



WEEKLY CROP UPDATE

UNIVERSITY OF DELAWARE COOPERATIVE EXTENSION

Volume 16, Issue 4

April 11, 2008

Vegetables

New Insecticides/New Uses - Joanne Whalen,
Extension IPM Specialist; jwhalen@udel.edu

Leverage 2.7SE (Bayer) - This insecticide label has received EPA approval for significant crop expansion. The additional crops are: leafy brassicas and leafy greens, dried peas and beans (**not succulent**), tuberous and corm vegetables, grapes and pome/stone fruit
(<http://www.cdms.net/LDat/ld6AP005.pdf>)

Belay 50WDG (Valent) - This new insecticide is now labeled for foliar applications on potatoes for Colorado potato beetle, aphids and leafhoppers. It contains the insecticide, clothianidin (same active ingredient in the Poncho seed treatments labeled for corn) so it belongs to the neonicotinoid class of chemistry (EPA Group 4A) which includes Admire, Provado (both imidacloprid), Actara, Platinum (both thiamethoxam), Leverage (Admire plus Baythroid), Endigo (Platinum plus Warrior), as well as the seed treatments Gaucho (imidacloprid) and Cruiser (thiamethoxam). Check the label for use rates and restrictions
(<http://www.cdms.net/LDat/ld8A8000.pdf>)

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

Seed Corn Maggots (SCM) Control in Spring Planted Vegetables

We continue to observe flies actively laying eggs in a number of situations including recently plowed fields, especially when a cover crop is plowed under or when manure was applied to a field. Spring planted vegetables susceptible to maggot damage include cole crops, melons, peas, snap beans, spinach, and sweet corn. Control options can include commercial applied seed treatments, or soil insecticides; however, not all options are available for all crops. The hopper box treatment, Latitude (imidacloprid) is available in our area and is only labeled on sweet corn. Please refer to the labels as well as the following link for control options -
<http://ag.udel.edu/extension/vegprogram/publications.htm>.

Peas

Be sure to sample peas for pea aphids as soon as small seedlings emerge. Before the recent rains, weather conditions (cool and dry) were favorable for aphids. 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.

Legume Vegetable Seed Issues -Gordon Johnson, Extension Ag Agent, Kent Co.; gcjohn@udel.edu

Pea plantings for later harvests in Delaware continue in April and the earliest snap bean plantings will start very soon. Early lima bean planting programs begin the third week in May. Other legume vegetables such as cowpeas and edible soybeans will also be planted starting in May.

Successful crops of legume vegetables begin with obtaining rapid emergence and adequate stands. Many issues with stands, vigor, and ultimately yield can be traced back to the seed quality and what happened with the seed in the time between seed planting and emergence.

Legume vegetables have large, relatively fragile seed. Food reserves are stored in the pair of cotyledons, sometimes called the seed leaves. Seeds can be easily broken into these two halves. In peas, during germination, the cotyledons stay below ground and the epicotyl emerges through the soil surface. In snap beans, lima beans, cowpeas, and soybeans, upon germination, the cotyledons are pulled through the soil by the extension of the hypocotyl to emerge above ground.

Legume seeds are easy to damage and damaged seeds produce lower vigor plants. Seeds may be damaged during seed conditioning, during transport and storage, and during field handling and planting. Always handle legume seed with care. Damage during handling lowers the germination percentage and increases the number of low vigor seedlings. Precise vacuum planters place individual seeds accurately with minimum damage and are preferable to older plate style planters.

Because food reserves are stored in the cotyledons, any damage that reduces these food reserves will limit the ability of the seedling to grow initially. In bean crops, where the cotyledons emerge out of the soil, there is considerable potential for damage during this process. In addition, because the cotyledons are so large, any physical impediment such as compaction or soil crusting may result in delayed

emergence, reduced stand, and potential damage to the cotyledons, producing lower vigor plants. Seed corn maggot can reduce stand vigor and germination significantly by feeding on the cotyledons and is one of our major problems in April and May plantings.

Best germination for snap beans and vegetable soybeans is obtained at soil temperatures above 60°F with an optimum around 70°F. Peas will germinate at lower temperatures (40°F), but the optimum is above 50°F. Lima beans and cowpeas require higher soil temperatures (optimum germination between 70° and 80°F). Seed rots can be a major problem when soil temperature is below the range for that legume. Potential injury from soil incorporated herbicides may also be increased due to longer exposure times (slower germination).

Vegetable legume seeds are sensitive to cold water imbibition damage which can lead to reduced stands. This occurs when there is high soil moisture or rainy weather and cold soils. Overly dry seed (below 10% moisture) can increase this negative effect. You can reduce this problem by conditioning seed for several days by exposing it to humidity in the air (this allows the seed to absorb some moisture from the air). You can do this by opening bags and holding them for several days in an unheated storage area.

Planting depth for legume seeds is 0.75 to 1.5 inches. Use shallow depths with early planting dates when soils are cold and wet. Plant deeper when the soil surface is dry and soils are warm. Try not to irrigate immediately after planting to avoid soil crusting and excessive chilling in cold periods. Plant into moisture or pre-irrigate the field before planting if soil moisture levels are low.

Seedlings should emerge by 10-14 days. Delays in emergence expose seedlings over a longer period of time to herbicide effects, seed and seedling pathogens, and soil insects. Aim for uniform emergence. A delay of emergence of only 2-3 days behind neighboring plants results in the later emerging plants being barren, especially at higher seeding rates.

Ideally, use seed already treated with an approved seed treatment with a fungicide for Rhizoctonia and Fusarium control such as Maxim 4FS, a second fungicide for Pythium control such as Apron XL LS and an improved insecticide for seed corn maggot control.

If you suspect that a seed lot may have reduced germination, have the seed germination retested. Seed vigor evaluations such as the cold germination test may be useful to compare or select seed lots for early planting. Adjust planting rates according to the germination percentage on the bag or the results of any seed tests performed.

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

Many of you know that potato acreage in Delaware has been declining, but we are committed to the potato growers to provide disease forecasting for late blight and information on other important potato diseases. Joanne Whalen and I will be providing the late blight forecast again using IPM resources. For those that would like to receive the Potato Disease Update that have not received it in the past, email me at bobmul@udel.edu or leave me a message at 302-831-4865 and give me your name and email address or FAX number. The report will use weather data for a potato field along Rt 9 in the Little Creek/Leipsic area in Kent County.

Thrips Overwinter on Winter Annuals in Maryland – *Jerry Brust, IPM Vegetable Specialist, University of Maryland; jbrust@umd.edu*

Vegetable and bramble growers in Maryland have called me often over the last two years about fruit problems in their fields possibly caused by thrips. As an overall study of the possible impact thrips may be having on vegetable and fruit quality I have been conducting a two-year survey for their numbers and species. Over the last two winters I have taken weed samples from vegetable fields looking to see if any thrips were

overwintering and, if so, what species they were. A sample site consisted of 5-12 fields from 2-5 farms that were in close proximity to one another. Pre-season weed samples consisted of 15 x 15 cm quadrats taken from a weedy area, 5 samples per field. Weed samples were placed in a 4-L Ziploc® bag with 20 ml of 70% isopropyl alcohol shaken in the bag ten times and the plants discarded. The bag was marked and placed in a cooler until transported back to lab where it was stored in a refrigerator until examined for content. Below is a 9-point summary of the overwintering sample program.

1. For most samples no thrips were found.
2. In 5 of the 12 sample sites thrips were found in December through January on winter annuals (Fig. 1).
3. At four sample sites thrips were found in March (Fig. 2).
4. The worst sample site had 25% of the sampled winter annual weeds with at least one thrips.
5. 81% of the thrips found were female adults, 11% were males and 8% were immatures or pupae.
6. Western flower thrips were found to overwinter in Maryland, Delaware and Virginia, although only in low numbers.
7. Chickweed was found to harbor 70% of all thrips with wild mustards and henbit being the next best winter hosts.
8. Sampling-sites near high tunnels or woods had a greater probability of containing thrips than sites out in a field.
9. Farms where thrips were found to overwinter had greater probabilities of infestations during the season.

Even though several thrips species, including Western flower thrips, were found to overwinter in the mid-Atlantic area it does not mean we have a thrips problem. They may have been there all along and we are just now discovering them. However, growers do need to watch for any early infestations in their brambles and vegetables and not overreact by spraying an insecticide unless really needed. Most brambles can have at least 5 thrips or more per fruit/flower before there is any possibility of damage. The species of thrips you have should be determined only if you think thrips are causing fruit quality problems at low densities. I

would be glad to look at your thrips if you send them to me: 2005 Largo Rd, Upper Marlboro, MD 20774 or you can call 301-627-8440 or email me: jbrust@umd.edu.

Figures 1 and 2 show the 12 sample sites, nine in Maryland, and one each in Pennsylvania, Delaware and Virginia. The 4 to 5 sample sites where thrips were found to overwinter are indicated with red dots and the yellow dots indicate sites where no thrips were detected.

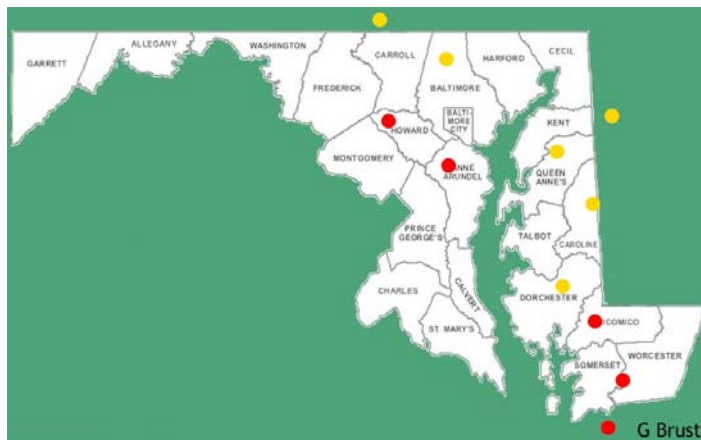


Figure 1. December and January sampling results, red dots indicate sites where thrips were found to overwinter and yellow dots indicate sites where no thrips were detected.

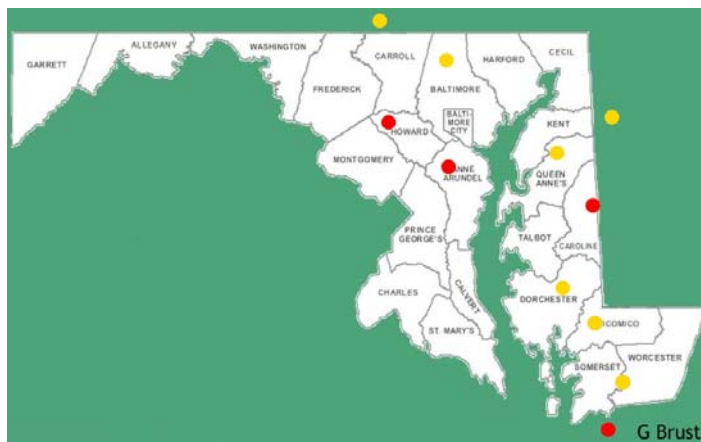


Figure 2. March sampling results, red dots indicate sites where thrips were found to overwinter and yellow dots indicate sites where no thrips were detected.

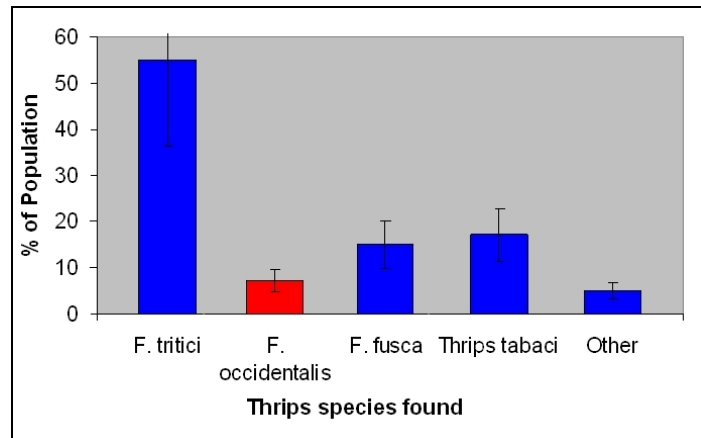


Figure 3. The proportion of thrips species found to overwinter at the 12 sample sites.

Grower's Guide to Understanding Protectant Fungicides (FRAC Codes M1-M9)

- Andy Wyenandt, Assistant Extension Specialist in Vegetable Pathology, Rutgers University; wyenandt@aesop.rutgers.edu

Protectant (contact) fungicides, such as the inorganics (copper, FRAC code M1) and sulfur (M2), the dithiocarbamates (maneb, mancozeb, thiram, M3) and chloronitriles (chlorothalonil, M5) belong to FRAC code groupings which have a low chance for fungicide resistance to develop. Protectant fungicides typically offer broad spectrum control for many different pathogens. So, why wouldn't fungi develop resistance to protectant fungicides? Protectant fungicides are used all the time, often in a weekly manner throughout much of the growing season. The answer is in their modes-of-action (MOA). Protectant fungicides have MOA's that affect (prevent) fungal development in different manners. In inorganic compounds, sulfur (M1) prevents fungal growth (i.e. spore germination) by disrupting electron transport in the mitochondria. Coppers (M2), on the other hand, cause non-specific denaturation of proteins. Chlorothalonil (M5) inactivates amino acids, proteins and enzymes by combining with thiol (sulfur) groups.

In all cases, a protectant fungicide's chemistry disrupts fungal growth and development either non-specifically or in multiple manners. Because

of this, there is a much lower chance for fungi to develop resistance to them. Protectant fungicides are contact fungicides, meaning they must be present on the leaf surface prior to the arrival of the fungus and must then come into direct contact with the fungus. Protectant fungicides can be redistributed on the leaf surface with rainfall or overhead irrigation, but can also be washed off by too much of either! Remember that with protectant fungicides, any new growth is unprotected until the next protectant fungicide is applied, in other words, protectant fungicides are not systemic and do not have translaminar activity like some of the newer chemistries. Protectant fungicides should be tank-mixed with fungicides with higher risks for resistance development. Protectant fungicides used in this manner will help slow (or reduce the chances for) fungicide resistance development on your farm. In any case, it's best to always follow the label and tank mix protectants with higher risk fungicides when suggested or required to do so.

Agronomic Crops

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

Alfalfa

If you have not started to sample for alfalfa weevil, be sure to begin sampling fields on a weekly basis. Look for small larvae feeding in the tips of plants producing a round, pinhole type of feeding. Once you detect tip feeding, a full field sample should be taken. In general, no treatment should be needed before you observe 50 percent of the tips with feeding damage. 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 as a guideline when making a treatment decision: up to 11 inches tall - 0.7 per stem; 12 inches tall - 1.0 per stem; 13 - 15 inches tall - 1.5 per stem; 16 inches tall - 2.0

per stem and 17 - 18 inches tall - 2.5 per stem. Numerous pyrethroids are now labeled for alfalfa weevil including Baythroid, Mustang MAX, permethrin, Proaxis and Warrior. Furadan, Imidan, Lorsban, Lannate and Steward are also labeled for alfalfa weevil control.

Field Corn

In general, black cutworm trap catches remain low. However, we have started to see an increase in catches this past week. Although no precise numbers are available, moth catches of 9 to 15 moths per 7-day period have been associated with a moderate to high potential for black cutworm outbreaks in field corn. Larvae should be large enough to begin cutting when about 300 base-50 degree-days have accumulated since peak moth activity and egg laying. Pheromone trap catches can help determine when peak moth flight and egg laying occurs; however, they cannot predict the amount or magnitude of cutting that will occur.

We can also have a number of other cutworm species present in corn fields at planting time including the dingy cutworm, claybacked cutworm and variegated cutworm. Reports from consultants indicate that they have found higher numbers of cutworms while doing soil sampling for grubs earlier this spring. Information from the Midwest indicates that the claybacked cutworms can cause economic loss in corn. They overwinter as half-grown larvae in the soil so they can get a "jump" on black cutworms when it comes to cutting each spring. Since they are larger in size earlier in the spring, this species can damage very young corn plants. So, scouting fields at plant emergence is important, even if at planting materials were used, to catch any potential problems.

Just a reminder, if you plan to tank-mix an insecticide with an herbicide for black cutworm control, it should be done at, or immediately following planting. Insecticides combined with early burn-down applications, 2-3 weeks before planting, have not provided effective control. For the most recent pheromone trap catches, be sure to check trap catches posted weekly on the University of Delaware IPM website at (<http://ag.udel.edu/extension/IPM/traps/currentbcwtraps.html>)

Timothy

Be sure to sample fields for cereal rust mite activity. As soon as fields green up, you should begin checking for cereal rust mites and the early signs of infested leaves, especially in fields with problems in past years. These mites are microscopic, so the use of a 20x-magnifying lens is necessary. If rust mites become a problem, Sevin XLR Plus still has a 24(c) label on timothy for rust mite management. The following is a link to the 24(c) label for Delaware. (<http://www.cdms.net/ldat/ld332028.pdf>). You must have this label in your possession at the time of application.

Wheat

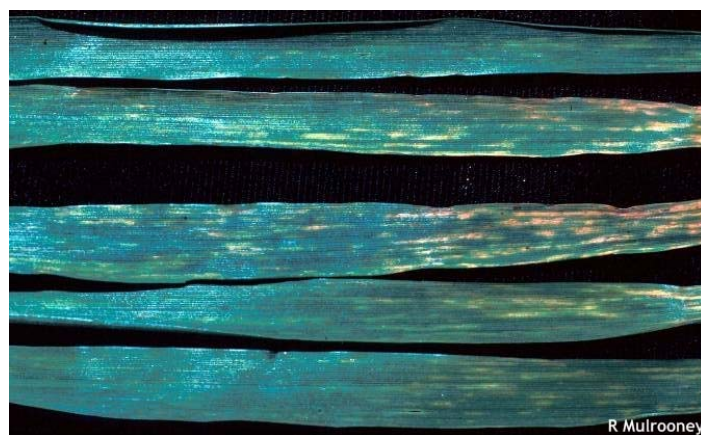
In addition to sampling for aphids, be sure to begin sampling fields for cereal leaf beetle activity. We can find evidence of adult feeding, so fields should be scouted early for the presence of egg masses. In recent years, the threshold for cereal leaf beetle has been adjusted to include sampling for eggs, especially in high management wheat fields or areas where problems were experienced the previous year. The eggs are elliptical, about 1/32 inch long, orange to yellow in color when first laid, changing to a burnt orange prior to hatching. Check our website for pictures of cereal leaf beetle adults, larvae and eggs: <http://www.udel.edu/IPM/facts/clbpictures.htm>

Generally, eggs are laid singly or in small scattered groups (end-to-end) on the upper leaf surface and parallel to the leaf veins. Cereal leaf beetle larvae are brown to black, range in size from 1/32 to 1/4 inch long, and eat streaks of tissue from the upper leaf surface. Since cereal leaf beetle populations are often unevenly distributed within the field, it is important to carefully sample fields so that you do not over or under estimate a potential problem. Eggs and small larvae should be sampled by examining 10 tillers from 10 evenly spaced locations in the field while avoiding field edges. This will result in 100 tillers (stems) per field being examined. Eggs and larvae may be found on leaves near the ground so careful examination is critical. You should also check stems at random while walking through a major portion of the field and sampling 100 stems. The treatment threshold is

25 or more eggs and/or small larvae per 100 tillers. If you are using this threshold, it is important that you wait until at least 50% are in the larval stage (i.e. after 50% egg hatch).

Scout Wheat for Diseases - Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu

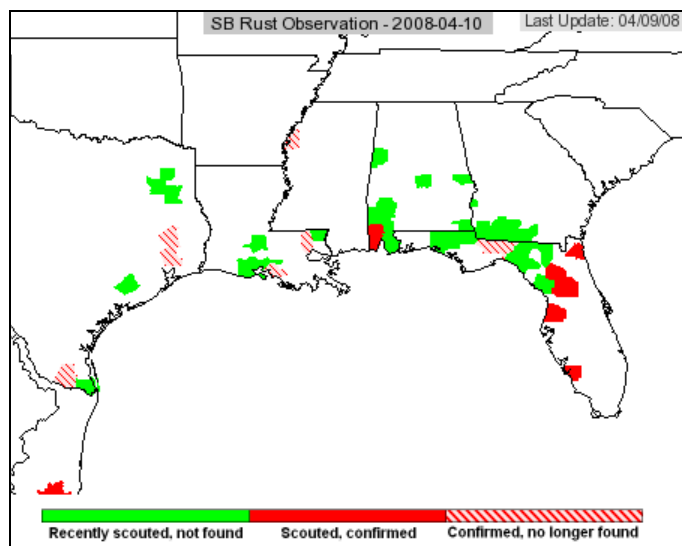
Continue scouting wheat for **powdery mildew**. The cool weather has been ideal for disease development. In cases where too much nitrogen was applied or extra carry-over from last year was not taken into consideration, resistance can be overcome. Lush wheat should definitely take priority when scouting. In areas that had good moisture in the fall keep an eye out for **wheat spindle streak mosaic virus**. This virus is vectored by a root infecting fungus that needs plenty of water in the fall when the initial infection takes place. We have had reports of it occurring but have not seen any plant samples yet in the lab. Wheat generally grows out of it once warm weather gets here and stays. Symptoms on leaves appear as yellow-green mottling, dashes, and streaks. It can occur widely in fields not just wet areas. **Wheat soil-borne mosaic virus** can often be confused with WSSMV but is generally more limited to wet spots in the field.



Wheat spindle streak mosaic virus

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

Soybean rust can no longer be detected in Louisiana, Texas, Mississippi or the panhandle of Florida. The disease is still active on kudzu in six counties in Florida as well as in at least one patch of kudzu in Mobile, Alabama. Soybean sentinel plots are beginning to be planted in some of the Gulf Coast states. Kudzu is also greening-up rapidly in this region of the country. There was some concern that soybean rust was moving farther and faster than in past seasons at this time. The recent scouting has shown that soybean rust is not as widely distributed as previously thought. The South is getting rain in many areas where kudzu is greening and growing and the potential is present for rust developing later.



Glyphosate Formulations - Mark VanGessel,
Extension Weed Specialist; mjv@udel.edu

With increased glyphosate costs and the limited availability of glyphosate this year, you may be looking to buy brands that you are not familiar with. Here are a few things to keep in mind when buying glyphosate.

There are numerous products containing glyphosate in the marketplace, but there is no consistency in how the companies report what is contained "in the jug". Glyphosate is what kills

the plant and it is an acid molecule, but it is formulated as a salt for packaging and handling. Various salt formulations include isopropylamine, diammonium, monoammonium, or potassium. Some brands include more than one salt.

Some companies report their product as acid equivalent (ae) of glyphosate acid, or some report it as active ingredient (ai) of glyphosate plus the salt, and others report both. In order to compare performance of different formulations it is critical to know how the products were formulated. Since the salt does not contribute to weed control and different salts have different weights, the acid equivalent is a more accurate method of expressing, and comparing concentrations.

Adjuvant loading refers to the amount of adjuvant already added to the glyphosate product. Fully loaded products contain all the necessary adjuvants, some contain no adjuvant system; while other products contain only a limited amount of adjuvant (minimal or partial loading) and additional surfactants must be added to the spray tank before application. Refer to product labels for specific recommendations. Most glyphosate brands recommend adding ammonium sulfate (AMS) if using hard water as a carrier or under other challenging conditions. If using AMS, always dissolve it in the spray solution before adding glyphosate.

Finally, some products will support technical service for the performance of the product and others come with no technical support. Usually the lower cost products have limited to no technical support.

So when trying to decide on which formulation of glyphosate to buy, be sure you know:

- the glyphosate concentration (how much product to add)
- adjuvant load (whether you need to add any surfactant and how much)
- whether the product will be "supported" by a technical rep of the dealer or manufacturer

Grape Hyacinth Control in No-Till Fields -
Mark VanGessel, Extension Weed Specialist;
mjv@udel.edu

Grape hyacinth has been showing up in no-till fields in Sussex County. The biggest problem is in soybeans in the fall because it interferes with harvest. It emerges in the fall and can get up to 8 to 10 inches tall and if the infestation is severe, the waxy succulent leaves will interfere with the cutter bar. We do not have a lot of experience with it at this point, but it appears that glyphosate at 1.5 times the normal rate is the best treatment. Last spring we compared glyphosate at normal and 1.5 X rates with paraquat, both tank mixed with Canopy or 2,4-D; all treatments were applied in the spring as the burndown treatment prior to planting soybeans. The treatment that provided the best grape hyacinth control in the fall was the higher rate of glyphosate, and additional herbicides did not improve control. Glyphosate in the spring was slow to kill the grape hyacinth; but in the fall, the number of stems was significantly lower and the plants were smaller. We have an ongoing project looking at the most effective method to control this emerging weed problem.



Grape hyacinth (*Muscari armeniacum*)

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

USDA April Supply/Demand Estimates

The bottom line in today's supply and demand estimates for the '07/'08 marketing year is bullish for corn, and neutral to bullish for the soybean and wheat markets.

Corn Analysis

USDA lowered the projection for ending stocks of U.S. corn by 200 million bushels from last month's estimate, now projected at 1.283 billion bushels for the '07/'08 marketing year. On the supply side beginning stocks, production, and imports were unchanged from last month projecting a total supply of 14.393 billion bushels. On the demand side, feed and residual use increased 200 million bushels; food, seed, and industrial use declined 95 million bushels; ethanol for fuel declined 100 million bushels for a change in domestic total use of 5 million bushels more than one month ago. U.S. corn exports were increased 50 million bushels.

Total use is now projected at 13.110 billion bushels.

World corn ending stocks, projected at 102.97 million metric tons (mmt), were down from 104.03 mmt in March.

Soybean Analysis

Ending stocks for U.S. soybeans were increased by 20 million bushels, now placed at 160 million bushels for the '07/'08 marketing year. On the supply side, the only change from one month ago was an increase in imports of 4 million bushels for a total domestic supply projection of 3.169 billion bushels. On the demand side, USDA increased their estimate for crushings 5 million bushels; increased exports 50 million bushels; increased seed use 6 million bushels; and decreased residual use 77 million bushels from last month's estimate. However, the residual use number might not be reliable and is to be considered suspect at this point in time. Total domestic use decreased 16 million bushels and is now placed at 3.009 billion bushels.

World soybean ending stocks projected at 49.31 mmt, up from 47.44 mmt in March.

Wheat Analysis

Ending stocks for all U.S. wheat were left unchanged at 242 million bushels. The '07/'08 supply for all wheat in the U.S. was left unchanged at 2.613 billion bushels. Demand estimates for all wheat were increased from one month ago in two categories: feed and residual use was decreased 50 million bushels (reducing domestic total use by 50 million bushels); and wheat exports were increased by 50 million bushels. The net effect is to leave total use unchanged from one month ago estimated at 2.371 billion bushels and ending stocks unchanged. Again, the feed and residual number was increased to offset the increase in the export estimate leaving room to question this change.

World wheat ending stocks are now estimated at 112.48 mmt, up from 110.4 mmt in March.

Marketing Strategy

Viewing this report as bullish for corn and neutral to bullish for soybeans and wheat runs contrarian to popular opinion. Calling the report for corn is easy. Calling the report bullish for soybeans and wheat is taking a bit of a 'leap of faith'. However, both soybeans and wheat have big reductions in their residual use categories. After calling those adjustments into question, it is my belief that those adjustments can not be explained.

Nevertheless, the primary trend in soybeans and wheat is currently down. The primary trend for corn is up.

Traders will be watching planting progress as the month progresses. The corn/soybean price ratio currently favors corn plantings. We could see a 3 to 4 million acre increase in U.S. corn acres planted over the March 31st Planting Intentions report. If that happens it would be extremely bullish for soybean prices. Currently, Dec '08 corn futures are trading at \$6.11 per bushel; Nov '08 soybeans at \$12.15 per bushel; and July '08 wheat is \$9.28 per bushel.

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

General

Center Pivot Irrigation System Maintenance

Tips - *Ian McCann, Irrigation & Water Management Specialist*; mccann@udel.edu

The UD irrigation program in Georgetown, with cooperation and support from NRCS, has evaluated the performance of over 170 center pivot irrigation systems on Delmarva. There are some problems we have observed that growers can easily correct. As we enter a new growing season, here are some suggestions:

1. Check the pressure gauge and replace if broken or missing. This is simple and cheap, but improper pressure can significantly alter the performance, particularly on systems that do not use pressure regulators.
2. Take time to ride or walk the length of the system while it is operating and replace any missing sprinklers, spray plates, plugs etc. and unplug any plugged tips. Sprinkler flow rate increases down the length of the system, and so each sprinkler is sized according to the distance from the pivot. A single plugged tip at 700 ft that causes reduced or no irrigation over a 10 ft section affects an area of 1 acre over a complete circle. The same situation at 1100 ft affects almost 1.6 acres. If replacing a sprinkler or tip, be sure to use the correct size, as we have observed that incorrectly sized sprinklers are a common source of unwanted variability.
3. It is difficult to accurately determine how uniformly a pivot system is applying water, or how much it is applying at any given timer setting. The best test involves setting out cans or rain gauges every few feet along the length of the system, as we do in the evaluation program. This gives a very accurate average and also catches any points with too little or too much water. This is not feasible for most growers, but perhaps checking the volume of water in 5-10 cans or gauges spaced along the system would

identify major problems and give an indication of the average irrigation amount at the particular timer setting. Manufacturers provide a chart that shows the irrigation amount at various timer settings. We have observed that charts are generally quite accurate on new and unaltered systems, and are built in on systems with programmable electronic panels. However, on older systems, especially if you have replaced some components or are running at different pressures, taking the time to find out if the system is putting out what you think it is can be a valuable exercise, particularly considering the rising cost of pumping water.

Announcements

Certified Pesticide Applicators Test

Wednesday, April 23, 2008 8:00 a.m. - noon
 Delaware Department of Agriculture
 2320 S. DuPont Highway, Dover, DE

For additional information got to
<http://ag.udel.edu/extension/pesticide/index.php>

Or contact Susan King swhitney@udel.edu or Larry Towle at larry.towle@state.de.us.

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

Recent Topics:

Check Timothy Fields for Rust Mite
 Getting the Best Burndown
 Controlled Traffic Systems
 Corn Planting Do's and Dont's
 Beef Quality Assurance Training
 Early Corn Planting
 More on Early Corn Planting
 Dairy - Managing with High Feed Prices
 Poultry - Electrical System Checkup
 Alternative Nutrient Sources for Crops

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of April 3 to April 9, 2008

Readings Taken from Midnight to Midnight

Rainfall:

0.25 inch: April 3
 0.36 inch: April 4
 0.09 inch: April 5
 0.47 inch: April 6
 0.02 inch: April 9

Air Temperature:

Highs Ranged from 70°F on April 4 to 45°F on April 7.

Lows Ranged from 50°F on April 5 to 29°F on April 3.

Soil Temperature:

52°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

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