This is the Last Issue of Weekly Crop Update for the 2003 Season - Tracy Wootten, Sussex County Extension Educator - Horticulture, wootten@udel.edu

2003 has not been an easy year for those of us in Agriculture. We dealt with more than adequate rainfall and cool temperatures. Just as we thought things would dry out, more rain would set in. I hope the information that you received in ‘Weekly Crop Update’ has been helpful and relevant. As editor, I would like to express my sincere thanks to all individuals that contribute to Weekly Crop Update. Thank you to our dedicated office staff that help pull everything together each week, especially as we rush to make the 4:30 p.m. deadline.

We welcome your comments and suggestions for improvements to ‘Weekly Crop Update.’ Please feel free to contact me at 302-856-7303, or wootten@udel.edu

As you may have noticed, my title changed in the middle of the summer. On July 1, 2003, I replaced Jay Windsor as the Sussex County Ag Agent in Horticulture. Jay retired June 30, 2003 after 18 years as the Sussex County Horticultural Agent. I have very big shoes to fill. I will continue with ‘Weekly Crop Update’ and vegetable support on a county level. I will be taking on new responsibilities in the commercial horticulture field as well as the Master Gardener program here in Sussex.

I look forward to interacting with many of you during the winter meetings. Best wishes for a safe and prosperous harvest season.

Kind Regards,
Tracy

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

Cabbage.
Although the rain helped to reduce populations, we can still find DBM and an occasional cabbage looper and imported cabbageworm in fall cabbage fields. The treatment threshold is 5% of the plants infested. Avaunt (3.5 oz/acre), a Bt, Proclaim (3 oz/acre), or Spintor (4-5 oz per acre) will provide control of all 3 species. If cabbage looper and imported cabbage worm are the predominant species, a pyrethroid, Intrepid (8 oz/acre) or Confirm (8 oz/acre) will also provide control.

Spinach.
Before the hurricane, we saw an increase in webworm moth activity and egg laying. Small to moderate size garden and Hawaiian beet webworms can still be found. Although not as high as last season, we can also find beet armyworms in the mix. Fields should still be scouted for webworm and beet armyworm larvae. Controls should be applied when worms are small and before they have moved deep into the hearts
of the plants. Also, remember that both insects can produce webbing on the plants. Confirm, Intrepid or Spintor will be needed for beet armyworm control. If webworms are the predominant species, Ambush, Pounce, Confirm (6-8 oz/acre), Intrepid (8-10 oz/acre) or Spintor (4-8 oz/acre) should be used.

Vegetable Crop Diseases – Bob Mulrooney
Extension Plant Pathologist; bobmul@udel.edu

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. 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.

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.

Pumpkins.
I have seen several samples this week of fruit rots caused by Fusarium that produces round, rough, sunken spots on the sides and the bottom of the fruit. Fusarium fruit rot is more likely to occur during wet seasons. Little is known about how these Fusarium fungi (11 different Fusaria have been reported to cause fruit rot) infect cucurbit fruit. Fungicides have not provided much control of these because of the difficulty to cover the fruit effectively. Infection is thought to take place in the field and causes decay both in the field and post-harvest as well. Since many of the fruit rot Fusarium occur on corn as well, there maybe some correlation with increased incidence of fruit rot following corn in wet seasons. Phytophthora fruit rot is also beginning to appear following the heavy rains.

The Year in Review – Vegetable Crops – Ed Kee,
Extension Vegetable Crops Specialist; kee@udel.edu

2003 has been one heck of a year! It actually started raining in the fall of 2002, and never really stopped. Twenty-five years ago, George Papen of Papen Farms told me he would rather “pump the water on, because he can’t pump it off.” While we all get tired of “blaming the weather,” there is no doubt that the wet and cool conditions experienced this year hurt yields, shortened the season, and created disease and quality problems across all crops. Each crop in each field is a biological system placed in diverse and sometimes harsh environment. That crop, or biological system, is definitely impacted by the conditions that surround it. In 2003, those conditions were adverse to the crop from the beginning. In fact, the determination and tremendous management exhibited by the growers as they coped with this situation was the only reason for any success at all. It was a major achievement to reach profitable production levels under the current cost/price squeeze in the face of further cost increases associated with bad weather.

There are some lessons that we can take from this. First is timeliness. The late Palmer Corey of Bridgeville told me once that “the difference
between a good farmer and a bad farmer is about three days.” In other words, being ready to go is the first step towards success. Here are some observations about some of the vegetable crops grown in Delaware in 2003:

Peas – Wet weather disrupted planting schedules, caused some plantings to be by-passed at harvest, and generally depressed yields.

Pickling Cucumbers – In general, yields were down 25-30%. Phytophthora, belly rot, and pythium were seen in fields, especially in or near wet spots. Growers who sprayed routinely experienced less problem with these diseases, although some plantings were sprayed in a timely manner, but four inch rains set the stage for disease development in spite of proper applications. Wet spots in themselves removed some acreage from many, many plantings. Crooks and nubs, which are non-paid culls, were higher because cloudy weather inhibits bee activity, less sunlight reduces good growth, and high soil moisture levels may leach nutrients, especially nitrogen.

Watermelons – The planting season was totally disrupted as transplants experienced the worst conditions in years. The bad start and continuing cool, wet weather put the harvest season back by two weeks, thus compressing the season. Wet and humid conditions created an ideal environment for many foliage and fruit diseases, thus driving spray costs higher. Despite this, yields in many fields were good, perhaps not as high as experienced in the past, but still decent.

Lima beans – Lima bean harvest is in full-swing at this time. In general, yields are decent, perhaps not record yields, but still at profitable levels. Downy mildew has been identified in some fields, but control measures seem to be effective.

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

Small Grains.
Although most folks tend to think about disease management, you should also consider slug management if you plan to plant no-till small grains. Combinations of heavy slug populations this past spring and early summer and wet summer conditions could result in significant damage in no-till small grain fields. In the past, we have seen significant damage when fall weather conditions are cool and wet and small grains are planted in a field with a history of problems and heavy crop residues. Although the growing point of small grains technically stays below the ground until tillering, continuous feeding can reduce plant reserves resulting in a significant reduction in tiller production and in some cases plant death. In the past, we have seen slugs kill the growing point and replanting has been necessary. If you look under corn stubble in recently harvested fields, slugs can be found under the surface trash. The best control option would be tillage. Tillage helps to lower the potential for damage because it removes the residue which provides a favorable slug habitat, and also assists by warming and drying the soil to encourage more rapid plant growth. However, if you are already committed to no-till planting, be sure to watch for feeding soon after plant emergence. Growers achieved the best slug control on corn this spring with the use of Deadline M-Ps broadcast at a rate of 10 lbs per acre with a cyclone spreader. This material is also labeled on cereal grains. It is important to calibrate the spreader so you are getting at least 5 pellets per square foot. In general slugs, stop feeding in 2-3 hours even though it may take them 2-3 days to die. If conditions remain extremely
wet, slugs sometimes can absorb enough moisture to compensate for the water lost in mucus production so a second application may be needed. Trails End LG (3.5% metaldehyde) is also labeled on cereal grains.

Field Crop Diseases – Bob Mulrooney Extension Plant Pathologist; bobmul@udel.edu

Small Grains.
Be sure that you plant wheat varieties with high levels of disease resistance. Seed should be treated to protect them from loose smut and common bunt. Varieties that are susceptible to powdery mildew should be treated with Baytan or other seed treatment that will protect them from early infection.

Soybeans.
Do not ignore soybean cyst nematode. It is still present and in spite of the wet season and good growth of soybeans this season, SCN can be present in high numbers as well. The wet season has helped plants compensate for nematode damage, which lulls growers into thinking that everything is fine because they see no severe stunting. During wet seasons SCN numbers can increase dramatically on susceptible varieties. Some late season troubleshooting samples have shown that SCN was responsible for poor growth (short plants) in some fields. Soil sampling after harvest before any fall tillage is recommended for fields to be planted next season to soybeans following this year’s crop. Soil sample bags are available from the county Extension offices for $10/ sample bag.

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

New Crop Soybean Prices Headed Higher.

With the weekly export sales report exceeding trader expectations for U.S. soybeans and the initial private industry production estimate dropping below USDA's September estimate, it now appears that new crop soybean futures will meet or surpass the $7.00 per bushel mark for the first time since August, 1997. At the opening this morning, Nov '03 soybean futures traded at $6.99 per bushel, up 12 cents from the previous day’s close. The primary question to ponder is how much higher than the $7.00 mark can soybeans trade? The answer to that question will remain somewhat allusive, at least until we get a better handle on the actual crop size. The next USDA production estimate will be released on Friday, October 10th.

U.S. Corn Crop to Top 10 Billion Bushels?
New crop corn futures are currently trading at $2.21 per bushel and will remain in a sideways trading pattern until the October 10th crop report is released. Early corn yields reported in the central Corn belt suggests that the October production estimate may be increased from the September forecast of 9.944 billion bushels, possibly topping the 10 billion bushel mark. If that happens, it will be surprising to this market analyst in that there seems to be a high degree of production variability throughout many parts of the Corn belt. We have all heard the reports of 200 bushel corn yields coming out of Central Illinois. However, many of the fringe Corn belt states may not be faring so well yield wise. The size of this corn crop will not be known until harvest is completed.

Market Strategy.
The old adage "buy the rumor - sell the fact" applies to the current soybean market. This means that soybean prices are currently bidding up based on trader expectations for a reduced production estimate for the U.S. soybean crop. Once crop size becomes known trader attention will turn to the Southern Hemisphere crop. The current soybean market should be rewarded with new crop soybean sales.
New crop corn basis levels that are currently (3 to 8 under) Dec. futures, and lower world corn and coarse grain stocks are indicative that corn prices should recover after harvest, placing Eastern Shore corn sales on hold.

**Mark Your Calendar.**
The Grain Marketing Strategies Conference for Delaware farmers is scheduled for December 19th at the Kent County Extension Office, Pardee Center, University of Delaware, 9 a.m. to Noon, details to follow. Contact: Carl German 302-831-1317 or clgerman@udel.edu.

**Fall Control of Perennial Weeds** - *Mark VanGessel, Extension Weed Specialist, mjv@udel.edu*

Fall is the most practical time to treat perennial weeds because it is the time that plants are best able to move the herbicide to the roots where it will do the most good and it is easier to get into the field. When considering fall weed control, the emphasis should be on what the patch of weeds will look like next spring or summer not the amount of dead stems this fall. Also, it is important to consider that a fall application will not eradicate a stand of perennial weeds; the fall application will reduce the stand size or the stand vigor. Fall applications of glyphosate is the most flexible treatment for most perennial weeds such as artichoke, bermudagrass, Canada thistle, common milkweed, common pokeweed, dock, hemp dogbane, horsemintle and johnsongrass. Rates of 21 to 42 oz/A of Roundup WeatherMax or 1 to 2 qts/A Touchdown IQ are consistently the most economical. Banvel at 2 to 4 pints is also labeled for artichoke, bindweeds, dock, hemp dogbane, horsemintle, milkweeds, pokeweed or Canada thistle. (Planting small grains must be delayed after Banvel application 20 days per pint of Banvel applied.) Allow 10 days after treatment before disturbing the treated plants. Fall herbicide applications should be made to actively growing plants. Allow plants to recover after harvest before treating them. Consider the options of spot treating in a standing crop; keeping the combine header as high as possible so the weeds are quicker to recover; or combining around the weed patches and then spraying those patches immediately after harvesting. Weed species differ in their sensitivity to frost; some are easily killed by frost (i.e. horsemintle) others can withstand relatively heavy frosts. Check the weeds prior to application to be sure they are actively growing.

**Options for Harvest Aid Treatments in Soybeans** - *Mark VanGessel, Extension Weed Specialist, mjv@udel.edu*

A harvest-aid may be a consideration to dry down vegetation prior to harvesting to reduce foreign matter in the harvested grain. Gramoxone and glyphosate are labeled. Gramoxone can be applied to determinant type varieties after at least one-half of the soybeans have dropped their leaves; or indeterminant varieties when at least 65% of the pods are mature brown or seed moisture is less than 30%. Glyphosate (Roundup, Touchdown, and Glyphomax) are labeled for an application when pods have lost their color. A waiting period of 7 to 14 days before harvesting is required depending on type of beans and the product applied. Be sure to read the label for all precautions.

**Weed Control for Grass or Mixed Pastures** - *Mark VanGessel, Extension Weed Specialist, mjv@udel.edu*

Weed control options are very limited for establishing a grass or mixed stand pasture. There are no products to use pre-plant incorporated or preemergence that will provide residual control and not injure the crop. Early postemergence options are also very limited. Ally, Banvel, Crossbow, Overdrive, or 2,4-D can be used for pure grass seedlings (they will kill clovers and
alfalfa), but grasses need to be well established at time of application. Ally can injure fescue and ryegrass. Fescue injury can be reduced if Ally is tankmixed with 2,4-D. Pursuit is labeled for established mixed pasture stands (broadleaf plus grass pastures).

**Weed Control in Seedling Alfalfa** - Mark VanGessel, Extension Weed Specialist, mjv@udel.edu

Getting seedling alfalfa off to a good start is critical for a long-term quality stand. The following herbicide suggestions are for pure alfalfa stands. Gramoxone or Roundup can be used prior to planting to kill emerged weeds. Balan or Eptam can be used pre-plant incorporated for control of small-seeded broadleaves such as pigweed or lambsquarters and most annual grasses. Residual control of either Balan or Eptam is only a few weeks. Fall postemergence treatments include Butyrac 200 (2 to 4 alfalfa trifoliates), Buctril (at least 4 trifoliates), Kerb, Poast Plus, Select, and Raptor or Pursuit (at least 2 trifoliates). Raptor provides the broadest spectrum of control. Kerb must be applied when soil temperatures are 50 degrees or less and requires rainfall for activation. Applications to small weeds are critical for effective control. Poast Plus and Select are effective only on grasses, and cannot be used on alfalfa plus grass stands. Most of the labeled herbicides can cause some crop injury to the alfalfa. Refer to the respective labels for spray additives.

**Late Planted Soybean Pod Fill and Cold Night Temperatures** - Richard W. Taylor, Extension Agronomist, rtaylor@udel.edu

With the prediction of some rather cold night-time temperatures this week, I asked a number of soybean experts across the county what effect such temperatures might have on soybean seed or pod fill and soybean development. Although I’ve only heard from a few folks so far, I thought I would share those comments with you. I will try to update this article in the near future if more or different information comes in.

First, in discussing it with Dr. Jim Dunphy and Dr. Patterson at North Carolina State University, they feel that the cool night temperatures may actually be of more help than harm to the soybean crop as long as the crop is not damaged by a frost. The cool night temperatures will retard respiration and transpiration during the time of day when photosynthates are not being produced. This will mean a net increase in the amount of carbohydrate stored in the grain as long as daytime temperatures remain near normal.

If daytime temperatures remain in the mid to low 40’s, they will likely retard photosynthetic production. However, both these responses will be temporary and metabolic activity will return to normal or near normal when temperatures return to more moderate levels. Long periods of cooler than normal temperatures will cause reduced seed size and may delay maturity only slightly.

Information from two very northern soybean growing areas support the conclusions above in that temperatures below 40°F will have no positive benefits to beans and can lead to frost damage, and cool nights and daytime temperatures between 60°F and 70°F can hasten seed fill and push late planted fields toward maturity. Dr. Naeve from Minnesota reports that this temperature regime allows some unadapted (those with too long of a growing season) to mature and produce seed in his region.

I expect more information and reports soon and will try to update this on the web site in the near future, so if you’re interested check back in a week or so.
**Nutrient Management Certification Sessions**

The University of Delaware Nutrient Management Program will be offering certification sessions this fall. This is your last chance to become certified before the deadline. Anyone that applies nutrients (fertilizer or manure) to 10 or more acres of land or has 8,000 lbs of animals needs to attend the certification sessions. **All certifications must be completed by December 31, 2003, and you must sign up for a Session I prior to October 15, 2003.** Please sign up early to get the session you would like to attend because session size is limited. To sign up for classes, please contact Jeanie Johnson at (302) 856-2585 ext. 305.

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**2003 Mid-Atlantic Crop Management School**

Early registration ends October 3, 2003 -  
*Richard W. Taylor, Extension Agronomist, rttaylor@udel.edu*

Early registration for the 2003 Mid-Atlantic Crop Management School to be held at the Princess Royale Oceanfront Hotel and Conference Center in Ocean City, MD on November 18 to 20, 2003 will end on Friday, Oct. 3 so if you have not sent in your registration materials now is the time to do so. To register both on time and on-line, you only need a major credit card and access to the internet. The URL address for on-line registration is as follows: [https://crayola.hcs.udel.edu/conf/registration/crop_management/](https://crayola.hcs.udel.edu/conf/registration/crop_management/)

The registration fee increases to $200 after October 3. Also, if you have yet to make reservations at the Princess Royale, the deadline to obtain the discounted room rate is October 24. To make room reservations, call the hotel at 410-524-7777 and indicate you are with the University of Maryland Crop Management School.

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A number of classes have reached capacity so register as soon as possible to obtain a class schedule as close to your preference as possible.

**PESTICIDE SAFETY EDUCATION and TESTING**

- September 30-October 1, 2003. **Kent Co.** Extension Office.
- March-April, 2004 **TBA.** Kent Co., NC County, Sussex Co.

The first day is training - 8:15 am - 4:30 pm. Training continues the morning of the second day, 8:15 am - noon.
Be sure to bring your Workbook!
The exam starts at 1:00 pm the second day. Closed book!! Bring your calculator for the calibration questions.

**LOCATIONS**

- **Kent County** Extension Office Pardee Center (302-730-4000) on Rt 113 (next to DOT) in Dover (south of the Blue Hen Mall).
- **Sussex Co.** UD Research & Education Center (302-856-7303) west of Georgetown.
- **New Castle County.** University of Delaware, Agricultural Campus (302-831-2526). Room 132 Townsend Hall on S. College across the street from Chrysler.
- **DDA** Delaware Department of Agriculture (302-739-4811) on Rt 13 south of Dover.
- **Capital Grange.** 911 S. Govenors Ave. Dover, DE.

**UPCOMING EVENTS**

**Ag Safety & Health Conference**

November 18, 2003
Cambridge, Maryland
Location & Times to be Announced
Mid-Atlantic Crop Management School
**November 18-20, 2003**
Princess Royale Oceanfront Hotel and Conference Center, Ocean City, Maryland
For More Information: Contact Richard Taylor at 302-831-1383 or rtaylor@udel.edu

Delaware-Maryland Agrability Conference
**December 3, 2003**
Delaware State Fairgrounds
Harrington, Delaware
8:00 a.m. - 3:30 p.m.
Focus: Arthritis and Farming
For More Information: Contact Ron Jester at 302-856-7303; rcjester@udel.edu

Grain Marketing Strategies Conference
**December 19, 2003**
Kent County Extension Office, Pardee Center, University of Delaware
9 a.m. to Noon
For More Information: Contact: Carl German
302-831-1317 or clgerman@udel.edu.

Delaware Vegetable Growers Meeting
**January 5, 6 & 7, 2004** *(note date change)*
Exhibit Hall, Harrington State Fair
Harrington, Delaware
For More Information: Contact Tracy Wootten
302-856-7303; wootten@udel.edu
or Gordon Johnson at 302-730-4000; gcjohn@udel.edu

Delaware Annual Pesticide Conference
**JANUARY 15, 2004**
This year's conference will be held in conjunction with the Horticultural Industry Expo at the Modern Maturity Center in Dover. Recertification credit will be given in all applicator categories except 7A, 7B, 7C, 7D, 7E, 7F.
For More Information: Contact Susan Whitney at 302-831-8886; swhitney@udel.edu

Delmarva Ag Safety & Health Conference
**January 28, 2004**
Capitol Grange
Dover, Delaware
8:30 a.m. - 12 noon
For More Information: Contact Ron Jester at 302-856-7303; rcjester@udel.edu

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**Weather Summary**

[Web Address for the U of D Research & Education Center:](http://www.rec.udel.edu)

**Week of September 25 to October 1, 2003**

**Rainfall:**
- 0.02 inches: September 27
- 0.13 inches: September 28

**Air Temperature:**
- Highs Ranged from 82°F on September 26 & 27 to 65°F on September 30.
- Lows Ranged from 63°F on September 27 to 43°F on September 30.

**Soil Temperature:**
- 68°F average for the week.
  - (Soil temperature taken at a 2 inch depth, under sod)
  - * Data taken from Warrington Farm Weather Station.

**Compiled and Edited By:**
Tracy Wootten
Sussex County Extension Educator - Horticulture

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