sure to sample all fields from the whorl through pre-tassel stage for corn borers, corn earworms and fall armyworm. We are starting to see an increase in whorl infestations of fall armyworm. 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. The first silk sprays will be needed for corn earworm as soon as ear shanks are visible. Be sure to check both blacklight and pheromone trap catches for silk spray schedules since the spray schedules can 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/silksp raythresh.html>). You can also call the Crop Pest Hotline (in state: 800-345-7544; out of state: 302-831-8851).

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### **Cucurbit Downy Mildew Update - Bob Mulrooney, Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)**

Wednesday's rain was a high risk event for cucurbit downy mildew in the region. Be sure downy mildew fungicides are being employed for disease control at this time. There have been no new reports of downy mildew in DE, MD, NJ or PA. That will probably change if this weather pattern continues. Keep current on disease progress by visiting <http://cdm.ipmpipe.org/>.

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### **Buckeye Rot on Tomato - Bob Mulrooney, Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)**

Be on the lookout for buckeye rot when we get wet weather and wet soils. This is more a problem on tomatoes grown on flat culture because the fungus is soil borne. Staked tomatoes generally are not affected unless soil splashes onto the fruit. Symptoms of Buckeye Rot on green fruit include brownish-tan lesions

that have a definitive concentric appearance. As lesions form the fruit will begin to soften up, this is quite different than Late blight which will cause a dark brownish/ black lesion with the fruit remaining somewhat firm. Unlike Late blight, Buckeye rot won't attack the foliage. For more information on control please see the [2010 Delaware Commercial Vegetable Production Recommendations](#).



R. Mulrooney  
Buckeye rot on tomato fruit

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### **Basil Downy Mildew Found in NJ - Bob Mulrooney, Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)**

Basil downy mildew has been confirmed near Vineland, NJ. Basil is at risk. Commercial growers can use ProPhyt or K-Phite -- both are phosphorus acid fungicides with the same mode of action. Very few products are labeled currently for this use. Be sure to check fungicide labels for instructions and rates.

For more information and pictures check the following link from Cornell University. <http://vegetablemndonline.ppath.cornell.edu/NewsArticles/BasilDowny.html>

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**Dry to Wet Disorders in Vegetables and Fruits** - Gordon Johnson, Extension Vegetable & Fruit Specialist; [gcjohn@udel.edu](mailto:gcjohn@udel.edu)

Most areas of Delaware received significant rainfall over the last 7 days. For example, Bridgeville had over 3.7 inches of rain, Dover, over 3 inches, Blackbird over 3.3 inches, Laurel 2.2 inches, and Greenwood, 3.2 inches. While this was welcome for soybeans and helped to stop further yield loss in corn, it was a mixed blessing in vegetables. Certainly, crops such as dry land lima beans have benefitted greatly as have non-irrigated corners of pivots (pickles and sweet corn especially). However, heavy rainfall after a long, hot, dry period can lead to certain disorders in other vegetables and fruits. Common problems include:

**Fruit Cracking and Splitting**

This is most common in ripening tomatoes, peaches, and melons but also can be found in other fruiting crops, especially those that were water stressed prior to the rains.

**Edema**

Edema is water blistering and is caused when the plant takes up more water than it is transpiring.

This is seen as raised bumps on leaves, stems, and sometimes fruits. If water pressure is great enough, these raised bumps will burst leaving small blisters.

**Wilting**

After heavy rains, in areas of the field that remain waterlogged, plants will wilt once the sun comes out. This is because roots are not functioning properly due to lack of oxygen. Wet conditions can also increase the susceptibility to root, crown, and stem rots due to organisms such as Pythium and Phytophthora, also leading to wilting.

**Split Sets**

Split sets are common in crops such as snap beans and lima beans where a crop under heat and moisture stress subsequently receives ample rain along with reduced heat. This induces re-flowering and a second pod or fruit set. Split sets complicate harvest timing as well as pest management programs in these crops.

**Fruit Quality Reduction**

Heavy rainfall along with cloudy weather can cause fruit quality problems in those fruits near ripening. Most common is reduced sugar content.

**Potato Disease Advisory #16 - July 15, 2010** - Bob Mulrooney, Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)

Disease Severity Value (DSV) Accumulation as of July 14, 2010 is as follows:

Location: Art and Keith Wicks Farm, Rt 9, Little Creek, Kent County.

Green row: May 6

Date	LATE BLIGHT			EARLY BLIGHT
	Daily DSV	Total DSV	Spray Recs	Accumulated P- days*
6/26-6/27	0	42	10-days	391
6/28-6/30	0	42	10-days	408
7/1-7/5	0	42	10-days	444
7/6-7/7	0	42	10-days	449
7/8	1	43	10-days	454
7/9	8	51	7-days	462
7/10	0	51	7-days	471
7/11-7/12	0	51	7-days	484
7-12-7/13	3	54	7-days	490
7/13-7/14	10	64	7-days	499

I am trying to get back on schedule so here is the latest report only two days additional data but the continued rainfall has increased the favorable environment for late blight, if there are any late blight spores anywhere around the region. There have been no reports of late blight from eastern shore VA, NJ or DE to date.

It is important to keep scouting and maintaining fungicide applications at this time.

For specific fungicide recommendations, see the [2010 Delaware Commercial Vegetable Production Recommendations Book](#).

## Agronomic Crops

**Agronomic Crop Insects** - *Joanne Whalen, Extension IPM Specialist; [jwhalen@udel.edu](mailto:jwhalen@udel.edu)*

### Alfalfa

Continue to scout fields on a weekly basis for leafhoppers. We have also received reports of increased levels of pea aphids and thrips in some alfalfa fields. As a general guideline for pea aphid management, you should consider a treatment in alfalfa less than 10 inches tall if you find 40 aphids per stem. The treatment threshold for alfalfa 10 inches or taller in height is 75-100 per stem. Beneficial insects can help to crash aphid populations; however, as a general rule, you need one beneficial insect per every 50-100 aphids to help crash populations.

In past years, we have seen increases in thrips during hot, dry weather conditions. Hopefully the recent rains will help plants grow ahead of damage. Reports from other areas of the country indicate that thrips feeding on developing leaf tissue can cause the leaves to distort as they emerge. Leaves may also be curled, with a cupped or puckered appearance. Since there are no thresholds for thrips in alfalfa and we have limited experience with this pest in Delaware, the following information from other areas of the country may be helpful when considering the need for thrips management: " (a) high populations of bean or onion thrips may cause damage, especially in dryland conditions and (b) if a thrips treatment is contemplated, it is best to cut as soon as possible and treat the regrowth if the infestation persists. Thrips are very difficult to control in alfalfa, so excellent coverage is important and two applications may be required for satisfactory results."

### Soybeans

We continue to see a number of defoliators (grasshoppers, blister beetles, Japanese beetles, bean leaf beetles and green cloverworm, etc.) present in full season and double crop beans. As fields enter the bloom to pod fill stages, remember that the threshold drops to 15% defoliation.

We are starting to see an increase in stinkbug populations in full season bean fields so be sure to watch for this insect as the earliest maturing fields begin to set pods. Economic damage is most likely to occur during the pod development and pod fill stages. You will need to sample for both adults and nymphs when making a treatment decision. Available thresholds are based on beans that are in the pod development and fill stages. We are currently following the same guidelines that are being used in Virginia. Thresholds are also based on numbers of large nymphs and adults, as those are the stages most capable of damaging pods. As a general guideline, current thresholds are set at 1 large nymph/adult (either brown or green stink bug) per row foot if using a beat sheet, or, 2.5 per 15 sweeps in narrow-row beans, or 3.5 per 15 sweeps in wide-row beans.

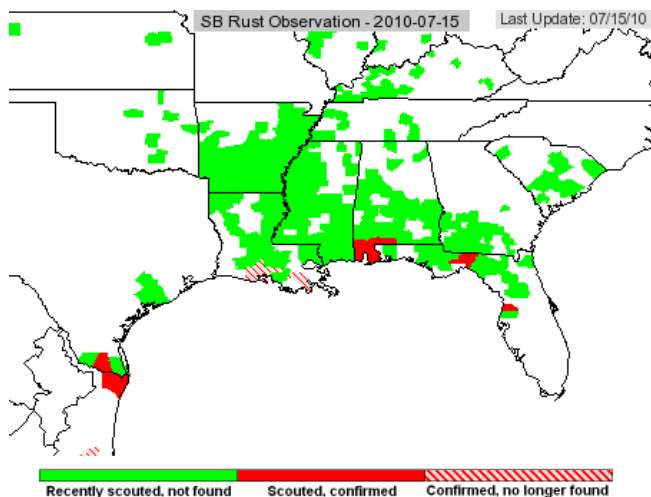
Although we have only seen low levels of soybean aphid populations in a few fields in New Castle County, be sure to watch for this insect in full season beans. This aphid is favored by cooler temperatures so we could see population increases if we start to experience more moderate temperatures. The treatment threshold established in the mid-west is 250 aphids per plant from R1 through R5 stage of growth. The following links from the University of Wisconsin provides good information in sampling, stages of soybean growth and development, thresholds and treatment guidelines

<http://www.plantpath.wisc.edu/soyhealth/aglycine.htm>  
[http://www.plantpath.wisc.edu/soyhealth/pdf/aphid\\_thresholds.pdf](http://www.plantpath.wisc.edu/soyhealth/pdf/aphid_thresholds.pdf)

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**Soybean Rust Update** - Bob Mulrooney,  
Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)

Soybean rust was reported on kudzu in the county of Leon, Florida on July 13, 2010. Soybean rust was reported July 3 in two counties in Alabama and one county in Florida. On June 28, soybean rust was found in one county in Florida. Rust has also been confirmed recently on soybean in the northern portion of the state of Tamaulipas in Mexico. Rust develop has been very slow this season. Conditions are dry in the South and there was not much overwintering on kudzu since the cold winter went so deep into the South.



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**Grain Marketing Highlights** - Carl German,  
Extension Crops Marketing Specialist;  
[clgerman@udel.edu](mailto:clgerman@udel.edu)

**Commodities Rally on 'Game Changer'**  
The July 9 USDA report was thought by some analysts to be a 'game changer'. The idea of large stocks of U.S. corn and soybeans growing from previously projected levels for the '09/'10 and '10/'11 marketing years was essentially erased. Instead of building stocks, the U.S. is now looking at a situation where production is just keeping pace with projected demand. In other words, total use is out pacing production

for U.S. corn and running very close for U.S. soybeans.

Weekly Crop Conditions were reported to improve slightly for the U.S. corn crop this week while the overall condition of the U.S. soybean crop declined slightly for the fifth straight week. Hot temperatures reported in pockets of the Corn Belt has moved Dec corn futures past resistance at \$3.97 ½ overnight. This sets the stage for an extended rally in the near term. Buying interest by both commercial and non-commercial interests suggests that traders might find improving conditions reported this week for U.S. corn to be rather suspect. Hot temperatures are not expected to be widespread, however the new crop stocks-to-use ratio estimated at 10.3 percent for U.S. corn doesn't leave much room for error, meaning any weather problem perceived or otherwise can lead to extending the rally in the near term for both corn and soybeans. Demand projections for U.S. corn and soybeans could eventually improve in ensuing USDA reports due to dry conditions reported in other corn producing countries e.g., Russia where row crops are under siege of one of their worst droughts reported in 130 years of reporting weather data.

The major question heading into the overnight session was whether the corn, soybean, and wheat markets could continue to rally. All three did, with December corn pushing past resistance while September wheat and August soybeans posted solid gains.

**USDA Export Sales Report 07/15**

Pre-report estimates for weekly export sales of soybeans (combined old-crop and new-crop) ranged from 27.6 to 36.7 million bushels. The weekly report showed total export sales of 45 million bushels, with old-crop sales of 24.5 million bushels above the 0.9 million bushels needed to stay on pace with USDA's demand projection of 1.46 billion bushels. Total shipments of 7.6 million bushels were below the 12.1 million bushels needed this week. This report should be viewed as neutral to bullish.

Pre-report estimates had weekly corn export sales at 29.5 to 43.3 million bushels. The weekly report showed total export sales of 39.4 million bushels, with old-crop sales of 26.7 million bushels, well above the 1.6 million bushels

needed this week to stay on pace with USDA's demand projection of 1.95 billion bushels. Total shipments of 41.1 million bushels were below the 50.1 million bushels needed this week. This report should be considered neutral to bullish.

Pre-report estimates for wheat ranged between 12.9 to 16.5 million bushels. The weekly report showed total export sales of 11.4 million bushels, below the 16 million bushels needed this week to reach USDA's projected 1 billion bushels. Shipments of 13.1 million bushels were below the 19.8 million bushels needed this week. This report should be viewed as bearish.

### Market Strategy

July futures contracts are now expired and have moved off the board. New crop Dec '10 corn futures are trading at \$4.05 per bushel; Nov '10 soybean futures at \$9.76; with Dec '10 SRW wheat futures at \$6.12 per bushel in this morning's trade. The Dow is down 104 points at 10,261. Nearby crude is trading at \$77.40 per barrel, up slightly on the day. The dollar index has declined, now trading at 82.56. With commodity markets trending higher, it is important to pay attention to technical indicators for price direction. For example, current technical analysis suggests that we can expect the corn and soybean markets to move higher from current levels. The next level of resistance for new crop corn is at \$4.10 to \$4.15 per bushel. For soybeans, the next level of resistance is at \$9.87 for Nov '10 futures. Once those levels are penetrated then there could be some sell off due to the perception of the markets being overbought before resuming upside potential.

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

## General

**Supplemental Label for Belay Insecticide -**  
*Joanne Whalen, Extension IPM Specialist;*  
[jwhalen@udel.edu](mailto:jwhalen@udel.edu)

A supplemental label for Belay has been approved by the EPA. This supplemental label

allows Belay to be applied aerially in soybeans, cotton, and potatoes.

<http://www.cdms.net/LDat/ld8J6009.pdf>

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### **Delaware NRCS Encourages Producers to Sign up Early for Three Conservation Programs**

Delaware producers interested in improving natural resources have until October 1 to sign up for three popular conservation programs from the USDA Natural Resources Conservation Service (NRCS). NRCS is offering financial and technical assistance to eligible producers through the voluntary Environmental Quality Incentives Program (EQIP), Agricultural Management Assistance Program (AMA), and Wildlife Habitat Incentive Program (WHIP). After the first batch date of October 1, monthly batch dates will be added as necessary as funding becomes available.

"As more Delaware producers adopt effective conservation practices, we are able to make great progress to improve our water quality, maintain high quality soils, and improve wildlife habitat," said Russell Morgan, NRCS State Conservationist. Producers are encouraged to apply early to ensure they meet current NRCS eligibility requirements.

Delaware farmers may apply for EQIP to receive financial and technical assistance to plan, design, and install structural conservation practices and to plan and implement management practices on eligible agricultural land. Producers may sign up for available practices including agricultural waste management, nutrient management, irrigation water management, soil erosion control, forest management, poultry house windbreaks, and more.

AMA provides payments to agricultural producers to voluntarily address issues such as water quality, water management, and erosion control by incorporating conservation practices into their farming operations. Some conservation practices eligible for funding include nutrient management, cover crops, high tunnel houses, and conservation cover. Eligible land includes cropland, grassland, pastureland, non-industrial

forestland, and other private land that produces crops or livestock.

WHIP offers technical and financial assistance to private landowners to develop, improve, and protect high quality habitat that supports wildlife populations. Land eligible for WHIP includes private agricultural land or non-industrial private forestland. Practices eligible for WHIP funding include filter strips, riparian forest buffers, wetlands restoration (including phragmites spraying), and more. WHIP provides both technical assistance and financial assistance up to 75 percent.

Applications for the above conservation programs are accepted year round. For additional information on EQIP, AMA, or WHIP, visit [www.de.nrcs.usda.gov](http://www.de.nrcs.usda.gov) or contact the local USDA Service Center nearest you. In Sussex, call 302-856-3990 ext. 3; in Kent, call 302-741-2600 ext. 3; in New Castle, call 302-832-3100 ext. 3.

## Announcements

### **Soybean Cyst Nematode Workshop**

Tuesday, August 3, 2010 8:30 a.m.- 1:30 p.m.  
Delmarva Poultry Industry Building  
(former UD office building)  
16684 County Seat Hwy.  
Georgetown, DE 19947

Soybean cyst nematode (SCN) is a widespread and serious pest of soybeans on Delmarva. First discovered in the fall of 1979 it has been causing increased problems for growers in recent years. This workshop will cover some basics about the biology of SCN and its management and the results of the recent Delaware Soybean Board sponsored survey of SCN in Delaware. The workshop will also include visiting a small research plot to see SCN first hand and discuss symptoms, diagnosing SCN from root samples with a hand lens, and proper soil testing procedures. The workshop is suggested for agricultural professionals on Delmarva who advise soybean growers and growers who want to know more about this important pest.

Pesticide recertification credits and CCA credits in pest management will be offered for attendees.

The cost of the program is \$10 per person with lunch included. The registration deadline is Friday, July 23.

A registration form is available here:

<http://www.rec.udel.edu/Extension/Agriculture/S/CN.pdf>

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### **Rutgers University Hybrid Hazelnut Field Day**

Saturday July 31, 2010 8:30 a.m. – 3:00 p.m.  
Rutgers: NJ Agricultural Experiment Station  
59 Dudley Rd.  
Cook Campus, Multipurpose Room A  
New Brunswick, NJ 08901-8520

Join Dr. Tom Molnar and his hazelnut research colleagues to learn about [hybrid hazelnuts](#) and [the Rutgers University hazelnut breeding and research program](#) at the 2010 Rutgers Hazelnut Field Day. The field day will include an overview of hazelnuts at Rutgers and presentations on the Arbor Day Foundations's hazelnut research program and the Hybrid Hazelnut Consortium, the Ferrero Candy Company in Italy, and experiences of local hazelnut growers assisting in research projects. Lunch and an afternoon tour of the hazelnut research fields are included.

*Cost of the field day is \$20. To register and for more information go to:*

<http://rutgershazelnutday.eventbrite.com/>

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### **Public Hearing on Proposed New Concentrated Animal Feeding Operations (CAFO) Regulations**

Wednesday, July 21, 2010 7:00 p.m.  
Delaware Department of Agriculture  
2320 S. Dupont Highway  
Dover, DE

The Delaware Department of Agriculture (DDA), the Delaware Nutrient Management Commission (DNMC), and the Delaware Department of Natural Resources and Environmental Control (DNREC) will hold a public hearing on proposed new Concentrated Animal Feeding Operations (CAFO) regulations. Delaware's current CAFO regulations will expire in the fall of 2010.

The purpose of the hearing is to consider the adoption of proposed new Delaware CAFO regulations that require designated farms and livestock and poultry producers to obtain CAFO National Pollution Discharge Elimination System (NPDES) permits. The

proposed new regulations were developed to ensure that CAFOs take appropriate actions to effectively manage manure, litter and wastewater and protect the state's water quality.

The proposed new regulations were developed by the Delaware Nutrient Management Commission (DNMC), the Delaware Department of Agriculture (DDA), and the Delaware Department of Natural Resources and Environmental Control (DNREC) and are posted on the DDA website, [www.dda.delaware.gov](http://www.dda.delaware.gov). Public workshops were held May 25, 26 and 27 to help farmers and livestock producers understand the CAFO permit process and ask questions.

The public and interested parties are invited to attend the hearing and make comments. Accommodations are available for individuals with disabilities by calling (302) 698-4500 or (800) 282-8685 (Delaware only) for aid or assistance.

Written comments will be accepted from July 1 until 4:30 p.m. July 31, 2010 by: U.S. mail addressed to Mark Davis, Nutrient Management Program Administrator, Delaware Department of Agriculture, 2320 S. Dupont Highway, Dover, DE 19901; by fax addressed to Mark Davis, Nutrient Management Program Administrator, (302) 697-6287; or by email, [Mark.Davis@state.de.us](mailto:Mark.Davis@state.de.us).

*For more information contact:*  
Mark Davis, DDA – 302-698-4503  
[Mark.Davis@state.de](mailto:Mark.Davis@state.de)

Jennifer Walls, DNREC – 302-739-9062  
[Jennifer.Walls@state.de.us](mailto:Jennifer.Walls@state.de.us)

## Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of July 8 to July 14, 2010

Readings Taken from Midnight to Midnight

### Rainfall:

0.02 inch: July 9  
1.15 inch: July 10  
0.01 inch: July 11  
0.31 inch: July 13  
0.03 inch: July 14

### Air Temperature:

Highs ranged from 88°F on July 12 to 77°F on July 10.

Lows ranged from 74°F on July 13 to 68°F on July 12.

### Soil Temperature:

83.6°F average

Additional Delaware weather data is available at  
[http://www.deos.udel.edu/monthly\\_retrieval.html](http://www.deos.udel.edu/monthly_retrieval.html)  
and  
<http://www.rec.udel.edu/TopLevel/Weather.htm>

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