



WEEKLY CROP UPDATE

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Vegetable Crops

Vegetable Crop Insects - Joanne Whalen,
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Asparagus

Be sure to check for asparagus beetles laying eggs on asparagus spears. As a general guideline, a treatment is recommended if 2% of the spears are infested with eggs. Since adults will also feed on the spears, a treatment is recommended if 5% of the plants are infested with adults.

Cabbage

Continue scouting fields for imported cabbage worm and diamondback larvae. As a general guideline, a treatment is recommended if you find 5% of the plants infested with larvae.

Peas

Be sure to sample for pea aphids on all stages of peas. 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.

Insecticide Update: Supplemental Label for Belay - Joanne Whalen, *Extension IPM Specialist*; jwhalen@udel.edu

Belay (clothianidin) - A supplemental label was recently approved by EPA. Crops included on the supplemental label include number of vegetable crops (brassicas, cucurbits, fruiting vegetables, and leafy vegetables) as well as peaches. In addition to the label on the pesticide container, you must also have a copy of the supplemental label in your possession to use Belay on these new crop additions (<http://www.cdms.net/LDat/ld8J6008.pdf>).

Hollow Heart in Watermelon - Gordon Johnson, *Extension Fruit & Vegetable Specialist*; gjohn@udel.edu

The first watermelons will be transplanted in the field the last week in April. One problem with seedless watermelons that can cause significant loss of marketable fruits is hollow heart. This interior separation of fruit storage tissue is most common on crown sets in the first harvests.

In the past, the cause for hollow heart was thought to be related to rapid growth of the fruit where the rind expanded faster than the internal flesh leading to separation of the three internal fruit compartments and an open area between. Excess nitrogen and over-watering along with favorable growing conditions were implicated in higher incidence of hollow heart.

There is growing evidence that hollow heart is not directly tied to nitrogen and water management but is related to pollination and weather conditions during pollination. Plant hormones are thought to be important in this effect. Several researchers have found no increase in hollow heart with increases in nitrogen; even in varieties known to have hollow heart problems. It is thought that with inadequate pollination, there is reduced release of the plant hormone that controls the development of storage tissue leading to hollow heart.

The first flowering and fruit set in watermelons often occurs in periods of stress with cold conditions. Cold, rainy weather during pollination will also reduce bee flights and may be a causal factor. In addition, some varieties are more susceptible to hollow heart, although hollow heart is wide spread across varieties in some years.

What can watermelon growers do to reduce hollow heart? First, it is important to choose varieties that are less prone to hollow heart for early plantings. Second, make sure that pollinizers in early plantings are in synch with the seedless varieties (there is plenty of pollen for the early sets). A higher pollenizer to seedless ratio may be warranted for the earliest plantings. Third, make sure that you have strong honey bee colonies and consider increasing colonies in the early plantings.

Weed Control for Succulent Beans - Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

There is some overlap of herbicide options for snap beans and lima beans, but you need to pay particular attention that a product is labeled for snaps or lima beans and do not assume if it is labeled for one, it is labeled for both.

Snap Beans

Weed control in snap beans starts with a good soil-applied program. The regional recommendations include Eptam, Treflan or Prowl applied pre-plant incorporated; Dual, which can be applied preemergence or pre-plant incorporated; or Command or Sandea applied

preemergence. Early postemergence treatments for broadleaf weeds include Basagran, Reflex, or Sandea. Select Max, Targa/Assure II, or Poast are labeled for postemergence grass control. UD research has seen consistent control with Dual used at planting followed by a timely (1 to 2 trifoliolate stage of the beans) application of Reflex and Basagran. If there are concerns about timely application of the postemergence herbicides, consider use of a broadleaf weed herbicide at planting.

Lima Beans

The biggest difference from snap bean herbicides is that Reflex cannot be used for lima beans since they are very sensitive to Reflex and severe injury will occur. A soil-applied herbicide program for lima beans is very important due to the lack of effective postemergence herbicides. Herbicides listed in the regional vegetable guide for lima beans include:

Pre-plant incorporated: Prowl or Treflan

Pre-plant incorporated or preemergence: Dual or Pursuit

Preemergence only: Sandea

Postemergence: Basagran or Raptor for broadleaf weeds; Select Max or Poast for grasses.

Fruit Crops

Strawberry Disease Control - Bob Mulrooney, *Extension Plant Pathologist*; bobmul@udel.edu

It won't be long before strawberry growers will need to deal with several important diseases. Here are the latest recommendations from the [2010 Commercial Vegetable Production Recommendations](#).

Anthracnose Fruit Rot

Strawberry anthracnose can be extremely destructive during warm, wet weather, causing significant fruit rot. Symptoms of anthracnose include blackish-brown circular spots on maturing green fruit and soft, sunken (flat) circular lesions on ripe fruit. On ripe fruit, lesions can expand rapidly and are often covered with a pinkish-orange spore mass. Spores are spread from infected to healthy fruit with

splashing water. Control of anthracnose always begins with a 7 to 10-day preventative spray program no later than 10% bloom and/or prior to disease development. For control apply the following combinations:

First Application

Captan (M3) at 4.0 lb 50WP/A *plus* Pristine (pyraclostrobin + boscalid, 11 + 7) at 18.5 to 23.0 oz 38WG/A

Second Application

Captan (M3) at 4.0 lb 50WP/A *plus* Abound (azoxystrobin, 11) at 6.0 to 15.5 fl. oz 2.08SC/A *or* Cabrio (pyraclostrobin, 11) at 12.0 to 14.0 oz 20EG/A

Third Application

Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

For subsequent applications, alternate:

- Captan (M3) at 4.0 lb 50WP/A *plus* Abound (azoxystrobin, 11) at 6.0 to 15.5 fl oz 2.08SC/A
- Cabrio (pyraclostrobin, 11) at 12.0 to 14.0 oz 20EG/ A *plus* captan (M3) at 4.0 lb 50WP/A
- Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

To help manage fungicide resistance development, do not make more than 2 consecutive applications of either: Pristine (pyraclostrobin + boscalid, 11 + 7), Cabrio (pyraclostrobin, 11) or Abound/Quadris (azoxystrobin, 11) before switching to another fungicide chemistry.

Botrytis (Gray Mold) and Blossom Blight

Botrytis gray mold and blossom blight can cause serious losses in strawberry plantings in high tunnels and the field if not controlled properly. Development is favored by moderate temperatures (59 to 77° F) with prolonged periods of high relative humidity and surface wetness. Control of gray mold begins with preventative fungicide applications. Apply at 5 to 10 percent bloom and every 10 days until harvest. During periods of excessive moisture, spray intervals of 5 to 7 days may be necessary. Rotate fungicide chemistries to aid fungicide resistance management.

First Application

Captan (M3) at 4.0 lb 50WP/A *plus* Topsin M (thiophanate-methyl, 1) at 1.0 lb 70WP/A

or

Switch (cyprodinil, 9) at 11.0 to 14.0 oz. 62.5WG/A

Second Application

Elevate (fenhexamid, 17 - See restrictions) at 1.1 to 1.5 lb 50WDG/A

or

Pristine (pyraclostrobin + boscalid, 11 + 7) at 18.5 to 23.0 oz. 38WG/A

Third Application

Captan (M3) at 4.0 lb 50WP/A *plus* Topsin M (thiophanate-methyl, 1) at 1.0 lb 70WP

or

Switch (cyprodinil, 9) at 11.0 to 14.0 oz. 62.5WG/A

For subsequent applications, alternate:

- Captan (M3) at 4.0 lb 50WP/A
- Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A
- Switch (cyprodinil, 9) at 11.0 to 14.0 oz. 62.5WG/A
- Pristine (pyraclostrobin + boscalid, 11 +7) at 18.5 to 23.0 oz 38 WG/A
- Thiram (M3) at 4.0 to 5.0 lb 65WSB/A

Agronomic Crops

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

Alfalfa

Continue to scout fields for both alfalfa weevil and pea aphids. Economic levels of both can be found in alfalfa fields at this time. As a general guideline, you should consider a treatment in alfalfa less than 10 inches tall if you find 40-50 aphids per stem. The treatment threshold for alfalfa 10 inches or taller in height is 75- 100 per stem. Although beneficial insects can help to crash aphid populations, cooler temperatures will slow their activity. As a general rule, you need one beneficial insect per every 50-100 aphids to help crash populations. As soon as temperatures increase, we will start to see a

significant increase in feeding damage from alfalfa weevil. As alfalfa approaches harvest, the decision to cut instead of treat may be considered. However, this option should only be used if you plan to cut shortly after you find an economic threshold level since damage can occur quickly. Cutting should only be considered as a management option if you can cut within 3-5 days of finding an economic level. As you get close to harvest, be sure to check labels carefully for time between application and harvest.

Field Corn

As soon plants emerge, be sure to check for cutworm feeding, even if an insecticide was used for cutworm control. A combination of wet conditions and the extended heavy snow cover has resulted in a higher level of slugs being found under residue in no-till fields. Although no true thresholds are available, levels of 5 or more slugs per square foot have indicated the potential for a problem from slugs.

Small Grains

Although aphid population remain low, a combination of cool temperatures followed by a quick increase in temperatures can result in a quick increase in aphid populations. In research done in VA in past years they found that small grains can tolerate a lot of feeding in the lower canopy. Since we are past the time of barley yellow dwarf transmission (fall transmission is the most important), the next important time to consider aphid management in small grains is at grain head emergence. Since aphids feeding in the heads of small grains can result in a loss in test weight, it is important to look for aphids as soon as the grain heads emerge. As a general guideline, a treatment should be considered if you find 20 aphids per head and beneficial insect activity is low. Although beneficial insects can help to crash aphid populations, cooler temperatures will slow their activity. As a general rule, you need one beneficial insect per every 50-100 aphids to help crash populations. Since barley heads have emerged, be sure to watch for the movement of aphids into grain heads. In many cases, beneficial activity is still not high enough to take care of populations moving from the lower canopy of the plants into the grain heads.

Once grain heads have emerged, you should also begin sampling small grains for grass sawfly and armyworm larvae. 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. The first small sawflies have been found in wheat and barley in Kent and Sussex counties. 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.

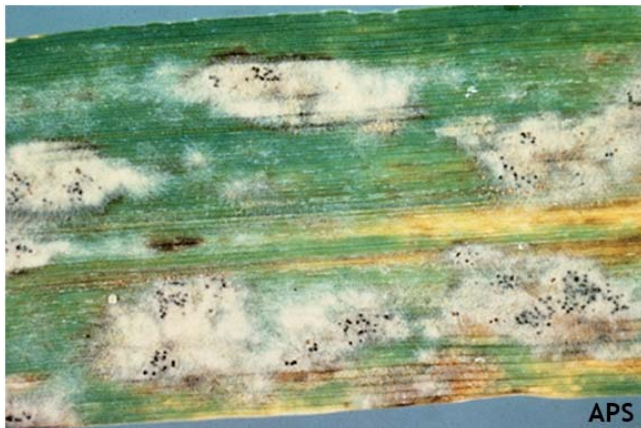
[Agronomic Crop Diseases](#) - Bob Mulrooney, Extension Plant Pathologist; bobmul@udel.edu

Wheat

The first disease of the season on wheat is usually powdery mildew. In general, powdery mildew has not been a problem for several years. Once wheat reaches jointing (Growth Stage 6) it should be scouted regularly for powdery mildew. As always, planting the highest yielding resistant varieties is the best control strategy, but if mildew threatens to rob yields later, fungicide control is the best control measure. Tilt, Propimax EC, Stratego, Quilt, Proline, and Caramba (the new Group 3 triazole from BASF) are suggested for control when and if fungicides are needed. These fungicides are also very effective for control of tan spot and Septoria leaf spot and glume blotch. It is common for powdery mildew to infect the lowest leaves and remain there for some time. The critical time to scout for powdery mildew is GS 8-10 (when the last leaf just appears until head emergence) to determine if fungicides are needed.

Barley

We have had reports of increasing amounts of powdery mildew on barley. 'Thoroughbred' looks to be the most susceptible variety but others should be scouted as well. Regionally we have no data to evaluate fungicides for control of barley diseases because barley rarely needs to be sprayed for diseases and the cost has been prohibitive. Times have changed, and if the heads are emerging and the top two leaves are infected there may be some benefit to controlling powdery mildew on a susceptible variety such as 'Thoroughbred' if the weather continues to favor powdery mildew. Stratego, Tilt, Quilt (10.5 - 14.0 oz/A) would be suggested for control if necessary. A beneficial non-target effect will be brighter straw if straw is being baled.



Powdery mildew on barley.

Soybean Cyst Nematode

It is still not too late to check for soybean cyst nematode, especially if susceptible soybeans are going to be planted. Soil test bags with the submission form can be purchased at the Extension offices. If you have a fax machine and need results quickly, test results can be sent via FAX if you provide the number on the Nematode Assay Information Sheet. This information sheet can be found on the web at the Plant Clinic Website <http://ag.udel.edu/plantclinic> .

Caution on Distinct or Overdrive for Spring Treatment of Grass Forages - Mark VanGessel, *Extension Weed Specialist*; mjv@udel.edu

UD Weed Research Program has seen significant leaf burn and stunting from use of Distinct or Overdrive on Timothy or Orchardgrass when applied in the spring during periods of rapid growth. Caution should be used with using Distinct or Overdrive prior to first cutting. Applications later in the summer appear to have greater safety on these species.

Weed Management in Summer Annual Grass Crops - Quintin Johnson, *Extension Associate, Weed Science*; quintin@udel.edu and Richard Taylor, *Extension Agronomist*; rtaylor@udel.edu

The use of summer annual grasses for supplemental forage is gaining popularity. The advantage of the summer annual grasses is that they produce abundant forage during July and August, the period when cool-season grasses decline in productivity called the "summer slump". When planted in late May or June, these grasses establish quickly, grow rapidly, have moderate to high drought tolerance, and can typically be grazed within 5 to 8 weeks of planting.

There are both common and species dependent disadvantages to the summer annual grasses. Common to all species is the fact that they usually are killed by the fall frost and will not survive the first fall freeze. The average date of the first fall frost is mid- to late-October for much of the region. By this time, cool-season grass production has increased again with the onset on cooler temperatures and fall precipitation levels. So although the death of the warm-season summer annuals can be considered a disadvantage, it is not a serious problem since pasture productivity usually has recovered by the time these summer grasses die.

Another common disadvantage is the extra production costs entailed with using annual species. The seed must be purchased each year, equipment must be rented or kept on hand to

plant the annuals, and some form of annual tillage and/or vegetation control must occur. Seed costs, however, are relative and a review of many warm-season grass species as of the date of this article shows that seed costs range from \$0.50 to \$1.25 per pound and suggested seeding rates generally between 20 and 50 lb/acre. At a 30 lb/acre seeding rate and \$0.75 per pound seed costs, annual seed cost would be under \$25/acre contrasted with a novel-endophyte tall fescue which would cost about \$150/acre but would be a long-term investment. Another mitigating factor to the cost issue is that many growers own or have access to brilliant seeders that are old enough not to be considered a large capital expense. Annual tillage or seedbed preparation and the opportunity cost associated with the land area used for the annual crop will be the biggest expenses for summer annuals versus perennial cool-season grasses.

With certain precautions outlined below, cattle can graze or be fed forage sorghum, sudangrass, sorghum-sudan hybrids, foxtail millet, hybrid pearl millet, or crabgrass. Horses can graze hybrid pearl millet or crabgrass, and teff can be used for hay then grazed before frost.

Sorghum, sudangrass, and sorghum-sudangrass hybrids contain dhurrin which can break down and release prussic acid (HCN, cyanogenic compounds). Levels can be high enough in young, drought-stressed, wilted, injured, or frosted plants to cause cyanide poisoning. Millets do not contain dhurrin or prussic acid. The concentration of dhurrin varies by species with the most in sorghums and the least in sudangrass. Grazers should not graze these species if they are less than 18 inches tall and should delay grazing until young or re-growing plants are 24 to 30 inches tall. Do not graze drought-stressed plants until they recover after sufficient rainfall (usually 4 - 5 days) or until the plants fully recover from other stresses. Frosted plants should not be grazed until the leaves are dead and completely dried down, usually about a week to ten days following a killing frost. Cyanide dissipates from properly cured hay and properly ensiled forage, making them safe to feed.

All summer annual grasses can accumulate high levels of nitrates when fertilization is followed by stress (usually drought). The potential for nitrate poisoning can be reduced by moderating nitrogen fertilizer rates, allowing stressed plants to fully recover, testing for nitrate levels before grazing, and providing supplemental low-nitrate forage when moderate to high nitrate levels are suspected. Nitrate levels are not reduced in cured hay or green chopped forage, and are only partially reduced in ensiled forage. Another management option if the nitrate levels are not excessively high is to graze the tops of the forage and leave all the lower stubble. Nitrates are highest in the stem material and are highest closest to the soil surface. If harvesting fertilized drought-stress warm-season grasses for hay, avoid harvesting the lower stems. Millet accumulates as much or more nitrate than the sorghums. Horses have been observed grazing entire hybrid pearl millet plants to within an inch or two of the soil surface, so top grazing may not work in this situation.

Weed management begins with a clean seedbed. For conventionally tilled seedbeds, tillage should occur as close to planting as possible. In no-tillage seedings, follow the label concerning how much time to allow between the use of a nonselective herbicide such as glyphosate and seeding. When possible, choose fields with few to no perennial weeds, and avoid fields with a high number of grassy weeds.

As with any cool-season forage crop, successful establishment begins with properly amended soils (pH and fertility), proper seeding rate and depth, and appropriate seeding equipment. A critical component for establishment is waiting until the soil temperature warms enough to ensure rapid seedling emergence from the seedbed. When moisture is adequate, summer annual forage grasses emerge quickly, grow fast, and compete well with weeds. There often is no need for additional weed control. However, chemical weed control can be warranted when establishment is slow, weed populations are high, potentially toxic weeds are present, or high quality (weed-free) hay or forage is desired.

Unfortunately, herbicide options for summer annual grasses are limited. Some plant growth regulator (PGR) herbicides are labeled for use

with these annual forages. Another limitation is that PGR herbicides are not recommended during the hot summer months due to their potential to injure sensitive plants with physical or vapor drift. Non-PGR herbicide options are listed in the table below. Pay particular attention to rotational crop restrictions for the preemergence herbicides (refer to label for crops not listed). Atrazine is typically not recommended due to its long rotation to other

forage crops, and should only be used if corn or sorghum will be planted in the following spring. Check herbicide labels for weeds controlled. The postemergence herbicides in this table typically control only small annual broadleaf weeds. The herbicide labels will list the maximum weed size or growth stage at which the herbicide will be effective. Often the best herbicide is that weed-free seedbed and a rapid vigorous seedling.

Table 1. Herbicide options for weed control in summer annual grasses

Herbicide	Labeled annual grasses	Timing/ weed type	Application Information			Grazing/ harvest interval	Rotation Restrictions (months)		
			Use rate /acre	Crop stage	Season maximum rate		To grasses	To small grains	To alfalfa/ clover
Atrazine ^a 4L	Forage sorghum, sorghum × sudangrass hybrid	PPI, Pre, POST/ broadleaf	3.2 to 4.0 pt (see label for details)	Up to 12 inches	5 pt	PPI or Pre = 60 days POST = 45 days	Second year	Next year to second year ^e	Second year
Callisto ^a	Pearl millet	Pre/ broadleaf	Up to 6.0 fl oz	n/a	6.0 fl oz (1 applic.)	n/a	18	4	10/18
Dual II Magnum ^{b,c}	Forage sorghum	Pre/ grass	1.0 to 1.67 pt ^d	n/a	1 applic.	n/a	Next spring	4.5	4/9
Aim ^a	Teff, crabgrass	POST/ broadleaf	0.5 to 2.0 fl oz	Any	5.9 fl oz (3 applic.)	0	0	0	12/12
Aim ^a	Millet	POST/ broadleaf	0.5 to 2.0 fl oz	Up to jointing	2.0 fl oz	7 days	0	0	12/12
Aim ^a	Forage sorghum	POST/ broadleaf	0.5 to 1.0 fl oz	Up to 6 leaf	1 fl oz	After 6 leaf	0	0	12/12
Basagran ^a	Forage sorghum	POST/ broadleaf	1.0 to 2.0 pt	Before heading	2 pt	12 days	0	0	0
Buctril ^b 2EC (for 4EC formulation cut rates in half)	Forage sorghum, sudangrass, sorghum × sudangrass hybrid	POST/ broadleaf	1 pt	3 leaf but prior to pre-boot	2 pt	45 days	1	1	1
			1.5 pt	4 leaf but prior to pre-boot					

^a Check label for adjuvant recommendations.

^b No adjuvant is recommended.

^c Requires the use of Concep-treated seed.

^d Coarse soils 1.0 to 1.33 pt/acre, medium soils 1.33 to 1.5 pt/acre, and fined soils 1.33 to 1.67 pt/acre.

^e Next year if applied before June 10 or the second year after application if applied after June 10.

Spring Forage Plantings - Richard Taylor,
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If you haven't been able to finish planting pasture and hay fields with a cool-season grass (CSG) or CSG pasture mix by now, your best shot at having a successful seeding will be to wait until late summer or early fall to plant the new field. As a temporary measure, you can choose one of the annual warm-season grasses (WSG) such as sudangrass, a sorghum-sudangrass hybrid, teff, pearl millet or pearl millet hybrid, or even one of the new forage crabgrasses to plant in the field and produce feed for grazing or hay until you are ready to plant late this summer. Crops like sudangrass or the sorghum-sudangrass hybrids are very good smother crops and will help choke out weeds and result in a cleaner seedbed later this year.

Other suggestions to consider for new spring forage plantings include waiting until you have 2 to 4 inches of top growth on the forage grass seedlings and then topdressing with about 20 to 30 pounds of nitrogen per acre. Application of nitrogen at this point will stimulate grass growth and will tend to benefit the grass that, by this time, has established a fibrous root system capable of taking up nitrogen more efficiently than the tap-rooted broadleaf weeds. Stimulating early growth of the grass seedlings will help them compete against weeds and will help establish a larger root system while soils are still cool so the grass has a better chance of surviving periods of dry weather and heat as summer begins.

If you find that the new seeding has a lot of weeds that are ahead of the grass seedlings, try clipping or mowing the area to be sure that enough sunlight reaches the grass. You may need to continue this activity for several months and especially later in the year when the weeds begin to flower and mature seed. Mowing will at least reduce the amount of weed seeds returned to the soil weed seed bank.

Finally if the new seeding is for grazing, do not start grazing too early. If you have the land resource available, use the new seeding for at least one hay crop before changing it back to support grazing animals. This helps the grass become better established with larger root

systems so that the animals do not pull new plants out of the soil. Also, keep the grazing pressure light during the first year, allowing the pasture regrowth to get 10 to 12 inches tall before beginning grazing and remove animals before they graze the pasture closer than 4 to 6 inches. The use of temporary fencing to do intensive rotational grazing is very helpful in managing new pastures and ensuring a vigorous healthy stand.

Spring Pasture Fertilization - Richard Taylor,
Extension Agronomist; rtaylor@udel.edu

While preparing to teach my Soil Fertility and Plant Nutrition course this week, I came upon some information that will be of interest to those who have pastures where they graze livestock. Most grazers are aware of the inherent springtime problem with grass tetany which is caused by low blood magnesium (Mg) levels. The rapid growth of forages in the spring plus cool, cloudy and sometimes rainy weather can restrict both root growth and transpiration in forages to the point that magnesium levels in the grass are too low for animal health.

However, another complicating factor is that we often try to stimulate early growth of pastures with nitrogen (N) fertilizer and with the blending capabilities of many fertilizer companies we can easily add in the extra potassium (K) that the soil test might suggest. Nutrients can actually be what is called antagonistic; where one or more nutrients act together to depress the uptake of another nutrient. This is the case for N and K, which if applied in too large amounts can depress further the uptake of Mg by forages in the spring. The depressed uptake of Mg then puts the grazing animals at risk for grass tetany. To avoid the possibility, hold off K applications until late May or early June since K applied at this time will be much less likely to increase the incidence of grass tetany and will improve the tolerance of the grass to the various stresses encountered during the hot summer months.

Nitrogen application in very early spring is useful in getting enough pasture growth to begin grazing a week or two earlier than you otherwise could. If the soil test indicates that soil Mg levels are low, use only a small amount of N in early

spring and wait until mid-May to apply larger amounts. This should help reduce the chance for grass tetany but still provide plenty of early season grazing.

A Few Comments on Corn and Soybean

Planting - *Richard Taylor, Extension*

Agronomist; rtaylor@udel.edu

At least here in northern Delaware, soil temperatures, as well as air temperature, remain low enough to slow corn emergence. One thing you can do to help improve emergence and speed up emergence is to carefully monitor seeding depth. Where possible try to plant corn between 1 and 1.5 inches deep to help improve the chances that the soil temperature will be above the minimum 50° F. needed for corn to germinate. If planted deeper than this when temperatures are marginal for germination, chances are emergence will occur over a fairly long period of time resulting in as much as a 2 leaf difference in the stage of growth of corn by side-dress time. A two or more leaf difference in growth stage is enough to change the younger corn plant from a yield contributor to a yield competitor, essentially making the younger corn plant the equivalent of a weed in the corn field. If planted shallower than 1 inch, the corn crown will not develop at the proper depth making it susceptible to early season environmental stresses.

Another valuable tool in helping warm the soil, especially in no-till and reduced tillage fields, is the use of row cleaners or row sweeps that will clear trash off the soil surface overtop the seed row. This will allow the sun's rays to warm the soil quickly and for the soil to dry faster, also allowing it to warm quicker. Rapid, even germination is essential for maximum yield potential.

Where you are tilling soil before planting either corn or soybeans, avoid tillage operations in the very wet areas of the field or in those fields that tend to stay wet longer in the growing season. Plant your better, well-drained fields first since these have a higher yield potential and can return higher profits to you. The ideal planting dates for maximum corn yields is between April

20 and around May 10. Your better, higher yielding fields are best planted during this time frame to improve overall farm yield averages.

For soybeans, early season planting can be a successful way to both spread out the planting season and spread out harvest season. In studies done a number of years ago we showed that group IV and V beans do best if planted the earliest, followed by group III beans that produce the best yields when planted by May 15. In any case, soil temperatures in many areas are still cold enough to warrant the use of a fungicide on the soybean seed to improve emergence. In our studies, we found that the fungicide seed treatments really helped with germination and final stand counts when planting in April. Usually by early May, soil temperatures have warmed enough to not require the seed treatment.

Another caution on both a full-season and double-crop soybean crop is to make sure the soil test potassium (K) levels are in the medium or optimum range. Although potash prices are still quite high, adequate soil test K levels are essential to maintain the soybean crops ability to tolerate stress during the growing season. If you didn't apply K to your wheat or barley crop last year and your soil test K levels are on the low side, consider adding enough K to support the soybean crop. A 40 bu/acre soybean crop removes about 90 to 100 lbs of potash (K₂O) per acre while an 80 bu/acre wheat crop will have removed about 100 to 120 lbs of potash per acre.

Grain Marketing Highlights - *Carl German,*

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Commodity Markets Caught in a Whirlwind

A volcanic eruption, allegations of fraud involving Goldman Sachs regarding the sub-prime mortgage debacle, government intervention in markets, and positive outside market forces e.g., the Dow trading over 11,000; crude prices in the 80s; and the dollar index near 81.7 have all provided volatility to the markets this week with technical signals indicating that prices could move higher in the short term.

Commercial buying continues to support the corn market as contracts have recovered most of

Monday's sharp losses. This sets up a test of last week's high at \$3.65 for the nearby May contract. Solid noncommercial buying resulted in May soybean futures closing above resistance near \$9.89, which could trigger additional technical buying. Chicago wheat futures were slightly higher with support tied to the rally in row-crops. If the nearby Chicago SRW wheat futures contract can move past last week's high at \$4.91, additional noncommercial short-covering may develop, meaning against all fundamental odds the market could bid higher in the short term.

USDA Weekly Export Sales Report for the Week Ending April 15

Pre-report estimates for weekly export sales of soybeans (combined old-crop and new-crop) ranged from 16.5 million bushels to 23.9 million bushels. The weekly report showed old-crop export sales of 11.3 million bushels, above the 4.8 million bushels needed this week to stay on pace with USDA's demand projection of 1.445 bb. Total shipments of 15.7 million bushels were also above the 8.7 million bushels needed this week. This report should be viewed as bullish.

Pre-report estimates had weekly corn export sales at 33.5 million bushels to 43.3 million bushels. The weekly report showed export sales of 58.3 million bushels, well above the 22.4 million bushels needed this week to stay on pace with USDA's demand projection of 1.9 billion bushels. Total shipments of 45.5 million bushels were above the 41.5 million bushels needed this week. This report should be viewed as bullish.

Pre-report estimates for wheat ranged between 12.9 million bushels and 18.4 million bushels. The weekly report showed total export sales of 17.1 million bushels, with old-crop sales of 6.1 million bushels below the 10.5 million bushels needed this week to stay on pace with USDA's projected 865 million bushels. Shipments of 15.9 million bushels were well below the 26.6 million bushels needed this week. This report should be viewed as bearish.

Market Strategy

Eventually, the anticipated large carry and potentially large to record large production in U.S. and world corn, soybeans, and wheat can be expected to turn these markets lower. Presently, it is important to pay attention to the

technical indicators in hopes of achieving better bids for pending sales decisions. Additionally, we are getting near the time period that seasonal rallies generally occur for corn and soybeans due to weather concerns, either real or imagined. Remember too - although it is important to try to time sales decisions, it is also important to make profitable decisions, not necessarily picking the highs or the lows of the market. That said, considering recent volatility in the markets use caution in advancing new and old crop sales. Currently, the weekly export sales report, outside market forces, and seasonality are indicating the possibility of prices turning higher in the short term. On Wednesday, May '10 corn futures closed at \$3.59; Dec '10 corn futures at \$3.87; May '10 soybean futures at \$9.95; Nov '10 soybean futures at \$9.77; May '10 SRW wheat at \$4.87; and July '10 SRW wheat futures closed at \$4.99 per bushel.

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

General

Pesticide Certification and Training Update

- *Larry Towle, Delaware Department of Agriculture*; Larry.Towle@state.de.us

You know the old saying; "Change is constant". Well the latest change coming to the pesticide certification and training program in Delaware is the movement of the pesticide applicator training manuals from the University of Delaware Cooperative Extension offices in the three counties to the Delaware Department of Agriculture office near Camden. This relocation of manuals centralizes all of the initial pesticide certification and training activities to the regulatory agency responsible for the program. The classroom training that was developed and conducted for many years, prior to administering the certification exams has been discontinued in favor of on-line training. All of the presentations that were conducted in the classroom have been placed on a University of Delaware web site and will soon be moved to the Delaware Department of Agriculture web site. The new format will

allow pesticide applicators to access the training on their own schedule. Recertification training will continue to be conducted by the University of Delaware Cooperative Extension Service specialists and agents, trade associations, consultants and vendors in the pesticide industry. Programs that have been approved for recertification credits can be found on the DDA Pesticide Section web site at:

<http://www.kellysolutions.com/de/Applicators/Courses/courseindex.htm>.

If you have any questions, please contact Larry Towle at the Delaware Department of Agriculture by email at Larry.Towle@state.de.us, or by phone at 302-698-4569.

Announcements

Is It Arthritis or...Is It Lyme Disease? Arthritis and Farming Workshop

Friday, April 30, 2010 7:30 a.m. – noon

MAC Center
909 Progress Circle
Salisbury, MD

Expert Speakers

Medical, arthritis and technology experts and a physical therapist.

Keynote Speaker:

Amber Wolfe with Indiana Arthritis Foundation and National AgrAbility Project

Health Screenings & Health Fair

Bone Density, Balance, Blood Pressure, Skin, Flexibility and more...

Lunch Provided

Please pre-register by calling the Wicomico Extension Office at (410) 749-6141 or AgrAbility toll free number at 877-204-FARM.

Planning Partners:

Mid-Atlantic AgrAbility Project
Wicomico County Extension
MAC Center
Health South

Weather Summary

Carvel Research and Education Center Georgetown, DE

Week of April 15 to April 21, 2010

Readings Taken from Midnight to Midnight

Rainfall:

0.15 inch: April 21

Air Temperature:

Highs ranged from 84°F on April 16 to 57°F on April 18.

Lows ranged from 53°F on April 16 to 37°F on April 20.

Soil Temperature:

58.7°F average

Additional Delaware weather data is available at http://www.deos.udel.edu/monthly_retrieval.html and <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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