

THE TURN ROW



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THE FIRST 40 DAYS

By: Jeff Thompson

Though the growing season may extend for months, the first 40 days following planting largely determines cotton's yield potential and profitability. Obtaining good uniform stands, maintaining plant health, and encouraging plant growth during these first few weeks will greatly impact ultimate yield and fiber quality. This becomes even more important when you realize nearly half of your total variable production costs have been spent during these forty days. In this edition of the Turn Row, we will discuss some early season management practices to aid in getting your crop off to the best start possible. Granted, each individual field has its own personality, and no one knows it better than you, the producer. Therefore, the rules of thumb below may require adjusting to fit a field's history and ever-changing weather conditions. However, the goal at the end of forty days is to have healthy plants all about eight inches tall and in the eight-leaf stage and have two to three squares. If so, you are well on your way to getting the most from your crop.

SEED & VARIETY SELECTION

When choosing varieties there are several factors to consider, many of which we mentioned in last month's Turn Row. Once you have decided on the desired traits, select varieties within that group which have genetic potential to deliver higher yield and fiber quality. The recommended variety lists we provided last month include those most capable of doing so. Another point to consider is seed size for it will directly influence seed vigor. Smaller seed size varieties may need a little more TLC or coddling to get an optimum stand. If planting early in cooler soils, it's important to know the cool germ of the seed. Always begin planting using seed with the highest cool germ reading.



SEEDBED PREPARATION & PLANT POPULATION

In the haste to get seed in the ground, certain planting preparations are sometimes unintentionally overlooked. Obtaining a good healthy stand primarily involves two things, seeding rate and soil preparation. Ideally, we want to plant 3.5 seeds per foot of row at a depth of 1 to 1 ½ inches to get a stand of two plants per row foot. For Texas/Oklahoma dryland, it's recommended to plant 2 to 2.5 seeds per foot and 3 to 3.5 seeds for irrigated acres. A plant population of between 30,000 to 60,000 plants per acre should be our target. Understandably, with the cost of seed, the lower end of this range is most preferred even with its inherent risks. The higher end, though obviously more costly, will also require greater management later in the growing season. Soil temperatures at planting should be 65 degrees or above for three consecutive days. As you see in the accompanying chart, soil temperatures are currently borderline of this goal. With weather forecasts calling for warmer air over the next several weeks, planting conditions should soon become favorable. Over the past several years, the tendency has been to plant later thanks to the new faster fruiting varieties. Nonetheless, we recommend taking advantage of the given the opportunity of warm soils and moisture in April. May is historically a dry month and we have all too often seen seed sit in the ground for weeks before germinating thus making a late crop even later. Also, leave planter settings in place resisting the urge to chase soil moisture for more times than not we outthink ourselves.



Thrips damage to young cotton

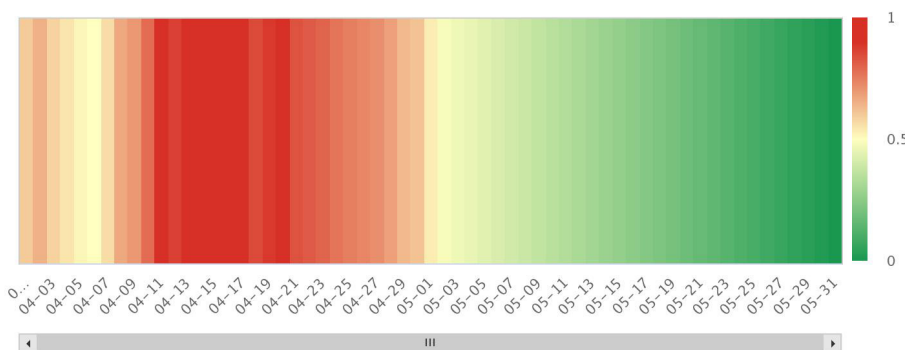
Plant in a green-free zone. The seedbed itself should be free of all actively growing weeds with the cover crop sufficiently killed from burndown applications sprayed at least three weeks prior. If possible, controlling wild host plants around field borders could aid in minimizing early season insect pests. Finally, replanting should be a last resort. Research has shown one plant per row foot, barring any large skips, would be preferred over replanting.

EARLY SEASON INSECT CONTROL

The number one insect pest of seedling cotton is thrips. The chances this pest will be present in fields each year is 100 percent. Thus, preventative control measures are recommended. The first line of defense is a seed treatment with an imidacloprid product (Gaucho, Aerialis, Avicta Elite) or an in-furrow treatment with an imidacloprid product, Orthene or Ag Logic. Thrips have shown a high level of resistance to Cruiser, so it is no longer a recommended seed treatment. It's feared the same fate may fall on imidacloprid materials since they are the same class of insecticide. So far, though, they remain effective. Thrips pressure will vary throughout early season and by location. Additionally,

SOIL TEMPERATURES ON APRIL 8, 2021	
Selma, AL	66 °
Florence, AL	58 °
Dothan, AL	66 °
Lubbock , TX	63 °
Rule, TX	64 °
Altus, OK	56 °

Within-Season Risk for 2021



WEED CONTROL

Weed competition should be eliminated for cotton seedlings for at least the first 21 to 35 days. Despite new herbicide technologies such as Extended Flex and Enlist Duo, this will require the use of residual herbicides both preplant and at planting in addition to OTP applications. Research has proven seedlings exposed to weed

competition at this early stage can reduce yields by 25 percent.

preventative measures may need to be supplemented with a foliar insecticide application if under heavy pressure. Recommended foliar insecticides include:

- Orthene at four to six ounces per acre while keeping in mind it can flare spider mites and is the least rain fast
- Bidrin at 3.2 ounces will not flare other pests and is more rain fast.
- Intrepid Edge at three ounces is another viable option. Once seedlings reach the five leaf stage control measures are no longer economical.

There is a relatively new computer program called TIPS (thrips infestation predictor) that can accurately predict whether a supplemental foliar application may be necessary according to your planting date. It can be found by going to www.products.climate.ncsu.edu. Upon entering your location and projected planting date, a customized graph will be created like the one seen here. This above chart depicts a planting date of April 9 in Prattville, Alabama. The closer your planting date is to the dark green shaded areas, the less chance a foliar application will be needed. Conversely, the closer it is to the dark red, the greater the chance one will be needed. Finally, monitor this insect closely for it can greatly delay plant maturity, especially in cool weather conditions.

Plant bugs are another insect pest requiring attention. They feed on pinhead squares causing them to abort. If square retention falls below 80 percent and plant bugs are present in the field, an insecticide treatment is warranted. Effective products for controlling this pest are Orthene, Diamond, Transform, and Bidrin. Controlling plant bugs early season will minimize egg lay by adults thus reducing mid-summer plant bug populations.

NEMATODE & DISEASE CONTROL

Seedling diseases unless under very adverse growing conditions can usually be controlled by the manufacturer's applied fungicide seed treatment. Nematode control is not that easy. Ideally, if a field is suspected of having nematodes, it should have been soil sampled last fall to truly determine the nematode species present and the populations. It is much easier to maintain nematodes at a manageable level than trying to reduce a population that has been allowed to build to damaging levels. Control options include crop rotations, nematicides, and there are now some nematode resistant cotton varieties available.

Until next time,

Jeff Thompson

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