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# Ag News

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The mention of brand names does not imply  
endorsement, nor discrimination against similar  
products not listed. Users are responsible for  
complying with regulations and label instructions.

## Off the Top...

### Wheat Situation April 20, 2016

#### • Disease

Most of the wheat I have looked at is  
between head emergence and the boot stage.  
I have seen just a few fields that have  
enough powdery mildew to warrant a  
fungicide application. This growth stage is a  
good time to decide if you want to apply a  
fungicide. Page 4 has a list of fungicides and  
their performance ratings for different cereal  
diseases. Another critical time will be once  
our wheat is heading 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://msue.anr.msu.edu/uploads/files/Agriculture/4-23\\_fungicide\\_table\\_2015\\_MARTIN.pdf](http://msue.anr.msu.edu/uploads/files/Agriculture/4-23_fungicide_table_2015_MARTIN.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.html>

The scab forecasting website can be viewed  
at:  
<http://www.wheatscab.psu.edu>

- **Freeze Injury**

I have checked several fields for freeze injury and have yet to find any damage. This does not mean some fields did not experience freeze injury. Here is a link to show what damage would look like at the different stages of wheat growth:

<http://varietytesting.tamu.edu/wheat/docs/Wheat%20Freeze%20Injury%20in%20Texas%20-%20Final.pdf>

## Cotton Planting Information

During winter meetings, many of you signed up to receive text messaging from me. This year we will send out DD-60 information based on weather forecast. 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 the information below discussing things to consider when making cotton-planting decisions.

## Cotton Planting 2016...

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. NCDA 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 Soybeans 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](http://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.

## Management of Small Grain Diseases

### Fungicide Efficacy for Control of Wheat Diseases (2015)

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)												
Class	Active ingredient	Product	Rate/A (fl. oz)	Powdery mildew	Stagonospora leaf/glume blotch	Septoria leaf blotch	Tan spot	Stripe rust	Leaf rust	Stem rust	Head scab	Harvest Restriction
Strobilurin	Picoxystrobin 22.5%	Approach SC	6.0 - 12	G <sup>1</sup>	--	VG <sup>2</sup>	VG	E <sup>3</sup>	VG	VG	NL	Feekes 10.5
	Fluoxastrobin 40.3%	Evito 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 <sup>2</sup>	VG <sup>2</sup>	E	E <sup>3</sup>	E	G	NL	Feekes 10.5
	Metconazole 8.6%	Caramba 0.75 SL	10.0 - 17.0	VG	VG	--	VG	E	E	E	G	30 days
Triazole	Propiconazole 41.8%	Tilt 3.6 EC <sup>4</sup>	4.0	VG	VG	VG	VG	VG	VG	VG	P	Feekes 10.5
	Prothioconazole 41%	Proline 480 SC	5.0 - 5.7	--	VG	VG	VG	VG	VG	VG	G	30 days
	Tebuconazole 38.7%	Folicur 3.6 F <sup>4</sup>	4.0	NL	NL	NL	NL	E	E	E	F	30 days
	Prothioconazole 19% Tebuconazole 19%	Prosaro 421 SC	6.5 - 8.2	G	VG	VG	VG	E	E	E	G	30 days
Mixed modes of action <sup>5</sup>	Metconazole 7.4% Pyraclostrobin 12%	TwinLine 1.75 EC	7.0 – 9.0	G	VG	VG	E	E	E	VG	NL	Feekes 10.5
	Fluxapyroxad 14.3% Pyraclostrobin 28.6%	Priaxor	4.0 - 8.0	G	VG	VG	E	VG	VG	G	NL	Feekes 10.5
	Propiconazole 11.7% Azoxystrobin 13.5%	Quilt Xcel 2.2 SE <sup>4</sup>	10.5 - 14.0	VG	VG	VG	VG	E	E	VG	NL	Feekes 10.5
	Prothioconazole 10.8% Trifloxystrobin 32.3%	Stratego YLD	4.0	G	VG	VG	VG	VG	VG	VG	NL	Feekes 10.5 35 days
	Cyproconazole 7.17% Picoxystrobin 17.94%	Approach Prima SC	3.4-6.8	VG	--	VG	VG	E	VG	--	NR	45 days

<sup>1</sup>Efficacy 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.

<sup>2</sup>Product efficacy may be reduced in areas with fungal populations that are resistant to strobilurin fungicides.

<sup>3</sup>Efficacy may be significantly reduced if solo strobilurin products are applied after stripe rust infection has occurred.

<sup>4</sup>Multiple 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, Tebustar 3.6 F, Tebuzol 3.6 F, Tegal, and Toledo. Products containing propiconazole include: Bumper 41.8 EC, Fitness, Propiconazole E-AG, and PropiMax 3.6 EC. Products containing propiconazole + azoxystrobin include: Aframe Plus, Avaris 2XS.

<sup>5</sup>Products 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.