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# Ag News

## In This Issue

**Disclaimers.....Page 1**

**New NCSU Cotton Planting Conditions Calculator (Collins/Edmisten).....Page 1**

**Cotton Planting 2019.....Pages 1,2**

**Paraquat Training Information Revised and Expanded.....Pages 2, 3**

**Soybean Planting Date..... Page 3, 4**

**Ask Yourself Can I Do Better?.....Page 4**

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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

**The New NCSU Cotton Planting Conditions Calculator (Collins & Edmisten) – Written By Guy Collins**

As the 2019 cotton planting season approaches, we know that it is especially important to frequently monitor and evaluate planting conditions once we get into our planting window. Prevailing temperatures (day and night) during the 5-day period following cotton planting, along with the potential for intense rains, are by far the best predictor for planting success in establishing acceptable plant stands. Additionally, some scenarios often influence our planting practices so that adjustments can be made during periods of less-than-ideal conditions in order to optimize stand establishment and early season vigor.

As discussed during winter meetings, we worked with the NC Climate Office beginning in late July of 2018 and recently launched the NC State University Cotton Planting Conditions Calculator in January. This new online tool can be found on the left-side toolbar on the [NC State University Cotton Portal website](#)

## Cotton Planting 2019...

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.

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

Relationship Between Predicted DD-60s and Planting Conditions	
Predicted DD-60 for five days following planting	Planting Conditions
10 or fewer	Very poor
11 to 15	Marginal
16 to 25	Adequate
25 to 50	Very good
More than 50	Excellent
Avoid planting cotton if the low temperature is predicted to be below 50°F for either of the two nights following planting or predicted daily DD60’s is near zero for the day of planting.	

## Paraquat Training Information Revised and Expanded – Wayne Buhler

Companies that produce paraquat-containing pesticides (example brand names: Gramoxone, Firestorm, Helmquist and Parazone) are required to have newly labeled product in the market after November 14, 2019 – some may produce and sell newly labeled product before that date. The NEW label will specify that the applicator, mixer, and handler of these products be a certified applicator and have completed a

paraquat-specific training program.

- EPA is allowing the sale of paraquat that is already in the channels of trade, so some paraquat sold this growing season may NOT have the new training requirement on the label.
- Growers that currently have a supply of paraquat that DOES NOT have the new labeling listing the required training ARE NOT required to complete the training.

The training is currently available online at [www.usparaquattraining.com](http://www.usparaquattraining.com). Applicators will need to register on the site, watch a 45-minute video presentation, and complete a quiz (final assessment). A certification of completion is awarded with a 100% quiz score (unlimited re-attempts allowed).

Paraquat-specific training is required once every 3 years. The training is hosted online by the National Pesticide Safety Education Center. NCDA&CS will not be conducting this training.

**Only certified applicators who have completed the paraquat training can mix, load, handle and apply paraquat-containing products---not someone working under their supervision.**

Other actions EPA has taken to prevent poisonings with new label changes include:

- Clarifying toxicity in English and Spanish language formats
- “DANGER-ONE SIP CAN KILL” and Skull and Crossbones symbol on the container
- A “product package safety requirements sticker” affixed to the container
- A “counter card” reiterating the same important warning information to be distributed with every container
- AN IMPORTANT NOTE: Requirement for closed system transfer ("requiring closed-system packaging for all non-bulk (less than 120 gallon) end use product containers of paraquat.") is NOT going to be in place this growing season!**

Registrants will submit label changes and new product registrations for the closed system packaging by March, 2019, and will have 12 months from EPA's label approval date to adopt the closed system packaging.

The best advice still remains, read and follow the label directions on the product you are using, keep product in it's original packaging, and **NEVER put product in any type of food container - especially a drink container.**

For a complete overview of the requirements see: <https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators>

## **Soybean Planting Date...**

**Information taken from Virginia Cooperative Extension Soybean Update By: Pat Phipps, 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](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.

## 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 doesn'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.