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Ag News

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Off the Top...

Wheat Situation April 23, 2014

- Disease**

Most of the wheat I have looked at is between the flag leaf being visible and boot stage. I have not seen much disease up to now but this growth stage is a good time to decide if you want to apply a Fungicide. Page 6. has a list of fungicides and their performance ratings for different cereal diseases. Another critical time will be once our wheat heads and starts to flower or pollinate, this will be when wheat is most susceptible to head scab infection. Below I have provided some website links to help you make management decisions for your wheat crop.

Information about these fungicides can be found online at:

<http://www.smallgrains.ncsu.edu/Pubs/Xtrn/FungicideTable.pdf>

Information about optimal sprayer setup for head scab management can be found for ground and air applicators at:

<http://www.smallgrains.ncsu.edu>

Information about head scab identification and management can be found at:

<http://www.smallgrains.ncsu.edu/head-scab.ht>

The scab forecasting website can be viewed at:

<http://www.wheatcab.psu.edu>

- **Insects on Wheat**

To this point I have only seen a few cereal leaf beetle larvae and a few aphids, nothing major. I have included the scouting, threshold and treatment information for the cereal leaf beetle. Just in case populations start to increase see pages 2 & 3.

Cotton Planting Information

During winter meetings, many of you signed up to receive text messaging from me. This year will be a trial run to send out DD-60 information based on weather forecast. We will continue to use the Hot Line, too, but it may not be updated daily. This information is not intended to be the “gospel” but a tool to assist you in your cotton planting decisions. You are the one who best knows your soil conditions and how many planting days you need to get your cotton crop planted in a timely fashion. I have included information on page 4 discussing things to consider when making cotton-planting decisions.

- **Commercial Pesticide Credits**

May 8, 2014 – 6 pm – 8 pm in the J W Faison Building Auditorium, we will offer 2 hours of pesticide credits for private, landscaping, right of way, dealer, research and demonstration (X, L, H, D, N).

August 26, 2014 – 10 am - 12 Noon; 1 pm – 3 pm in the J W Faison Building Auditorium, we will offer 2 hours of pesticide credits “X” and commercial for each class.

CEREAL LEAF BEETLE...

Cereal leaf beetle’s preferred small grain hosts are wheat, oats, and barley, although they will feed on corn, wild grasses and all other cereals.

Life Cycle...

Adult beetles are about 3/16-inch long and have metallic looking, bluish-black heads and wing covers. The legs and front segments of the thorax are rust-red. Eggs are elliptical, about 1/32 of an inch long, and yellow when nearly laid, but later become darker to orange-brown and finally black before hatching. Most often the eggs are laid singly or end-to-end in short chains on the upper leaf surface between, and aligned with, the leaf veins. Larvae (pictured here) are slug-like and have yellowish bodies with heads and legs that are brownish-black. However, body coloration is usually obscured by a black globule of mucus and fecal matter held on the body, giving the larvae a shiny black, wet appearance. Larvae develop in 10 to 12 days.



Yield reductions of 10 to 20 percent are typical in infested commercial fields. Yield reductions of 45 percent have been observed when defoliation was near 100 percent and the damage occurred early in the heading period.

Scouting Method...

* Take samples at a minimum of 10 random sites in the interior of the field (avoid the edges). At each site, examine 10 stems for eggs and larvae. This will result in 100 stems per field being

examined.

- * Eggs may be on the leaves near the ground. Record the number of eggs and larvae counted at each sample site and then calculate the total number of eggs and larvae found in the field.
- * If there are more eggs than larvae, scout again in five to seven days. This is important because egg mortality can be very high. A large number of eggs do not necessarily mean there will be a high larvae population.
- * If there are more larvae than eggs, there is no need to scout again. A decision about applying an insecticide for cereal leaf beetle control can now be made.

Threshold...

When the scouting results show that there are more larvae than eggs, peak egg laying has passed and it is the correct time to use the spray threshold. If there are 25 or more eggs plus larvae on 100 stems the threshold has been met.

Cereal leaf beetle is easily controlled with low rates of many insecticides if they are applied when the threshold is met. Because only one-generation hatches per year, if insecticides are applied based on the thresholds, one application will give adequate management.

Insecticides labeled for cereal leaf beetle management

CEREAL LEAF BEETLE	beta-cyfluthrin, MOA 3 (Baythroid XL) 1.0 EC	1.0 to 1.8 fl oz	12	7 (forage) 30 (harvest)	Use where beetle eggs/larvae are above threshold. Application of insecticide with topdress fertilizer for preventative control is not advised. Lower rates should only be used where population densities are above threshold, but moderate.
	carbaryl, MOA 1A (Sevin XLR Plus) 4 EC	1 pt	24	21	
	chlorpyrifos, MOA 1B + lambda-cyhalothrin, MOA 3 (Cobalt Advanced) 75 WG	11 to 25 fl oz	24	30	
	cyfluthrin, MOA 3 (Tombstone) 1.0 EC	1.0 to 1.8 fl oz	12	30	
	gamma-cyhalothrin, MOA 3 (Dedare) 1.25 EC	1.02 to 1.54 oz	24	30	
	lambda-cyhalothrin, MOA 3 (Karate, Lambda-cyhalothrin, Silencer) 1.0 EC (Warrior II and Karate Z) 2.08	2.58 fl oz 1.92 fl oz	24	30 30	
	methomyl, MOA 1A (Lannate) 2.4 LV (Lannate) 90 SP	1 to 2 pt 0.25 to 0.5 lb	48	7 7	
	zeta-cypermethrin, MOA 3 (Mustang Max) 0.8 EC	1.6 to 4.0 fl oz	12	14	



Celebrating 100 Years of Cooperative Extension!

Cotton Planting 2014...

Take time to find out the cool germ on the different lots of cottonseed you plan to plant this year.



In cotton there are two common germination tests, standard germination and cool germination. Standard germination results are reported on the seed tag. Standard germination tests are conducted at 86 degrees F for sixteen hours per day and 68 degrees F for 8 hours per day. In North Carolina it is highly unlikely that all of the cottonseed you plant will benefit from these close to ideal conditions.

The test that is of more practical value to growers in North Carolina is the cool germination test often referred to as “cool germ”. Cool germ tests are not reported on the seed tag. The seed companies run this test on all seed and the dealer or distributor usually has this information. If not, the value can be obtained by calling the seed company with the lot number of the seed. NCDCA can run cool germ tests on your seed if needed.



What is considered to be “good” cool germ results? Being aware of the cool germ results is probably more important than what is actually a good or bad cool germ. As long as you are aware of the cool germ values for a given seed lot you can plan accordingly. A somewhat arbitrary division of cool germination values follows in Table 1.

Table 1. Cool germinations ratings.

Cool germ value	Rating-Comments
Under 50	Bad – most companies would not sell the seed
50-65	Acceptable – use special care with this seed*
65-80	Good
Over 80	Superior

*What is meant by using special care with this seed?

There are several things a grower can do to make it likely that this type of seed (cool germ 50-65%) will produce an acceptable stand:

1. Do not plant during cool periods.

Cool temperatures can be especially detrimental during the first two days after planting. The DD60 forecast for the five days following planting is the best indicator we have of planting conditions. The table below offers guidelines as to the relationship between DD60's and planting conditions.

2. Do not plant too deep. This is especially critical on our Coastal plain soils that tend to crust.

3. Do not use low-end seeding rates for a given soil type to save money on biotechnology fees.

4. Consider protecting the seed with in-furrow fungicides especially if the field has a history of seedling disease or is wet natured. This is especially true if planting under less than ideal temperatures.

Table 2. The relationship between DD60's and planting conditions.

(Adapted from Deltapine Cotton Management (Guide))

DD60's accumulation in the 5 days following planting	Planting Conditions
Less than 10	Very Poor
11 to 15	Marginal
16 to 25	Adequate
Greater than 25	Very Good

Cotton seedlings are particularly susceptible to cool weather when they first take up water (imbibe) and the 2 days following imbibition.

Soybean Planting Date...

Information taken from Virginia Cooperative Extension Soybean Update By: Pat Phillips, Extension Plant Pathologist and David Holshouser, Extension Agronomist

The optimum time for planting soybeans is usually from mid-May to early June, but soybeans can be planted earlier. Soybeans will emerge when average soil temperature (at 3-inch depth) is 55°F. However, if planted in early April, one risks late frosts and freezes that may injure the crop. Regardless of frost concerns, if temperatures are forecast to average less than 55°F, planting should be delayed or one risks poor emergence.

Keep in mind that soybean germination and emergence will be slowed when soil temperatures are below 65°F. They will germinate and emerge, but it could take 2 to 3 weeks. The longer a swelled or germinated seed remains in the soil un-emerged, the more likely it will be attacked by disease. Also keep in mind that non-rotated fields will have a higher risk of disease than fields in rotation with other crops. So, planting good quality seed into rotated, warm soils is a primary line of defense.

Listed below are some other good management practices:

1. Check the warm germination on all seed. Seed having a warm germination level below 70% should be exchanged for better seed. Plant your best seed (85% or higher) in early plantings that may be subjected to soil temperatures below 70°F, and follow with lower germ seed in plantings that are made in later full season plantings and double crop plantings when soil temperatures are warmer (75°F or above). Seed with germination levels below 75% should be re-cleaned and retested with the hope of removing poor quality seed.
2. Depth of planting is important and needs to be about 0.75 to 1 inch and into sufficient moisture for seed to swell and germinate. Sometimes 0.5 inch is deep enough for no-till soils, which generally have better at-planting soil moisture. Planting deeper is risky, especially if heavy rainfall follows and creates a hard crust that hampers seedlings emergence. **Quick emergence is a key to avoiding seeding disease.**
3. Soybean should be planted in soils that are 65°F or warmer, and the forecast calls for stable or warmer temperatures over the next 7 days. A good source of medium range forecasts can be obtained at www.weather.com. Be sure to enter your location to obtain the regional forecasts.
4. Seed with germination levels between 70% and 85% germination may benefit from applications of seed treatment, especially if planted in soils with high moisture and temperatures below 70°F during the period of 5 to 7 days before emergence. Read and follow label directions on seed treatments before planting.
5. An important factor in achieving a good stand is to plant in periods that soybeans are likely to emerge quickly (i.e. warm, moist soil, and proper depth). The warm germ of seed is also an important determinant since it directly relates to the vigor of seedlings in soil.

Ask Yourself Can I Do Better?

This is the time of year when we start getting calls about spray drift from agricultural activities being carried off the targeted spray site to adjoining properties. Most complaints involve homeowners or garden enthusiasts claiming injury or loss of desirable vegetation that was growing close by an agricultural field. Keep in mind some vegetation can be very sensitive to certain chemicals. A classic agriculture example would be 2,4 -D drift onto an adjacent cotton field or round-up on tomatoes. In the tomatoes case it takes a long time for the plant to become productive again if it don't die. Below are a few spray drift tips.

- Drift potential usually increases with increasing wind speed.
- However, many factors (droplet size and boom height) can influence drift.
- The effects of wind are reduced if small droplets are minimized and the application is made at the proper height.
- Try to avoid spraying in winds above 10 mph.

Management of Small Grain Diseases Fungicide Efficacy for Control of Wheat Diseases (Revised 4-8-14)

The North Central Regional Committee on Management of Small Grain Diseases (NCERA-184) has developed the following information on fungicide efficacy for control of certain foliar diseases of wheat for use by the grain production industry in the U.S. Efficacy ratings for each fungicide listed in the table were determined by field testing the materials over multiple years and locations by the members of the committee. Efficacy is based on proper application timing to achieve optimum effectiveness of the fungicide as determined by labeled instructions and overall level of disease in the field at the time of application. Differences in efficacy among fungicide products were determined by direct comparisons among products in field tests and are based on a single application of the labeled rate as listed in the table. Table includes most widely marketed products, and is not intended to be a list of all labeled products.

Efficacy of fungicides for wheat disease control based on appropriate application timing

Fungicide(s)		Rate/A (fl. oz)	Powdery mildew	Stagonospora leaf/gleume blotch	Septoria leaf blotch	Tan spot	Stripe rust	Leaf rust	Stem rust	Head scab	Harvest Restriction
Strobilurin	Picoxystrobin 22.5%	Aproach SC	6.0 - 12	G ¹	--	VG	VG	E ²	VG	NR	Feekes 10.5 and 45 days
	Fluoxastrobin 40.3%	Evyto 480 SC	2.0 - 4.0	G	--	VG	--	VG	--	NL	Feekes 10.5 and 40 days
	Pyraclostrobin 23.6%	Headline SC	6.0 - 9.0	G	VG	VG	E	E ²	E	NL	Feekes 10.5
	Metconazole 8.6%	Caramba 0.75 SL	10.0 - 17.0	VG	VG	--	VG	E	E	G	30 days
Triazole	Propiconazole 41.8%	Tilt 3.6 EC ³	4.0	VG	VG	VG	VG	VG	VG	P	Feekes 10.5
	Prothioconazole 41%	Proline 480 SC	5.0 - 5.7	--	VG	VG	--	VG	VG	G	30 days
	Tebuconazole 38.7%	Folicur 3.6 F ³	4.0	G	VG	VG	VG	E	E	F	30 days
	Prothioconazole 19%	Prosaro 421 SC	6.5 - 8.2	G	VG	VG	VG	E	E	G	30 days
	Metconazole 7.4%	TwinLine 1.75 EC	7.0 - 9.0	G	VG	VG	E	E	VG	NL	Feekes 10.5
	Fluxapyroxad 14.3%	Priaxor	4.0 - 8.0	G	VG	VG	E	VG	G	NL	Feekes 10.5
	Pyraclostrobin 28.6%	Quilt 200 SC ³	10.5 - 14.0	VG	VG	VG	E	E	VG	NL	Feekes 10.5
	Propiconazole 11.7%	Quilt Xcel 2.2 SE	10.5 - 14.0	VG	VG	VG	E	E	VG	NL	Feekes 10.5
Mixed modes of action ⁴	Azoxystrobin 13.5%	Stratego YLD	4.0	G	VG	VG	VG	VG	VG	NL	Feekes 10.5 and 35 days
	Prothioconazole 10.8%	Approach Prima SC	3.4-6.8	G	--	VG	VG	E	--	NR	45 days

¹Efficacy categories: NL=Not Labeled; NR=Not Recommended; P=Poor; F=Fair; G=Good; VG=Very Good; E=Excellent; -- = Insufficient data to make statement about efficacy of this product.

²Efficacy may be significantly reduced if solo strobilurin products are applied after stripe rust infection has occurred.

³Multiple generic products containing the same active ingredients also may be labeled in some states. Products including tebuconazole include: Embrace, Monsoon, Muscle 3.6 F, Onset, Orius 3.6 F, Tebucon 3.6 F, Tebustor 3.6 F, Tebuzol 3.6 F, Tegrol, and Toledo. Products containing propiconazole include: Bumper 41.8 EC, Fitness, Propiconazole E-A-G, and Proplimax 3.6 EC. Products containing propiconazole + azoxystrobin include: Avaris 200 SC.

⁴Products with mixed modes of action generally combine triazole and strobilurin active ingredients. Priaxor is an exception to this general statement and combines carboxamide and strobilurin active ingredients.