WEEKLY CROP UPDATE
UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 16, Issue 7 **May 2, 2008**

Vegetables

Vegetable Crop Insects – *Joanne Whalen, Extension IPM Specialist*; jwhalen@udel.edu

Cabbage

Fields should be scouted for imported cabbage worm and diamondback larvae. We are starting to see an increase in moth egg laying activity. As a general guideline, a treatment is recommended if you find 5% of the plants infested with larvae. If both insect species are present, Avaunt, the Bt insecticides, Proclaim, Rimon, Spintor or Radiant have provided control.

Melons

As soon as plants are set in the field, you should begin scouting for cucumber beetles, aphids and spider mites. Aphids can be found in the earliest transplanted fields. When sampling for aphids, be sure to watch for beneficial insects as well since they can help to crash populations. As a general guideline, a treatment should be applied for aphids when 20 percent of the plants are infested with at least 5 aphids per leaf. Foliar treatments labeled for melon aphid control on melons include Actara, Beleaf, Fulfill, Lannate and Thionex. These materials should be applied before aphid populations explode. The Fulfill label states that the addition of a penetrating type spray adjuvant is recommended to provide optimum coverage and penetration. Admire, Platinum and Venom are also labeled at-planting for aphid control.

Peas

We are starting to see an increase in aphid populations on peas so be sure to sample all fields on a weekly basis. 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. As a general guideline, a treatment is recommended if you find 5-10 aphids per plant or 50 or more aphids per sweep. Be sure to check labels for application restrictions during bloom.

Potatoes

Begin sampling the earliest planted and emerged fields for Colorado potato beetle adults, especially if an at-planting material was not used. Low levels of the first emerged adults can now be found. A treatment should not be needed for adults until you find 25 beetles per 50 plants and defoliation has reached the 10% level.

Sweet Corn

Be sure to scout emerged fields for cutworms and flea beetles. As a general guideline, treatments should be applied for cutworms if you find 3% cut plants or 10% leaf feeding. In order to get an accurate estimate of flea beetle populations, fields should be scouted midday when beetles are active. A treatment will be needed if 5% of the plants are infested with beetles.

A Review of Sweet Corn Types and Isolation Requirements

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

Half of the genes expressed in a kernel of corn come from the plant producing the ear and half come from the pollen grain that fertilized the kernel. The expression of the pollen genes in the seed makes it necessary to isolate sweet corn from field corn, pop corn, and, in certain cases, from other types of sweet corn. The genes that make sweet corn sweet are all recessive, which means that a kernel of sweet corn must have two copies of the gene (one from the mother plant and one from the pollen parent) in order for the sweetness trait to be expressed. (See Table 1 for a listing of the genes discussed in this article.) Field corn and pop corn carry the dominant starch producing forms of these genes. Consequently, if field corn or pop corn pollinates sweet corn, the starch producing genes from the field or pop corn will be expressed instead of the genes from the sweet corn. Understanding why certain types of sweet corn must be isolated from one another is a bit more complicated.

Table 1. Recessive Sweet Corn Genes and Their Dominant Counterparts

Gene	Description
Su-1	Dominant starch-producing gene
su-1	Recessive sugary gene
Se	Dominant starch-producing gene
se	Recessive sugary enhancer gene
Sh_2	Dominant starch-producing gene
sh_2	Recessive shrunken-2 gene

There are two sweet corn isolation groups which can be further broken down into six basic categories and then nine different genotypes. The following is a discussion of the six categories accompanied by Table 2 which details the nine different genotypes available, their advantages, disadvantages, and isolation groups.

Normal

Normal sweet corn varieties, such as Silver Queen, carry the sugary gene, *su-1.* The sugary gene increases the amount of sugar in the developing ear. However, the disadvantage of the normal sweet corn varieties is that the sugar is quickly converted to bland-tasting starch after harvest. This is the sweet corn that needs to go directly from the field into a pot of boiling water.

Sugary Enhanced

The sugary enhancer gene, *se*, works in conjunction with *su-1*. The *se* gene increases the amount of sugar produced in the kernel and also increases the tenderness of the kernel. Some sweet corn hybrids are heterozygous for *se*. This means that the hybrid carries only one copy of *se*. Consequently the ears produced by a heterozygous *se* hybrid have approximately 75% normal sweet corn kernels, and about 25% sugary enhanced kernels. Homozygous *se* hybrids carry two copies of *se*, which results in ears with 100% sugary enhanced kernels. Sugary enhanced varieties start out with more sugar in the kernels so they stay sweeter longer (up to a week at 32 - 34˚F). However, the sugars will eventually be converted to starch. Some people like the tender, creamy texture of sugary enhanced corn while others would term it mushy.

Silver King – a homozygous sugary enhanced hybrid

Supersweet

Supersweet sweet corn varieties carry the *shrunken-2* (sh_2) gene. This gene causes very slow conversion of sugar into starch. Consequently, hybrids that carry sh_2 maintain their sweetness for a long time, up to 21 days when cooled to 32 - 34˚F. The kernels of supersweet corn are described as crisp by fans and tough and watery by detractors. Because even the mature kernels of supersweet corn do not contain much starch, plantings are more

difficult to establish. Seed should be handled with care and soil conditions should be as close to optimum as possible (soil temperature at least 60°F and adequate but not excessive moisture).

Some supersweet varieties do not carry *su-1*. Instead they have the dominant form of the gene, *Su-1*. If supersweet hybrids are pollinated by normal or sugary enhanced sweet corn the combined effects of *Su-1* from the supersweet and Sh_2 from the normal or sugary enhanced hybrids will produce starchy field corn-like kernels. This is why supersweet hybrids must be isolated from normal and sugary enhanced hybrids.

Synergistic

Synergistic sweet corn hybrids carry *su-1*, one or two copies of *se*, and one copy of sh_2. The combination of the effects of the *se* gene and sh_2 results in tender kernels with very high sugar content. Synergistic hybrids produce ears with a mixture of kernel types. The ratio and types of kernels produced depends on whether the hybrid has one or two copies of *se* (see the table for details). Because they carry the dominant Sh_2 gene, synergistic sweet corn varieties should be isolated from supersweet varieties. A few synergistic varieties have the *brittle-2* (bt_2) gene instead of sh_2. The bt_2 gene's effect on kernel sweetness is about the same as the effect of sh_2 and both genes work in nearly the same way. Synergistic hybrids have the advantage of similar seed vigor to the normal and sugary enhanced hybrids.

Misquamicut – a synergistic hybrid

Augmented Shrunken

Augmented shrunken or "augmented supersweet" hybrids carry *Su-1*, two copies of *se*, and two copies of sh_2. The ears produced by augmented hybrids have 100% tender supersweet kernels, which, due to the combined effects of *se* and sh_2, are tenderer than regular supersweet corn. The tender supersweet kernels are appreciated by some, but others prefer the crunchy texture of the supersweet hybrids. Augmented shrunken varieties must be carefully hand harvested because their very tender kernels will be damaged by machine picking. Augmented varieties need to be isolated from normal, sugary enhanced and synergistic hybrids. Additionally, they have the same seed vigor problems as supersweet varieties and should only be planted under optimal conditions.

Xtra-Tender 377A – an augmented shrunken hybrid

Mirai™

Mirai™ sweet corn varieties carry two copies of all three sweet corn genes: *su-1, se* and sh_2. They have all tender supersweet kernels and, like the augmented shrunken varieties, need to be hand-harvested. Mirai™ varieties also need optimal soil conditions for seedling establishment. Mirai™ does not require isolation to avoid starchy kernels, but, like all of the sweet corn types, isolation from other sweet corn types is necessary for the best quality.

Table 2. A Comparison of Sweet Corn Genotypes

Sweet Corn Genotype	Genes & Copy Number			Examples	Kernel Description	Advantages	Disadvantages	Isolation Requirements[1]
	su	*se*	sh_2					
Normal	2			Silver Queen Stowells Evergreen	100% normal	·vigorous seed	·no shelf life	Supersweet Augmented Shrunken
Heterozygous Sugary Enhanced	2	1		Silverado Argent	75% normal 25% sugary enhanced	·vigorous seed ·creamy and tender	·short shelf life	Supersweet Augmented Shrunken
Homozygous Sugary Enhanced	2	2		Table Sweet™ varieties Silver King, Sugar Snow II, Imaculata, Brilliance	100% sugary enhanced	·vigorous seed ·creamy and tender	·short shelf life	Supersweet Augmented Shrunken
Supersweet			2	Snow White Boreal Millennium	100% supersweet	·long shelf life ·sweet and crisp	·low seed vigor ·tough	Normal Sugary Enhanced Synergistic
Synergistic Heterozygous Sugary Enhanced	2	1	1	Sweet Breed™ varieties	56% normal 19% sugary enhanced 19% supersweet 6% tender supersweet	·vigorous seed ·longer shelf life	·mixed kernel types on ear	Supersweet Augmented Shrunken
Synergistic Homozygous Sugary Enhanced with sh_2	2	2	1	TripleSweet™ varieties Cinderella	75% sugary enhanced 25% tender supersweet	·vigorous seed ·longer shelf life	·mixed kernel types on ear	Supersweet Augmented Shrunken
Synergistic Homozygous Sugary Enhanced with bt_2	2	2	1 (bt_2)	Misquamicut Avalon	75% sugary enhanced 25% tender supersweet	·vigorous seed ·longer shelf life	·mixed kernel types on ear	Supersweet Augmented Shrunken
Augmented Shrunken		2	2	Gourmet Sweet™ varieties Multisweet™ varieties Xtra-Tender™ varieties	100% tender supersweet	·long shelf life ·tender and sweet	·low seed vigor ·mushy ·hand harvest only	Normal Sugary Enhanced Synergistic
Mirai™	2	2	2	Mirai™ varieties	100% tender supersweet	·long shelf life ·tender and sweet	·low seed vigor ·mushy ·hand harvest only	None necessary

[1] To avoid starchy kernels, isolate from the genotypes listed by ≥300 feet or ≥12 days in silking. For the best results, each genotype should be isolated from the others or planted in large blocks. All sweet corn must be isolated from field corn and pop corn.

Overhead Irrigation of Vegetables *-Gordon Johnson, Extension Ag Agent, Kent Co.*; gcjohn@udel.edu

Irrigation is a critical management tool for producing high yielding and high quality vegetable crops. Scheduling irrigation for different vegetables grown under center pivot, travelling gun, or solid set overhead systems involves knowledge of the soil water holding capacity, the effective rooting depth of the crop (how deep water can be drawn by the crop), how efficiently water is being delivered (water losses to evaporation before it reaches the crop and how much water is lost to runoff), how much water is being used by the crop (transpiration) and how much water is being lost from the soil and wetted surfaces directly (evaporation). The combination of transpiration and evaporation losses is termed evapotranspiration.

To schedule irrigation, the goal is to replace water lost through evapotranspiration without excessive runoff or excessive loss through percolation out of the root zone. Another factor to consider is the permissible water depletion; how much will you allow the soil to dry down between irrigations. For most crops we set this at 50% of the water holding capacity of the soil. However, for some shallow rooted crops you may want to keep that value lower (only allow for 40% depletion between irrigations). By knowing how much water is being lost and how much is left in the soil, you can determine when to irrigate and how much to irrigate.

In classic work done by the University of Delaware Agriculture Engineering Department in the 1970s and 1980s, water use estimates were developed for a number of vegetable crops. These values remain useful guides for irrigating these crops. A summary follows:

Sweet Corn: Water use 40 days after planting was 0.10 inches per day, water use 60 days after planting was 0.23 inches per day and water use at peak (75 days) was 0.26 inches per day.

Potatoes: Water use 40 days after planting was 0.15 inches per day, water use 60 days after planting was 0.27 inches per day and water use at peak (80 days) was 0.37 inches per day.

Peas: Water use 40 days after planting was 0.16 inches per day and water use 60 days after planting was 0.33 inches per day (peak).

Lima Beans: Water use 20 days after planting was 0.13 inches per day, water use 40 days after planting was 0.25 inches per day, water use 60 days after planting (peak) was 0.33 inches per day and water use 80 days after planting was 0.23 inches per day.

Cucumbers: Water use 20 days after planting was 0.13 inches per day, water use 40 days after planting was 0.27 inches per day, and water use at peak (50 days) was 0.30 inches per day.

Watermelons: Water use 20 days after planting was 0.10 inches per day, water use 40 days after planting was 0.23 inches per day, water use 60 days after planting (peak) was 0.30 inches per day, water use 80 days after planting was 0.28 inches per day and water use 100 days after planting was 0.22 inches per day.

Tomatoes: Water use 20 days after planting was 0.15 inches per day, water use 40 days after planting was 0.27 inches per day, water use 60 days after planting (peak) was 0.33 inches per day, water use 80 days after planting was 0.28 inches per day and water use 100 days after planting was 0.25 inches per day.

In future articles information on irrigation scheduling aids (such as computer scheduling programs), soil moisture sensors, and irrigation scheduling under plastic mulch will be presented.

Agronomic Crops

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

Alfalfa

Economic levels of alfalfa weevil continue to be found in many fields throughout the state so be sure to sample all fields for larvae. If alfalfa is in the full-bud stage and economic levels are present, early harvest is an alternative to spraying. However, if harvest is not possible

within 3 days and populations are increasing, use a short residual insecticide. If economic levels were present before cutting, be sure to check re-growth for larvae and feeding damage within a week of cutting. In recent years, cool conditions after first harvest have not produced enough "stubble heat" to control populations with early cutting. In some cases, damage to re-growth can be significant. A stubble treatment will be needed if you find 2 or more larvae per stem and the population levels remain steady.

Field Corn

As corn emerges from the ground, you will want to watch for cutworm activity as well as slugs. Last week's cutworm traps catches (the last of the season) were high in many locations throughout the state (http://ag.udel.edu/extension/IPM/traps/currentbcwtraps.html). Due to the warm winter, slugs can be easily found under surface residue in no-till situations. With the recent rains, you should watch for newly hatched juveniles under surface trash, especially where corn stalk residue is present. Knowledge of slug biology, conditions favoring outbreaks, scouting practices and potential management options can help reduce slug problems. Please see the accompanying article "Slugs – Scouting and Control in Field Corn."

Small Grains

Fields should be sampled on a weekly basis for sawfly and armyworm larvae. We continue to find low levels of both in fields in Kent and Sussex counties – however, we are starting to see an increase in armyworm moth activity. Remember, armyworm larvae are nocturnal so look for larvae at the base of the plants during the day. As a general guideline, a treatment should be considered if you find one armyworm per foot of row for barley and 1-2 per foot of row for wheat. Since sawflies feed on the plants during the day, small sawfly larvae can often be detected early using a sweep net. *However, there is no threshold for sweep net samples.* Once sawfly larvae are detected, sample for larvae in 5 foot of row innerspace in 5-10 locations in a field to make a treatment decision. You will need to shake the plants to dislodge sawfly larvae that feed on the plants during the day. As a guideline, a treatment should be applied when you find 2 larvae per 5 foot of row innerspace or 0.4 larvae per foot of row. If armyworms and sawflies are present in the same field, the threshold for each should be reduced by one-half. We can also find cereal leaf beetle larvae in fields that have had historical problems. When daytime temperatures are cooler, insects will feed lower in the canopy so be sure to sample the entire plant for small larvae. As temperatures increase, larvae can quickly damage fields so early detection is important. The treatment threshold is 25 eggs and/or small larvae total per 100 tillers. You should also continue to watch for aphids feeding in small grain heads. As a general guideline, the treatment threshold is 20 aphids per head with low beneficial insect activity. Although beneficial insect activity has increased, fluctuating temperatures may limit their ability to reduce aphid populations.

Slugs – Scouting and Control in Field Corn

– *Joanne Whalen, Extension IPM Specialist*; jwhalen@udel.edu

Biology of Slugs

Most 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. In the winter, adult slugs may enter a state of hibernation, and in the dry and hot summer conditions they enter a similar inactive state. A combination of one or more of the following factors favors 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°F) combined with evenly distributed rainfall that maintains soil moisture at 75% 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.

Scouting for Slugs
You can still identify fields with the potential for problems before planting by using a shingle or covered pit to provide a humid, sheltered hiding place for slugs. 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 weekly basis. 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. As a general guideline, 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.

Controls
Management options are still limited to the use of baits and cultural practices. If a number of factors are present which favor slug development, then a combination of cultural practices and baits may be needed. Cultural practices, including the use of "pop-up" fertilizer and trash whippers to remove residue over the seed furrow, can help corn grow ahead of the damage. When populations were extremely heavy in the spring of 2003, good results were obtained with Deadline MPs (metaldehyde bait). The label states 10 - 40 lbs per acre (http://www.cdms.net/LDat/ld7CL000.pdf). We saw good results with 10 lbs. per acre broadcast applied with a cyclone spreader if the spreader was calibrated 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 they may take 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. Most baits, as well as cultural practices, only reduce the slug activity - buying time to enable the crop to outgrow the problem.

Small Grain Diseases

– *Bob Mulrooney, Extension Plant Pathologist*; bobmul@udel.edu

Barley
Several diseases are present at this time. **Powdery mildew**, which we had reported earlier, seems to be found primarily on the variety '*Thoroughbred*'. The **spot blotch** form of net blotch is also present in some varieties at low levels that should not affect yields. The latest "new" disease that appeared at heading is **loose smut**. This fungus is present in the seeds at planting and grows with the germinating plant and systemically infects the head and replaces the seed with its dark brown spore masses. Grain harvested from infected fields should not be used for seed unless it is treated with a systemic fungicide such as Baytan, Dividend, and Raxil. Because the spore masses weather and are absent during harvest the fungus does not cause surface contamination of the harvested grain so the feed value is not affected. Plant certified smut free seed and/or treat with a fungicide for loose smut control.

Loose smut of barley caused by *Ustilago nuda*

Spot blotch on left two leaves, net blotch on right two leaves

Barley scald caused by a fungus *Rhynchosporium secalis.*

The last disease that I am seeing in barley is **scald**. This disease overwinters in old barley debris or can be seed borne. Look for the water-soaked gray-green spots that appear initially. As the lesion the dries out the center becomes bleached then tan with a brown margin (see photo). Some lesions can be very large and several spots can merge and kill the leaf. Rotation and use of resistant varieties is the best control method.

Wheat

Powdery mildew is still the most prevalent disease present. Continue to scout and remember that the end of flowering is the last opportunity to apply a fungicide for control. We have not confirmed it yet but I believe we have seen barley yellow dwarf mosaic virus (BYDMV) in wheat this week. A late fall infection or early spring infection produces symptoms of off-color wheat, which may be stunted in varying degrees, as well as red-purple flag leaves (the uppermost leaf). Since this virus is aphid transmitted, fields that are early planted or have had high aphid infestations are the most at risk. The later the infection occurs the less the effect on yield. Aphid control, including seed treatments, may prevent BYDMV as well as avoiding early planting.

Barley yellow dwarf causing reddened flag leaves

Flowering has begun for many wheat fields due to the warm weather last week. The remainder will be flowering in the next week or two. If you want to check the Scab Forecasting website visit: http://www.wheatscab.psu.edu/ for more info. Right now the risk for scab statewide for the next 48 hours is low.

Soybean Rust Update – *Bob Mulrooney, Extension Plant Pathologist*; bobmul@udel.edu

There has not been much new activity on the soybean rust front. Soybean rust can currently be found on kudzu in six counties in Florida and one county in Texas. Soybean sentinel plots are being established throughout the Gulf Coast region. Kudzu is also greening-up rapidly in this area of the country.

Soybean rust was confirmed by the USDA on a new host, *Erythrina herbacea* (common name coral bean or Cherokee bean) collected in Marion County, Florida. This is a new development. This bean would be grown here as an ornamental bean and not likely to impact the local rust situation if soybean rust was to arrive here. *Erythrina herbacea* is native to hardwood hammocks in the deep southern states of the eastern United States.

Coral bean: for more info see http://www.floridata.com/ref/E/erythrin.cfm

Protecting Corn Yields with Postemergence Programs – *Mark VanGessel, Extension Weed Specialist*; mjv@udel.edu

This article was modified from article by Bob Hartzler, Iowa State University.

Farmers have an array of products that allow weeds to be effectively controlled postemergence. These new technologies include herbicide resistant hybrids, such as Roundup Ready and Liberty Link corn, and several newer herbicides (Callisto, Status, etc.). While postemergence herbicides (2,4-D, Banvel) have been used successfully for more than 30 years to control weeds in corn, the new products offer greater flexibility in application timing, reduced risk of crop injury, and a broader spectrum of weed control. However, an understanding of weed/corn competition is needed to use these products more efficiently.

Most summer annual weeds (giant foxtail, pigweeds, common lambsquarter, etc.) begin to emerge near the time of corn planting, but significant numbers of weeds continue to emerge into late June and July. A temptation for many farmers relying on postemergence herbicides is to delay application until the crop canopy is large enough to shade out late-emerging weeds. Delaying application of postemergence herbicides may result in cleaner fields at the end of the growing season, but this approach may have serious economic consequences. A regional project investigated the effectiveness of using only glyphosate for weed control in Roundup Ready corn (Gower et al. 2003). Roundup was applied at several times during the growing season based on the size of the dominant weeds in the field. A total of 35 experiments were conducted in nine states, including Delaware. Most sites had high weed densities. In these studies, weed control continually improved as applications were delayed. For example, a single application when weeds were 12" tall resulted in 95% control, whereas spraying 2" tall weeds resulted in only 73% control. The reduced weed control was due to weeds that emerged after application, rather than an inability of glyphosate to kill the larger weeds. Looking only at weed control would suggest that delaying herbicide applications is an effective strategy to enhance weed control.

However, corn subjected to weed competition from emergence to postemergence application began to suffer yield losses when herbicide application was made to 4" weeds. Applying the herbicide when weeds were 4" tall resulted in a 3% yield loss, and each delay approximately doubled the yield loss. The reduction in corn yields due to competition prior to the postemergence application illustrates the risk of

delaying treatment in hopes of minimizing problems with late emerging weeds.

Table 1. The effect of application timing on weed control and corn yields.
Adapted from Gower et al. 2003[1].

Application Timing (Weed Size)	Weed Control	Corn Yield Loss Early-season competition only[2]	Corn Yield Loss Early- and late season competition[3]
	---------- % ----------		
2"	73	0	7
4"	83	3	6
6"	90	6	7
9"	93	14	11
12"	95	22	21

[1] Gower, Loux, Cardina, Harrison, Sprankle, Probst, Bauman, Bugg, Curran, Currie, Harvey, Johnson, Kells, Owen, Regehr, Slack, Spaur, Sprague, VanGessel and Young. 2003. Effect of postemergence glyphosate application timing on weed control and grain yield in glyphosate-resistant corn: Results of a 2-year multistate study. Weed Technol. 17:821-828.
[2] Weeds emerging after herbicide application controlled with hand weeding.
[3] Weeds emerging after herbicide application allowed to compete with corn.

An efficient approach is an early application of glyphosate to protect the corn yield and in addition, include an herbicide with glyphosate that will provide residual control. Herbicides to consider include: atrazine, Callisto, Hornet, Resolve, Sandea, or Steadfast. Herbicide selection needs to be based on weeds present in the field. Be sure to consider corn height restrictions as well.

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

Top Five U.S. Corn Producing States Lag in Planting Progress

Wet weather in the Corn Belt is getting to be very concerning when one considers the calendar just registered May 1. On Monday, USDA reported U.S. corn planting to be at 10 percent vs. 35 percent for the 5-year average and 20 percent last year. However, a closer look at the planting progress numbers is even more concerning. The three "I"s: Iowa, Illinois, and Indiana are way behind last year's progress and the 5-year average. Iowa was only 3 percent planted compared to the 5-year average of 33 percent and last year's 12 percent. Illinois, reported at 6 percent planted, was 29 percent complete by this time last year. The 5-year average for Illinois is 55 percent. Indiana, at 11 percent planted, was 1 point ahead of last year, but 19 points behind the 5-year average of 30 percent. Minnesota was reported at only 1 percent planted as compared to 20 percent last year and the 5-year average of 27 percent. Nebraska, at 9 percent planted, was 4 percent behind last year and 12 points behind the 5-year average.

Can U.S. corn planting be completed on time? On time is defined here as the end of May, after that time period the odds of not achieving trend line yields increase. Further, the cut-off date for corn planting in the heart of the Corn Belt is June 10th. Planting corn after that date becomes extremely risky. The actual outcome remains to be seen. It might still be possible to get the majority of the U.S. corn crop in the ground by the end of May. However, drier and warmer conditions will have to prevail in order to achieve that objective. We will have to wait and see whether more or less corn acres get planted than the 86 million acres reported in the March 31st planting intentions report. In the meantime, this development will keep the corn market supported at higher levels. Electronic Dec '08 corn futures were at $6.32 per bushel in overnight trading.

Strike Threat Looms in Argentina

Argentine farmers have been on-again off-again on their threat to strike due to their government's plan to tax soybean exports on a sliding scale. News that entered the market yesterday indicated that talks between the Argentine producers and their government had run into a snag. Soybean futures took note in yesterday's trading with new crop futures up 25 cents per bushel at the close. Electronic Nov '08 soybean futures were at $12.32 per bushel in overnight trading. If the dispute in Argentina does not get settled then we will see a

significant rally in soybean futures prices from current levels.

Wheat Harvest Nears
U.S. winter wheat harvest will begin in the Southern Plains in two weeks. Spring wheat supplies are expected to run short this spring. The soft red winter wheat harvest is just two months away. SRW wheat was at $8.07 in overnight Electronic trade.

Market Strategy
Corn and soybean price direction in the near term will be determined by the two primary factors discussed above: the weather and the outcome of the Argentine situation impacting soybean exports. The price of crude oil has dropped about $6.00 per barrel this week. The nearby U.S. dollar index, now at 73.315, is about 2 points higher than recent lows. The markets continue to be extremely volatile.

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

Announcements

Agronomic Crops Twilight Tailgate Session

Monday, May 19, 2008 6:00 p.m.
UD Cooperative Extension Research and Demonstration Area
(3/4-mile east of Armstrong Corner on Marl Pit Rd. – Rd 429, Middletown)

Bring a tailgate or a lawn chair and join your fellow producers and the UD Extension team for a discussion of this year's demonstration trials and current production issues in small grains, corn, and soybeans. Brief updates will include nutrient management, risk management and grain marketing. We will wrap things up with the traditional ice cream treat!

We will apply for both MD and DE Pesticide and Nutrient Management re-certification credits.

This meeting is free and everyone interested in attending is welcome. To register, for more information or special consideration in accessing this meeting, please call our office in advance, at (302) 831-2506.

See you there!
Anna Stoops, Extension Agent, Agriculture

Small and/or Beginning Farm Series Workshop: Irrigation for Your Crops and Water Quality

Thursday, May 15, 2008 6:00 p.m.
DSU Smyrna Outreach and Research Center
884 Smyrna-Leipsic Rd, Smyrna, DE

We never know how much rain we will get during the growing season. Learn about effective ways to provide water to your plants and keep your well protected.

Light refreshments served.

Please call (302) 857-6462 to register.

This workshop is part of the 2008 Small/ Beginning Farm Workshop Series held by Delaware State University. For complete information on the workshops planned, see the brochure at http://www.rec.udel.edu/update08/announcements/smallfarmbrochure2008.pdf

For Current Agricultural Information from the UD Kent Co. Extension Office Visit www.kentagextension.blogspot.com

Recent Topics:

Growing degree days and corn emergence
Food incubator center at Delaware State University
Should you spray wheat now?
Organic no-till field day
Viruses in wheat – WSSV
Wet weather may increase slug problems in no-till
Strawberry blossom blight and fruit rot
Letting weeds grow too much robs nitrogen
Poultry – Getting ready for warm weather I
Poultry – Getting ready for warm weather 2
Dairy – Steps to maintain milk quality in warm weather
Irrigate wheat in dry fields now
Current insects and diseases to scout for
More on effective burndown
Lambsquarters control keeps getting tougher

Wye Strawberry Twilight

Wednesday, May 21, 2008 6:00 p.m. - dark
Wye Research and Education Center
Queenstown, MD 21658

Speakers include:
Jerry Brust , Entomologist
Anne DaMarsay, Fruit pathologist
Michael Embrey, Apiary specialist
Michael Newell, Program manager and strawberry specialist

People will see:

-High tunnel strawberry production, planted September 2007. Planted varieties include: Carmine, Ventana, Florida Festival, Seascape, Chandler, Albion, and Camarosa.

-Annual field plasticulture variety trial planted with bare-rooted dormant plants in July 2007. Varieties include: Bish, Jewel, Ovation, Allstar, Chandler, Daraselect, Eros, KRS-10, and Seascape.

No preregistration required

Light refreshments served

Directions can be found at www.wrec.umd.edu

For more information contact Mike Newell, (410) 827-7388 or mnewell@umd.edu

Growing Well With Pain

June 9, 2008 9:00 a.m.-noon
Richard A. Henson Conference Center
University of Maryland Eastern Shore
Princess Anne, MD

The American Chronic Pain Association and the Delaware-Maryland AgrAbility Project will be presenting a chronic pain seminar entitled "Growing Well with Pain".

Penny Cowan, founder and Executive Director of the American Chronic Pain Association, will lead this workshop aimed at helping agricultural workers, their families, and the health care community to better understand chronic pain and cope with the challenges it presents.

Go to http://www.rec.udel.edu/Update08/announcements/chronicpainworkshop.pdf for additional details on the workshop.

Reservations are required and the seminar is free if you register by June 4, 2008. Call Sally VanSchaik to register at 1-877-204-3276.

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of April 24 to April 30, 2008

Readings Taken from Midnight to Midnight

Rainfall:

0.07 inch: April 27
0.76 inch: April 28
0.03 inch: April 29

Air Temperature:

Highs Ranged from 79°F on April 26 to 58˚F on April 27.

Lows Ranged from 55˚F on April 26 to 41˚F on April 30.

Soil Temperature:

60˚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.