Pea Weed Control - Post-emergence -
Ed Kee, Extension Vegetable Crops Specialist; kee@udel.edu

Delmarva’s pea acreage is nearly 40 percent planted, and the earliest planted fields have emerged and seem to be off to a good start. Growers, scouts, and field personnel will begin scouting for any emerging weeds soon. If certain broadleaf weeds are present, Basagran is the only post-emergence broadleaf herbicide available for peas. It can be applied at 1.5 to 2 pints/acre after the peas have more than three pairs of leaves. Do not add oil concentrate. Smaller weeds are more effectively controlled. Basagran will control ragweed, pigweed, smartweed, and velvetleaf. It will provide fair control or suppression of lambsquarters if applied when the lambsquarters are small, i.e. one inch or smaller. If taller than two inches, lambsquarters control will be minimal.

Escaped grasses can be controlled with Assure II or Poast. Check the label for details.

Vegetables

Peas.
You should begin scouting the earliest planted fields for aphids. As soon as temperatures warm up, aphids will become active. As the weather fluctuates between warm and cool temperatures, aphid populations often explode and beneficial insect activity can lag behind. On small plants, you should sample for aphids by counting the number of aphids on 10 plants in 10 locations throughout a field. On larger plants, take 10 sweeps in 10 locations. A treatment is recommended if you find 5-10 aphids per plant or 50 or more aphids per sweep. Dimethoate or Lannate will provide aphid control. Be sure to check the labels for application restrictions during bloom.

New Labels/Changes.
Zeal - This new material from Valent is now available for mite control in apples, pears and strawberries. It is also labeled for lygus bug and spittle bug control on strawberries. It is a reduced risk insecticide which acts as an insect growth regulator against all stages of spider mites and European red mites. The active ingredient is etoxazole which is a molting inhibitor. It also has translaminar activity. The use rate is 2-3 oz/acre. The days to harvest after an application to strawberries is one day.

Lorsban 75WG - This new formulation of Lorsban will be marketed by Gowan and will replace the old 50W formulation. Field trials have indicated
equal or better control compared to the 4E/50W formulations.

Danitol 2.4 EC - Please note that the restricted re-entry interval (REI) is listed incorrectly in the Commercial Vegetable Recommendations book for all cucurbits (including cucumbers, muskmelons, pumpkins, squash and watermelons). The correct REI is 24 hours.

More Label Updates for 2004 for Vegetable Crops - Mark VanGessel, Extension Weed Specialist; mjv@udel.edu

The following herbicide labels have been changed or modified over the past year. This is intended to make you aware of changes but be sure to read the labels for complete details.

Snap beans - Raptor 1AS (BASF) for use postemergence. Label requires a tank-mix with Basagran at 6 to 16 oz/A. Basagran is intended to safen the Raptor.

Tomato Dual Magnum 7.62E (Syngenta) for use with plastic mulch and bare ground

Dual Magnum 7.62E (Syngenta) Now has labels (24c registration) for preemergence application for peppers, cabbage, and spinach. This registration requires a waiver of liability provided by the DE Vegetables Growers’ Association. Contact Ed Kee or Tracy Wootten for more information regarding the waivers.

Stinger 3L (Dow AgroSciences) garden beets, brassica, sweet corn, spinach, stone fruit, turnip root and top. Use rates range from 2.6 to 8 oz/A depending on the crop. Be aware of rotational restrictions

Sandea 75DF (Gowan) asparagus, cucumbers, cantaloupes, pumpkins, winter squash, summer squash, watermelons, lima beans, green beans, tomatoes, eggplant, and pepper. Has both preemergence and postemergence activity, but the use pattern varies with the crop and whether it is used with pasticulture or bare ground. There are rotational issues with Sandea. Be sure to read and follow all label restrictions.

Field Crops

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

Alfalfa.
Alfalfa weevil population levels remain light in fields throughout the state. The larvae we are finding at this time are a result of eggs laid last fall. Overwintered adults can lay eggs in stems any time temperatures are above 48 degrees F. The weevil passes through four larval stages in approximately three weeks. Larvae hatching from spring-laid eggs cause the most damage. As a general guideline, treatment should be applied if damage is visible on 50 percent or more of the tips. However, a more accurate way to time an application and try to avoid multiple insecticide applications would be to sample stems and determine the number of weevils per stem. A minimum of 30 stems should be collected per field, placed top first in a bucket to dislodge larvae from the tips and then count the number of weevils per stem. The following thresholds, based on the height of the alfalfa, should be used to make a treatment decision: up to 11 inches tall - 0.7 per stem; 12 inches - 1.0 per stem; 13 - 15 inches - 1.5 per stem; 16 inches tall - 2.0 per stem and 17-18 inches tall - 2.5 per stem.

Field Corn.
Very low levels of black cutworm moths continue to be found in traps. These moths will be attracted to weed covers and larvae will be most active in later planted corn. Although we can see leaf feeding early, we generally do not see cut plant damage until we reach 300 DD from peak catches. Also, early cutting often occurs from variegated cutworm which we can find while sampling for grubs. Herculex Bt corn can provide good cutworm control; however, fields should still be scouted for leaf feeding and cut
plant damage. A treatment should be considered in 1-2 leaf stage corn if you find 3 percent cut plants or 10% leaf feeding. Pyrethroids and Lorsban provide the most cost-effective control. For the most recent pheromone trap catches, check our website at http://www.udel.edu/IPM/traps/currentbcwtrap.html.

As far as grubs and wireworms, we have found moderate population levels (just at or below threshold) in most fields. Since wireworms remain in the soil for 3-5 years as larvae, we are finding economic levels in the same areas that experienced wireworm damage in past years. Threshold levels of grubs have been found behind corn, full season and double crop soybean stubble.

We continue to find slugs in fields that had problems in 2003. Both slug eggs and newly hatched juveniles can be found under surface trash. In our region, most field slugs pass through a single generation per year. Although they generally overwinter in the egg stage, we can often find juveniles and adults all winter, especially if conditions are warm. Since slugs may live 12 to 15 months and eggs are laid both in the early spring and fall, overlapping generations of adult and juvenile stages may be observed. The following factors favor slug outbreaks: no-tillage field crop production practices; development of dense weed cover or addition of organic matter such as manure; mild winters which increase the number of overwintering stages, especially adult slugs; prolonged periods of favorable temperatures (63 to 68 degrees) combined with evenly distributed rainfall that maintains soil moisture at 75 percent saturation; high pH (6.3 - 6.7); over fertilization with nitrogen and cool growing conditions which delay crop development and extend the period of susceptibility of the crop to slug injury. You can identify fields with the potential for problems before planting by placing ten - one square foot boards or roofing shingles throughout a field and checking under them for slugs. Another sampling method would be to use a covered pit to provide a cool refuge from the sun. Slugs tend to congregate in large numbers in these shelters. As a rule of thumb, you can expect problems in a field if you find one to five slugs per trap. Once a field is planted, you should examine fields with a potential for damage on a weekly basis. If the seed slot is not closed at planting, slugs can feed underground resulting in reduced stands. Once plants start to emerge, slug damage will appear as a shredding of the leaves since they feed by grating away the surface of the plant tissue. The presence of “slime trails” can also be used to distinguish slug injury. Look for slugs under dirt clods and surface trash around 5 plants in 10 locations in a field. Since slugs are nocturnal, sampling should be done in the evening or when weather is cloudy. A treatment may be needed if conditions are favorable for slug development and you find 5 or more slugs around each plant from the spike to 3-leaf stage. Although there are no new control options, an application of 30 percent nitrogen (20 gallons per acre on corn in the spike to one-leaf stage) or the use of Deadline MPs (metaldehyde bait) should be considered if slugs become a problem. Nitrogen formulations containing sulfur have been reported to provide superior control. In 2003, we saw the best results with Deadline MPs. Although the label states 10 - 40 lbs per acre broadcast, we have seen good results with 10 lbs. broadcast applied with a cyclone spreader. It is important to calibrate the spreader so you are getting at least 5 pellets per square foot. Also, the best results have been observed when applications were made and there was at least one day of sunny weather after an application. 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.

**Timothy.**
Cereal rust mite populations remain low; however, conditions during the next couple of weeks will determine if we see population explosions. If timothy appears curled and has a “rusted” appearance, but it is not drought stressed you should suspect rust mites. The only available control option is Sevin XLR. Apply 3 pts
per acre with ground equipment only with adequate water for complete coverage (20 or more gallons by ground). One application should provide enough suppression to prevent economic yield and quality losses. Apply at approximately 3-4 weeks after green-up in fields with a previous history of rust mites and/or when 25 percent of the plant tillers exhibit curled tips of the new leaf blades.

**More Label Updates for 2004** - *Mark VanGessel, Extension Weed Specialist; mjv@udel.edu*

The following herbicide labels have been changed or modified over the past year. This is intended to make you aware of changes but be sure to read the labels for complete details.

**Pastures.**
Overdrive 70WG (BASF) dicamba and diflufenzopyr (same ingredients as Distinct). There are no grazing or harvesting restrictions.

**Cimarron 60DF (DuPont)** This is a name change for Ally.

**Cimarron Max (DuPont)** a combination product of Cimarron (Ally) plus dicamba and 2,4-D. See label for grazing and haying restrictions

**Soybeans.**
Gangster (Valent) Co-packaged product of FirstRate and Valor. Intended for preemergence broadleaf weed control with Roundup Ready soybeans.

**Do Not Overuse Roundup Ready Corn** - *Mark VanGessel, Extension Weed Specialist; mjv@udel.edu*

Avoid the temptation to use Roundup Ready corn in the same fields where you are planting Roundup Ready soybeans. Relying on glyphosate (whether it is Roundup products, Touchdown, Glyphomax or others) every year for postemergence weed control is not a sound, long-term weed management program. As a general rule, do not use a Roundup Ready crop more than once out of two years for a given field.

**Height Restrictions for Small Grain Herbicides** - *Mark VanGessel, Extension Weed Specialist; mjv@udel.edu*

2,4-D - up to jointing stage (pre-jointing) Banvel/Clarity - up to jointing stage (pre-jointing) Buctril - up to boot stage Harmony Extra or Harmony GT - up to flag stage (pre-flag leaf)

**Conventional Soybean Herbicides** - *Mark VanGessel, Extension Weed Specialist; mjv@udel.edu*

I have had some questions about herbicides for non-Roundup Ready soybeans. There is interest in growing conventional varieties for a number of reasons. Most sound herbicide programs will require a broadleaf plus a grass herbicide at planting. The Delaware/New Jersey Soybean Weed Management Guide available free at the county offices or online at [http://www.rec.udel.edu/weed_sci/WeedPublicat.htm](http://www.rec.udel.edu/weed_sci/WeedPublicat.htm) will provide useful information for selecting herbicide programs for the specific weed problems you need to handle. As always, there is not one program available that will fit all situations. Be sure to consider all factors, including effectiveness, application timing, and rotational restrictions. Contact your county agent if you want to review your options.
Grain Marketing Highlights - Carl German, Extension Crops Marketing Specialist; clgerman@udel.edu

April Crop Report Sets Bullish Stage for Spring Planting.
Good news abounds in the release of today's USDA monthly supply and demand report. Ending stocks for U.S. corn, soybeans and wheat were lowered from month ago estimates. Additionally, as expected, soybean production estimates for the '04 Brazil and Argentina crop were lowered. To some degree, this report may be viewed as already discounted into commodity prices. However, the overall report is price friendly and will get a bullish call going into today's trading. The stage is now set for weather developments in the U.S. to become a major factor in determining price levels and market direction throughout the growing season.

Corn.
Ending stocks for U.S. corn in the '03/'04 marketing year are now forecast at 856 million bushels, as compared to 901 million bushels estimated last month and ending stocks of 1.082 billion bushels carried over from the '02/'03 marketing year. World coarse grain ending stocks now estimated at 102.26 million metric tons (MMT) are slightly above pre-report trade estimates and slightly higher than last month's estimate. World ending coarse grain stocks are noted as being significantly less than the '02/'03 carryover of 145.32 MMT. World corn ending stocks are now estimated at 67.6 MMT, as compared to 67.79 a month ago and 102.88 MMT carried over from the '02/'03 marketing year.

The projected price range for U.S. new crop corn is now projected at $2.45 to $2.65 per bushel, a 10 cent increase on both ends of the range.

Soybeans.
An unexpected adjustment was made in U.S. ending stocks for soybeans with the ending stocks estimate for the '03/'04 marketing year now placed at 115 million bushels, 10 million bushels less than last month and 63 million bushels less than the carry over from the '02/'03 marketing year. World ending soybean stocks for the current marketing year are now forecast at 33 MMT, as compared to the carry over from the '02/'03 crop of 39.27 MMT. Brazil and Argentina are now forecast to produce 91 MMT combined as compared to 88 MMT from the '03 crop.

USDA's projected price range for U.S. new crop soybeans is now placed at $7.40 to $7.80 per bushel, an increase of 25 cents per bushel on both ends of the range.

Wheat.
U.S. wheat ending stocks are now forecast at 531 million bushels, 13 million bushels less than last month and 40 million bushels more than the 491 MMT '02/'03 carry over. World ending wheat stocks are now forecast at 127.5 MMT, slightly higher than the 124.93 MMT projected last month. However, world wheat stocks are significantly less than the 166.26 MMT carry over from the previous marketing year.

The projected average price range for U.S. wheat is now placed at $3.35 to $3.40 per bushel, a nickel higher on the low end of the range.

Market Strategy.
Volatile commodity markets are going to be with us for awhile longer. Any weather problems during '04 crop development will result in large price moves. Current price offerings, across the board, present some good opportunities to get some of '04 crop sales locked in. Basis levels for Southern Delaware are currently 15 over for new crop corn, 15 under for new crop soybeans, and 15 under for new crop wheat. Those levels
equate to forward contract price offerings of $2.48 for new crop corn, $7.71 per bushel for new crop soybeans, and $4.09 for new crop wheat. The current rally, anticipated from the release of today’s crop report, should be used to advance sales to the 25 percent of intended production level. It may be advantageous to make these sales via a minimum price contract for corn and soybeans. Questions should be directed to Carl German 302-831-1317.

**UPCOMING MEETINGS:**

Attention Vegetable, Fruit & Specialty Crop Growers and All Interested in New Enterprises for your Farm

High Tunnel Workshop Series
*First of Four Workshops - Constructing a High Tunnel*

**Date:** Thursday, April 15, 2004  
**Time:** 3:00 pm – 6:30 pm

**Place:** Blendt Outreach & Research Farm, Delaware State Univ., Smyrna, DE

**Directions:** Take Rt. 13 to Smyrna. Turn on the Smyrna- Lipsic Rd. heading east for 1 mile. It is the first Farm on Right (there is a DSU sign out front)

**Information:** Contact John Clendaniel 302-857-6425, jclendan@desu.edu

This workshop is the first of four hands-on workshops that will cover the benefits of adding a High Tunnel to your operation. High tunnels are an unheated, protected plasticulture, growing system. The workshop will explore the layout and construction of a high tunnel structure. Future workshops will cover actual use of this structure throughout the summer with a production system of tomatoes, specialty vegetables, and more. The workshop is organized by the Small Farms Program of Delaware State University with the cooperation of University of Delaware Extension. Sponsors include DSU, UD Cooperative Extension and Kent County Levy Court.

_Gordon Johnson, Extension Agent, UD, Kent Co._
### University of Delaware Beekeeping Short Course

**Saturday, April 17, 2004**
**9:00 a.m. – 4:00 p.m.**

Course Fee $25 (individual/family); Youth (18 or less) $10

Lunch included.

Topics to be covered:
- Honey Bee Biology
- Basic Beekeeping Equipment
- Honey Bee Diseases & Parasites
- In the Apiary
- Care & Feeding of Your New “livestock”
- Where Do We Go From Here??
- Time & Labor Saving Tips/Suggestions

Registration required. For more Information on the Program, Contact Dewey Caron, University of Delaware, 302-831-8883 or dmcaron@udel.edu.

### Weather Summary

#### Week of April 1 to April 7, 2004

<table>
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<tr>
<th>Rainfall:</th>
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<tbody>
<tr>
<td>0.35 inches: April 1</td>
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<tr>
<td>0.01 inches: April 2</td>
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Readings taken for the previous 24 hours at 8 a.m.

<table>
<thead>
<tr>
<th>Air Temperature:</th>
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<tr>
<td>Highs Ranged from 73°F on April 7 to 46°F on April 5.</td>
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<tr>
<td>Lows Ranged from 45°F on April 1 to 31°F on April 5 &amp; 6.</td>
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<th>Soil Temperature:</th>
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<td>47°F average.</td>
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(Soil temperature taken at a 2 inch depth, under sod)

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

Compiled and Edited By:
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Sussex County Extension Agent - Horticulture
University of Delaware

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