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Ag Questions

Getting Your Ag Questions Answered

- When you contact the extension office at 302-856-7303, be sure to let the secretary know you need assistance with an Ag question. As many of you know, Derby Walker is retired, but has been working part-time with us until his position is filled. We anticipate his replacement being on board with us by early fall. Until then, Derby will answer calls when he is in the office. In his absence, your calls will be directed to the Production Ag staff that is covering the Ag calls that day.

- Or you can call the Ag extension cell phone at 302-542-1857 and whoever is covering the calls will respond to your call.

Asian Soybean Rust

Soybean Rust Update

Soybean rust is showing up down south in sentinel plots in AL, GA, and FL. This was predicted to happen from Tropical Storm Cindy. Early last week, soybean rust activity had increased with three new finds on soybeans in sentinel plots in Georgia, southern Mississippi, and another county in Florida. All three sites had moderate incidence, but low severity. The epidemic is still low and we are waiting to see what effect Hurricane Dennis may have had in distributing rust in the South.

While spores have been found in spore traps in several southern states, infection of plants has not occurred at detectable levels yet. All this means that it is still too early to begin fungicide applications in DE for soybean rust control.

We still need to be looking here in DE. The DE survey crew has been scouting 50 plots throughout the state once a week. The Delaware Department of Agriculture has supervised this effort and the survey staff was
trained by Extension Specialists on soybean rust, as well as soybean aphid identification. This information is being posted on the national soybean rust website for our use, as well as others around the country. For a map of the sites being surveyed follow this link: http://www.rec.udel.edu/update05/SBRsentinalMap.pdf

**Soybean Rust Information and Resources**

- For local information, go to the national website at [http://www.sbrusa.net/](http://www.sbrusa.net/). Click on the State Update Map on the right side of the site and when it appears click DE on the map. Recent observations, management, forecast outlook, scouting recommendations, scouting techniques, and additional documents are listed there. To keep up with the predictions, click in the green SBR Forecast box on the home page. It is being updated daily.

- A toll-free 800 number is in place for DE and MD with a message that will be updated on an “as-needed basis”. The number is 1-866-234-1347. This is a short recorded message giving updated information on where soybean rust has been found.

- Additional information on soybean rust identification, spraying strategies, forecasting and mapping, fungicides, and a list of links can be accessed from the University of Delaware Cooperative Extension website at: [http://ag.udel.edu/extension/pdc/soybeanRustResources.htm](http://ag.udel.edu/extension/pdc/soybeanRustResources.htm) or contact the Sussex County Extension office at 302-856-7303 for copies.

- If you suspect Asian soybean rust, contact the extension office at 302-856-7303 for identification. For samples taken on weekends, contact the following cell phone number (302-542-1857) to make arrangements for sample submission.

**Fungicides for Soybean Rust Management**

See the attached table for Section 3 and Section 18 fungicide products approved for soybean rust management in DE.

**Recommendations on Spraying for Soybean Rust with Ground Sprayers**

The following recommendations were provided by Ray Kaczmarczyk, Application Technology Engineer for DuPont Crop Protection, at the Soybean Rust Sprayer Clinic meetings in June.

- **Nozzle type** - Spraying Systems Twin Jet, Turbo Tee Duo, and Hypro Twin Cap (tip opening depends on spray volume, pressure, etc.)
- **Nozzle spacing** - no more than 20", closer is better
- **Nozzle angle** - 80° or higher
- **Droplet size** - medium is best
- **Pressure** – 40 to 80 PSI
- **Spray volume** – 15 to 20 gal/A
- **Boom height** – 8” to 12” above the crop
- **Speed** - Whatever works for you. Slower is better, but you have to get the acres sprayed too.

**Soybeans ..........................................................**

**Recently Diagnosed Issues**

Farmers and consultants have been very good in looking for soybean problems. As such, we've been getting a lot of samples looking for Asian soybean rust. Of course, there has been no rust in the area yet, but we have seen Septoria brown spot, downy mildew, manganese deficiency, and cyst nematodes. These problems can sometimes appear similar to soybean rust. Septoria affects lower leaves first with symptoms of irregular-shaped yellow-brown specks. Infected leaves yellow and drop. With downy mildew, yellow to brown lesions occur on the upper soybean leaves and fuzzy gray tufts can be observed on the leaf underside. Manganese deficiency can also be confused with rust due to interveinal chlorosis
and red speckling on the leaves. With soybean cyst nematodes, you see varying symptoms that include: stunting, interveinal chlorosis, yellow margins (potash deficiency), spots in fields (usually elongated with the tillage), and cysts on roots.

**Soybean Herbicide Injury**

A couple common herbicide injuries on soybeans have been observed recently. With some soybeans under stress due to the hot weather, there has been some yellowing or whitening of soybean leaves from glyphosate applications. There has also been some growth regulator injury observed from products containing dicamba. The injury most likely occurred from the volatilization of dicamba due to the recent high temperatures and high humidity. Typical dicamba injury produces upper leaves that are darker green in color, puckered, and stretched. There is a great deal of variety sensitivity to dicamba and 2,4-D, where some varieties actually show yield increase, some show no yield difference, and some show decreased yield.

Since you are out looking at your fields in the cooler times of the day, don’t forget to get any new weeds identified that you may come across. There are some weeds that you would want to control before they get established in your field or on your farm. By getting the weeds identified, you can control them now and be aware of them when you are harvesting to keep from spreading from field to field or farm to farm.

**Insects** ................................................

**Soybeans (Joanne Whalen)**

Continue to scout fields for green cloverworm, grasshoppers and Japanese beetles. Japanese beetles and grasshoppers continue to be the predominant defoliators. At the prebloom stage, controls may be needed if you find 30% defoliation. This threshold decreases to 15% defoliation during the bloom and pod-fill stages.

Be sure to continue to check fields for spider mites. A treatment is recommended if you find 20-30 mites per leaflet or 10% of plants with 1/3 or more leaf area damaged.

Be sure to also scout fields on a weekly basis for soybean aphids. The action threshold – developed in the Midwest - is an average of 250 aphids per plant on plants sampled throughout the field. Spraying at or beyond R6 has not been documented to increase yield.

**Alfalfa and Clovers (Derby Walker)**

Growers of alfalfas and clovers need to be aware of increasing numbers of blister beetles. Hay must be clean of blister beetles to be fed to livestock. It is very important to manage your cuttings so that beetles are not trapped in the hay. Blister beetle contaminated hay is almost always the result of beetles being crushed prior to baling. Cutting without using crimpers and avoiding wheel traffic on freshly cut alfalfa are two of the best ways to avoid problems. For more information on avoiding blister beetle contamination, as well as guidelines for alfalfa sampling and thresholds, access the following websites:

- [http://osuextra.okstate.edu/pdfs/F-2072web.pdf](http://osuextra.okstate.edu/pdfs/F-2072web.pdf)
- [http://www.udel.edu/IPM/fcindex.html](http://www.udel.edu/IPM/fcindex.html)

**Irrigation Management** ..............................

Fuel bills are high, so there is a need to maximize the efficiency of your water applications to keep fuel costs down, but still maximize yields. This can be accomplished by timing, number of applications, and ending the irrigation when corn and beans will no longer respond to the water.

**Soybean Irrigation (Richard W. Taylor and Bob Uniatowski)**

With double-cropped soybeans in the ground and full-season beans closing the canopy or beginning to bloom, it’s time to consider how to irrigate beans. Full-season beans yield best if
not irrigated early unless severely impacted by drought, soil-applied herbicides need moisture for activation, or moisture is required for germination and emergence. But, about this time of year when the beans begin to bloom, it is time to begin irrigation on full-season beans. The beans are probably using about 1/4 inch of water per day and this will rapidly increase to about 1/3 of an inch per day. Irrigation should raise the soil moisture to near field capacity throughout the rooting depth and then replace the amount of soil moisture loss to evapotranspiration until about the R7 growth stage (physiological maturity designated by at least one pod on the main stem turning to the mature pod color).

For double-crop soybeans, irrigation should begin immediately after planting and continue until the R7 growth stage. In most situations, the soil is quite dry when double-cropped beans are planted so be sure to apply adequate water early in their growth to rewet the deeper soil layers. This will provide the beans with an extra cushion if you experience a long period of very dry, hot weather.

Corn Irrigation (Richard W. Taylor)

For those growers irrigating corn, irrigation procedures should be monitored closely from now through the end of the season. At the soft dough to early dent growth stage, the amount of water used by the crop per day has begun to decline rapidly from the maximum daily use rate of about a third of an inch per day. This is especially true for short-season corn hybrids. To facilitate drydown in corn for early harvest, the frequency of irrigation and amount of irrigation applied per week needs to be reduced as the water use rate of corn declines. In many cases, especially for the short-season hybrids, the degree of maturity combined with field capacity throughout the rooting depth of the corn means that it is time to cease irrigation altogether. Keep adequate moisture on corn up to the black layer. No matter which type of hybrid you have, take a look at the water-use rate curves available in our Cooperative Bulletin No. 13 entitled “Irrigated Corn Production: A Guide to Profitable High Yields”. These curves can help you plan the rest of the irrigation season for long-season hybrids.

Fungicide Applications Through Irrigation Systems (Bob Mulrooney)

Some growers have been asking about applying Quadris, Quilt or Headline through their irrigation systems for disease control in field corn. I have checked around and this is what I learned from different sources. All three labels allow for application through irrigation systems and have good information on how to do it and the precautions to prevent water source contamination, drift issues, etc. Be sure to read the labels. Avoid drift of Quadris or Quilt to apple trees (see label for more specifics). The most critical point seems to be that the fungicide has to be applied in 0.5 inch of water/A (13,577 gal/A) or less. Less is better, more like 0.2 inch. More water than this reduces the efficacy of the products. You do not want the fungicide on the ground. Coverage is usually very good so no adjuvants are needed. The important thing is to get the product on the ear leaf and above, so if your system has drops, reverse them to cover the top of the plants. Any nozzling system that would produce good coverage of the plants as in a conventional spray application would be suggested. These fungicides do not move down the plant systemically so you have to get the ear leaf and the leaves above treated. As far as rates go, the minimum for Quadris or Headline would be 6 fl. oz/A. If you can apply that low amount of water and have the right pump and the equipment to do it, it can be done successfully. Growers should note that this is not the same as fertigation. Fertigation application rates would be too high for effective fungicide performance from what I can determine. Unless you have experience and the right equipment it might be better to apply these fungicides conventionally either by air or ground. BASF reports that growers in Nebraska and Kansas have been successful in making applications through the irrigation
systems on a number of crops. Potato growers out West have also been doing it for years. The chemical company technical reps will have good information for growers as well.

**Note from Derby Walker:** Even though you can successfully apply some fungicides through the system, the key is having your system designed to do this. You must have the right nozzle set-up, be able to apply the right amount of water in an evenly distributed pattern, plus have all the safety equipment required on the irrigation system to apply pesticides. Many systems are not adequately set-up to apply pesticides through them or have neighbor issues, especially if you are putting an insecticide in the mix. Neighbor issues would include irrigating into other properties (yards and roads), and ditches, etc.

**Wheat** .................................................................

**Germination Test for Saved Seed**

If you are saving your own wheat and barley, a seed germination test needs to be done. This can be done by the Delaware Department of Agriculture (DDA) for a small fee. You will need about a pint of seed, your name, address, telephone number, variety, plus payment for running the test. Call the DDA toll-free number (1-800-282-8685) for more information and ask for the seed lab.

**Small Grain Variety Trials 2005**

Small grain variety trial data will be available within the next two weeks at the extension office and on the web at: [http://ag.udel.edu/extension/information/varietytrials/index.html](http://ag.udel.edu/extension/information/varietytrials/index.html)

**Check Your Soil pH**

Issues with soil pH being low or high has been a prominent problem this year. As a result, we have seen both deficiencies and toxicities in corn and soybeans. With the above average rainfall that has occurred in the last couple of years, those on a 2 or 3 year liming program may want to consider checking their soil pH, in particular those who plan on planting small grains this fall. Either work with your crop consultant or get a soil testing bag from the UD extension office.

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