



# WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 15, Issue 13

June 22, 2007

## Vegetables

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

### Cucumbers

With hot weather earlier this week, be sure to sample fields for aphids that can explode quickly. A treatment should be applied for aphids if 10 to 20 percent of the plants are infested with aphids with 5 or more aphids per leaf.

### Melons

Continue to scout all melons for aphids, cucumber beetles, and spider mites. In many cases, multiple applications may be needed to control these pests. If spider mite populations are high at the time of treatment, 2 sprays spaced 5 days apart may be needed. Be sure to watch for bees foraging in the area and avoid insecticide applications on blooming crops.

### Peppers

In fields with small fruit, a corn borer treatment is 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. Controls will be needed for green peach aphids 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 ½.

### Snap Beans

Continue to scout for leafhopper and thrips activity in seedling stage beans. At this time, fresh market and 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 after bloom

(<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 and corn borer trap catches are above 2 per night, a 7 to 10-day

schedule should be maintained for corn borer control.

### Sweet Corn

We have received reports of cereal leaf beetle adults feeding on whorl stage corn. No thresholds are available. However, if damage is significant and reducing growth, a treatment may be needed. 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 corn earworm to make a treatment decision. This information should also be backed up with field scouting. 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: 1-800-345-7544; out of state: 302-831-8851). Be sure to watch for the first fall armyworm larvae in whorl stage sweet corn - we anticipate seeing them any day and they may already be here. 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.

### Potato Disease Advisory June 21, 2007 - Bob Mulrooney, Extension Plant Pathologist

Disease Severity Value (DSV) Accumulation as of June 20, 2007 is as follows:

Location: Broad Acres, Zimmerman Farm, Rt 9, Greenrow: May 2

Remember that 18 DSVs is the threshold to begin a spray program for late blight

Date	LATE BLIGHT			EARLY BLIGHT
	Daily DSV	Total DSV	Spray Recs	Accumulated P days*
6/1-6/2	0	5	none	245
6/3-6/4	5	10	none	264
6/5- 6/6	0	10	none	282
6/6 -6/7	0	10	none	290
6/8- 6/11	0	10	10 days	324
6/12-6/13	2	12	10 days	341
6/14- 6/18	0	12	10 days	383
6/19- 6/20	2	14	10 days	400

\* P days- We use the predictive model WISDOM to determine the first fungicide application for prevention of early blight as well. The model predicts the first seasonal rise in the number of spores of the early blight fungus based on the accumulation of 300 physiological days (a type of degree-day unit, referred to as P-days) from green row. To date, 400 P-days have accumulated at the site.

**Early blight and black dot.** Many fields are flowering or have flowered and this is a good time to consider switching to an application or two of Gem, Headline or Quadris (Amistar) for early blight susceptible varieties. This can also be helpful for late season varieties including russets if stress makes plants susceptible to black dot later. Make one or two applications at the end of flowering and repeat 14 days later. Apply mancozeb or chlorothalonil 7 days later between the two applications.

If pink rot or leak is a concern and no pink rot fungicide was applied at planting consider applying one of the following when potatoes are nickel-sized and repeating 14 days later. Apply in as much water as possible (20-30 gal/A): Mefanoxam/chlorothalonil (Ridomil/Bravo or Flouranil) 2 lb/A, or Ridomil Gold/MZ 2.5 lb/A, or Ridomil Gold/Copper 2 lb/A.

For specific fungicide recommendations, see the 2007 Delaware Commercial Vegetable Production Recommendations Book.

**Vegetable Crop Diseases** - *Bob Mulrooney;*  
*Extension Plant Pathologist;* [bobmul@udel.edu](mailto:bobmul@udel.edu)

Sweet corn rust was identified in Sussex County this week. Generally we have recommended fungicide sprays when rust appears at the late whorl stage or earlier. Usually later infections do not affect yield, but for fresh market corn keeping rust off the ears would be important. Hybrids vary in their resistance to common rust.

**Cucumbers and Other Cucurbits**

There is a new source of downy mildew in Medina County, Ohio fairly close to the Ontario greenhouse infestation. Up until now downy mildew activity has been limited to southern Florida, southern Texas and a greenhouse in Ontario, Canada. There is no threat to Delmarva at this time from the Florida and Texas sources. There is some risk of spore movement from this new Ohio site, although low, but growers should be scouting just in case over the next few days. Just like soybean rust cannot overwinter here, neither can downy mildew. It has to move north as the season progresses. The weather has not been favorable for downy mildew or soybean rust down south nevertheless it is important to scout cucumbers for downy mildew on a regular basis especially if the current weather pattern should change. To track the progress of downy mildew in the eastern US and to keep up with reports of downy mildew from other states please visit North Carolina State University's Cucurbit Downy Mildew Forecasting Center at <http://www.ces.ncsu.edu/depts/pp/cucurbit/>.

---

**Health Benefits Found from Watermelon** -  
*Michelle Casella; Rutgers University, Gloucester Count Ag. Agent;* [minfante@aesop.rutgers.edu](mailto:minfante@aesop.rutgers.edu)

Watermelon is popular with all age groups, especially children. It is not hard to imagine why for anyone who has tasted a good watermelon. Watermelon is found to have the highest concentrations of lycopene compared to other fruits and vegetables. Over the past decade we have learned about lycopene from promotion of tomatoes and tomato products. Lycopene provides health benefits related to prostate, bone, and skin health. Lycopene is an

antioxidant, which appears to prevent the formation of harmful by-products of metabolism called free radicals that can lead to certain chronic diseases like cancer. Research around the world has also shown reduction in bone loss, internal protection from sunburn, and increased sperm concentration in males with infertility problems when lycopene intake is increased through eating watermelon, tomatoes, and other fruits and vegetables.

Now there are more reasons why we should all be eating watermelon. The USDA has sent out a news release entitled "Watermelon Serves up Medically Important Amino Acid" that summarizes a research study published in the Elsevier Nutritional Journal entitled "Watermelon Consumption Increases Plasma Arginine Concentrations in Adults". With this study come four new nutritional claims for watermelon:

1. Watermelon consumption increases free arginine and citrulline, which can help maintain cardiovascular function.
2. Eating watermelon can help maintain cardiovascular health.
3. Watermelon has amino acids such as citrulline and arginine that helps maintain arteries.
4. Watermelon amino acids citrulline and arginine can help maintain blood flow and heart health.

Other important nutritional benefits from watermelon include:

- Vitamin A for eye health
- Vitamin C for immune system defense and protection from free radical damage
- Vitamin B6 used in manufacturing brain chemicals such as serotonin, melatonin, and dopamine which may help the body cope with anxiety and panic
- Potassium needed for water absorption in cells and can help prevent muscle cramping
- Watermelon is also low in calories, fat free and sodium free

These health claims can be used by both retailers and wholesalers to increase sales of watermelon. The National Watermelon Promotion Board offers a CD with Heart Healthy logos in various formats to use for marketing. Contact Stephanie Simek at

[ssimek@watermelon.org](mailto:ssimek@watermelon.org) to get a copy. Also for more information on watermelon see the web site <http://watermelon.org>.

## Agronomic Crops

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

### Field Corn

We are still receiving reports of cereal leaf beetle adults feeding on leaves. In many cases, feeding is confined to field edges and is adjacent to recently harvested barley. In general, a treatment should not be needed until you find at least 10 beetles per plant and 50% of the plants exhibit leaf feeding damage. However, if plants are drought stressed you may need to reduce this threshold.

### Soybeans

In addition to heavy grasshopper populations, we are also seeing an increase in spider mite populations in full season soybeans, especially in drought stressed fields in Kent and Sussex counties. As a general guideline, a treatment for mites may be needed if you find 20-30 mites per leaflet and 10% of plants with 1/3 or more leaf area damaged. Dimethoate or Lorsban are your only control options. In the past, when dimethoate was used, the addition of a penetrating surfactant like LI-700 or Penetrator Plus, or a material like Hyperactive has helped to improve control, especially in drought stressed fields.

---

**Agronomic Crop Diseases** - *Bob Mulrooney; Extension Plant Pathologist; [bobmul@udel.edu](mailto:bobmul@udel.edu)*

### Soybean Rust Update

Soybean rust was reported in two new locations in Louisiana on June 21, 2007. Both sites are in soybean sentinel plots located in Avoyelles and Rapides Parishes. These parishes are in the central portion of the state approximately 80 miles north of the positive kudzu sites in the coastal parishes of Iberia and St. Mary. On June 14<sup>th</sup>, a commercial soybean field in Hidalgo

County, Texas was confirmed to have soybean rust. This county had rust earlier in the year. Scouting for soybean rust has intensified and soybean sentinel plots are now being monitored throughout most of the soybean growing areas. It has continued to be very dry in northern Alabama and Mississippi as well as south Georgia and the panhandle of Florida. Some pop-up showers are occurring in Florida but overall conditions for soybean rust have not been favorable in the Southeast. Activity is low overall even on kudzu. Keep current on the soybean rust situation by visiting the PIPE (Pest Information Platform for Extension and Education) website at <http://www.sbrusa.net>.

### Soybeans

Locally *Septoria brown spot* is beginning to appear on the unifoliate leaves (first true leaves) on plants that have 2-4 trifoliate leaves.

---

**Postemergence Control of Glyphosate-Resistant Horseweed** - *Mark VanGessel, Extension Weed Specialist; [mjv@udel.edu](mailto:mjv@udel.edu)*

Options for controlling horseweed resistant to glyphosate after the soybeans have emerged are very limited. FirstRate or Classic are the only postemergence herbicides to provide some horseweed suppression. However, neither FirstRate nor Classic will kill large horseweed plants. These herbicides may provide some suppression, but results have been quite erratic the past few years. Horseweed plants are generally not very tolerant of shade and most soybeans will begin to canopy over the horseweed and out-compete them. In most cases, I have recommended to not spray emerged horseweed plants with another herbicide. Rather, make postemergence applications of glyphosate based on need to control other weed species. Additional glyphosate applications will provide some suppression of horseweed.

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

### **Weekly Export Sales Report Exceeds Expectations**

Pre-report estimates placed weekly U.S. corn exports at 500,000 to 800,000 metric tons. The weekly report placed sales at 826,900 metric tons (32.6 million bushels). This is well above the 15.1 million bushels needed this week to stay on pace with USDA's projection of 2.15 billion bushels for the current marketing year.

Pre-report estimates for soybean exports ranged from 100,000 to 300,000 metric tons. The weekly report placed export sales at 359,300 mt (13.2 million bushels). Less than 1 million bushels were needed this week to stay on pace with USDA's 1.08 billion bushel projection for soybean exports in the current marketing year.

Pre-report estimates for wheat exports ranged between 150,000 and 350,000 metric tons. The weekly report placed sales at 541,000 mt (19.9 million bushels). This was above the 16.5 mb needed to stay on pace with USDA's projection.

For all three commodities the report is viewed as bullish.

### **Marketing Strategies**

Today is June 21<sup>st</sup>, the first day of summer, although one couldn't prove that by talking to the eastern portion of the Corn Belt farmers. The month of May for many was one of the driest on record. Volatile markets make life interesting and grain sales decisions difficult. Commodity markets often react opposite to bearish and bullish news, as evidenced by the June supply and demand report and this morning's weekly export sales report. Corn, soybean, and wheat futures prices have recently achieved 10 year highs, with some possibility that they can go even higher. The direction that prices take from here depends in large part upon the weather, both at home and abroad. It appears safe to say that the eastern portion of the corn belt, including the states of Illinois, Indiana, and Ohio remain on the dry side at this point in time and are in need of a good soaking rain. Some moisture was received in parts of this area at

the beginning of this week, keeping crops for the most part in a holding pattern. If a good rain develops within the next week or so in the eastern Corn Belt, commodity prices will turn lower. What individual grain marketers must wrestle with right now concerns answering the following questions: Should I sell a portion of my crop now? If so, how much? and What sales alternative should I use? These are typical questions that grain sellers answer each time a sales trigger is pulled. The answers to these questions become more difficult, but not impossible, to decipher during volatile times. Dec '07 corn is currently trading at \$4.02; Nov '07 soybeans at \$8.64; and July '07 wheat at \$6.11 per bushel. New crop basis bids in Bridgeville this morning are 5 over for corn, 25 under for soybeans, and 70 under for wheat. For technical assistance on grain marketing decisions contact Carl L. German, Extension Crops Marketing Specialist

## **Fruits**

**Strawberry Renovation and Summer Cultural Practices** - *Gordon Johnson, Kent County Extension Agriculture Agent;*  
[gjohn@udel.edu](mailto:gjohn@udel.edu)

With the relatively cool spring and late start, strawberry harvest was extended well into mid June in many locations. Renovation is necessary after the last harvest in matted row systems and plasticulture beds that will be carried over a second year.

### **Matted Row Systems**

In matted row strawberries, the goals in renovation are to reduce plant numbers by narrowing the rows, remove old foliage (reduces diseases), control weeds, reduce insect and mite pests, and promote new runner development (production of daughter plants). After renovation, regular irrigation and weed control are essential. High yields next year depend on having large, healthy, vigorous plants when fruit buds are initiated in late summer.

With matted rows, renovation starts with an application of 2,4-D amine herbicide (Formula

40) after the last harvest. If grasses are a problem a sequential application of sethoxydim (Poast) or clethodim (Select) may be necessary (do not tank mix with the 2, 4-D). After the last herbicide application, wait 3-5 days and then mow off the strawberries to just above the crown (do not damage the crown). Apply nitrogen fertilizer (25-60 lbs N/acre) at this time. Using a split N application, half at renovation and half 4 weeks later, is preferable. If other nutrients were low or deficient (as indicated by tissue tests prior to fruiting) then apply at this time. Subsoil fields with compaction from equipment or heavy foot traffic between the rows (U-pick plantings for example).

Next, narrow the rows with a cultivator, coulters/discs, a rotary tiller/multivator or other devices to 12-18 inches at the base. Matted row strawberries are edge bearers and benefit greatly from this narrowing. Strawberries produce new roots higher on crowns each year so try to throw about 1 inch of soil over the row (without covering the crowns). This will also help new daughter plants root (runners produced from mother plants). After narrowing the rows apply preemergence residual herbicides. Apply 2-4 ounces of terbacil (Sinbar). This is one half the annual rate. Sinbar can injure some varieties and attention should be paid so as not to have overlaps. If Sinbar is not used, napropamide (Devrinol at 4 lb/acre) or DCPA (Dacthal at 8- 12 lb/acre) should be applied at this time. These materials require adequate rainfall or overhead irrigation for activation. Devrinol and Dacthal benefit from being lightly incorporated (possible in row middles). During the summer, cultivate between rows to remove weeds and to sweep runners into the row. From late summer on, cut off any additional runners during cultivation (discs or coulters work best).

Weeds in the rows must be controlled throughout the summer. Sethoxydim (Poast) or clethodim (Select) may be sprayed over the top to control grass weeds. Clopyralid (Stinger 3A) has a 24c label for use in MD, NJ, VA, and PA for over the top control of some broadleaf weeds. (The legal use of this product may require a waiver of liability that has been signed by the grower, and returned to Dow AgroSciences.)

Additional herbicide options include: 2,4-D amine (for broadleaf weeds), Sinbar (for residual control of broadleaf weeds), paraquat (as directed spray to row middles), and Dacthal (residual control of mostly grass species). Remember that 2,4-D is volatile and can injure sensitive plants in the near vicinity. It should not be used with windy conditions, nor when temperatures of 85°F or greater are expected. Hand hoeing will be necessary for removal of remaining weeds.

Irrigate strawberries so that they receive 1.5 inches of water (combined rainfall and irrigation) each week during the summer. Irrigation during late July and August are very critical to produce large plants as flower buds will be initiated starting in August. Continue irrigation through the fall until dormancy (at reduced rates). Strawberries may benefit from low amounts of additional nitrogen fertilizer (25 lbs of N/acre) later in summer depending on the vigor.

### Plasticulture Systems

With the high cost of establishing strawberries planted on plastic mulch, many growers choose to carry them over for another year. First, evaluate the disease pressure on the planting. If anthracnose was a major problem, you should not carry the planting over. If disease pressure was low, then renovation can proceed.

Goals in renovating plasticulture strawberries are to remove old foliage, remove any runners formed, remove diseased plant material from the field, control weeds, reduce insect and mite pests, and reduce crown size of very large plants.

Mow the strawberries as close to the crowns as possible without damaging them. Remove any diseased plant material from the field. Plants with more than 5 branch crowns may benefit from thinning. Using an asparagus knife, remove one half the crown. Apply weed control measures between plastic beds (herbicides, cultivation, or combination) being careful not to apply herbicides over the plastic beds. Irrigate strawberries so that they receive 1.5 inches of water (combined rainfall and irrigation) each week during the summer. Fertigate with 40 to 60

pounds of nitrogen per acre in late August and add any additional nutrients as suggested by tissue tests. Continue irrigation as needed throughout the fall.

## General

### Sample Submission to the Plant Diagnostic Lab in Newark via the Sussex County Extension Office

Sample delivery service will continue from now until October 18<sup>th</sup>. Please be sure to get a yellow information sheet from the receptionist and include this with your sample.

Samples should be submitted by **9:30 am** on the day of pick-up.

Pick-Up in Georgetown	Delivery to Newark
10:00 a.m. Monday	1:00 p.m. Tuesday
10:00 a.m. Tuesday	4:30 p.m. Tuesday
10:00 a.m. Thursday	1:00 p.m. Friday

For more information, please contact Cory Whaley or Tracy Wootten at 302-856-7303.

---

### Farm Fires - Ron Jester; *Extension Safety Specialist (retired)*; [rcjester@udel.edu](mailto:rcjester@udel.edu)

Fire has been a constructive part of our society since the dawn of civilization. Yet, this powerful servant can turn with a fury indifferent to personal status or wealth. Unfortunately, our behavior with respect to fire's potential dangers often is surprisingly casual. People smoke in bed, allow electrical and heating equipment to deteriorate, handle flammable materials improperly, and delay establishing a home fire escape plan. We often appear so nonchalant about fire and fire hazards!

I vividly recall two farm fire incidents with serious consequences - one involving handling of flammables and the other one involving children playing with matches in a barn. In the case with flammables, gasoline was being used to clean parts. The open container with gasoline in it was

near a bench grinder, which provided the spark. A farm shop was destroyed and fortunately a combine was removed from the structure before it was completely engulfed with flames. In the latter case, children were playing with matches in a barn loft and ignited the straw. Two children died as a result of this incident.

Fires on farms may not be statistically significant but they do pose a serious threat due to remoteness from the fire service and water supply. Consequently it would be a good idea to have family members and farm workers trained on proper use of a fire extinguisher and knowledgeable of fire safety in the workplace. You will never eliminate fires completely, but you can better manage the risks.

The main causes of farm fires and how to better manage the risks are as follows:

**Electrical fires** - The potential for electrical-related fires is significant and usually results from defects in, or misuse of, the electrical system (wiring, grounding, fusing, etc.) or electrical equipment (motors, heating appliances, etc). Since many farmers do their own electrical work, it is crucial that electrical inspectors approve your work before throwing the switch. The work environment including, the poultry house, dairy barn, or swine unit contain atmospheres that require regular maintenance of electrical devices. The dust, moisture, ammonia and other gases are corrosive and can cause heat build-up and electrical malfunctions. Install dust-proof electrical boxes to help remedy this potential problem. Don't overload circuits and always use ground fault circuit interrupters.

**Flammable liquids and gases** - Gasoline, diesel fuel, degreasing fluids, and paint solvents are flammable materials that are used on farms. The vapors from these materials can be extremely explosive in the presence of flames, sparks and hot surfaces. Dangerous practices include fueling a running or hot engine, smoking when handling gasoline and using gasoline as a solvent or cleaning agent. Remember to store flammable products in their original containers in a cool place and out of the sun. Keep cleaning rags in a metal container to reduce the risk of a fire.

**Farm machinery** – Fires involving farm machinery can be costly. Common causes of such fires include defects in the ignition system, leaking fuel lines, improper refueling, smoking, overheated engine, sparks from the exhaust and friction. Common sense preventive measures can reduce these mishaps significantly. When refueling, turn off the engine and extinguish smoking materials. Watch for and repair leaks in fuel lines, carburetors, pumps, etc. promptly. Always work in a well-ventilated area when using solvents and other flammable materials. Be extremely cautious when welding and cutting that sparks are contained and combustible materials are protected from the heat. Take a few minutes during harvesting to clean crop residue away from the engine and exhaust system of equipment when a build-up occurs.

**Lack of fire extinguishers and training** – Several studies have shown that combine fires often result in a total loss to the machine. In many cases, this has been due to the lack of a proper sized fire extinguisher on the equipment and often compounded by users who do not understand the proper use of the extinguisher. Other studies have indicated that there were no extinguishers readily available or charged. Therefore, check with the fire service or equipment manufacturer in regards to the proper size extinguisher, train operators on proper use, and regularly check extinguishers to keep them current and charged.

**Remember that no property is worth risking a life for!** Therefore in case of a farm fire, follow these simple rules:

- Evacuate the building or area
- Call the fire department
- Give precise directions to the scene
- Clear an exit away from the fire
- Keep bystanders and others away from the fire
- Inform the fire service of any special hazards at the scene

Take time this week and every week to make your farm fire safe. Reducing fire hazards may save your life!

## Announcements

### **Delaware Weed Science Field Day**

Wednesday, June 27, 2007 8:15 a.m.

Carvel Research and Education Center

Rt. 9 (County Seat Hwy) Georgetown, DE

Meet at the Pine Grove near the farm buildings and new office building on the north side of the road.

8:15 a.m. – Registration

8:30 a.m. – Opening remarks

Coffee, juices, and donuts will be provided.

We will also provide sandwiches for lunch.



## Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of June 14 to June 20, 2007

Readings Taken from Midnight to Midnight

### **Rainfall:**

0.01 inch: June 14

0.18 inch: June 20

### **Air Temperature:**

Highs Ranged from 92°F on June 19 to 64°F on June 14.

Lows Ranged from 66°F on June 18 and June 19 to 56°F on June 14.

### **Soil Temperature:**

75°F average.

(Soil temperature taken at a 2" depth, under sod)

Additional Delaware weather data is available at <http://www.rec.udel.edu/TopLevel/Weather.htm>

*Weekly Crop Update is compiled and edited by Emmalea Ernest, Extension Associate - Vegetable Crops*

Cooperative Extension Education in Agriculture and Home Economics, University of Delaware, Delaware State University and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Delaware Cooperative Extension, University of Delaware. It is the policy of the Delaware Cooperative Extension System that no person shall be subjected to discrimination on the grounds of race, color, sex, disability, age or national origin.