THE UNIVERSITY OF GEORGIA
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Colleges of Agricultural and Environmental Sciences & Family and Consumer Sciences

Newsletter

SOYBEAN

June, 2007

Soybean Planting Options—Dry Weather

John Woodruff

(May 25, 2007)

As of this writing, most of Georgia has become extremely dry. Many fields across the region remain unplanted as farmers are waiting for rain. Some farmers are "dusting in"/dry planting cotton hoping for rain later to get emergence. This practice has not generally been successful for soybeans.

It will take 3 to 5 inches of moisture to replenish soil moisture in most areas. Such will be needed if summer crops like soybeans are to have a fair start to the season. Odds of getting this scenario now appear slim. But in our area anything is possible. Georgia weather over the last 12 months has cycled from wet to dry to wet and back in 100-120 day periods. Should this cycle continue, the area could start getting rains by late June.

What about soybean planting in light of this situation? Here are four options to consider. Each should be prefaced by what Crop Insurance approves.

Option 1. "Dust in" soybeans. Unless required to qualify for crop insurance, I would not do this. The soybean must absorb about 50% of its weight for the germination process to begin. If the soybean seed absorbs inadequate moisture, the seed usually decays rapidly, especially in hot soil. The likely result of this option will be very poor soybean stands.

Option 2. Your field gets a shower in early June (1/2" or less). The surface soil layer (3" and up has moisture but the underlying soil is very dry. I would continue to wait for rain. Soybeans in this setting will germinate but will be highly susceptible to soil disease and soil insects. If one should plant in this scenario, a soil insecticide should be used. (See Dr. Phillip Roberts' article in the May Soybean Newsletter). Also, if planting in limited soil moisture, the seeding rate should be increased about 15%. This amounts to about 12 seed per foot of row for 36" spacings. My advice: if you plant in this situation, you are going for a long shot gamble without irrigation. Waiting for better soil moisture will probably be a better gamble.

Option 3. The drought abates and abundant rains come by late June. In this setting, there is still a chance to make a pretty fair soybean crop if management is altered for late planting. You need to (1) plant a soybean variety appropriate for late planting (see the UGA soybean website and/or the May Soybean Newsletter for a list of these varieties) and (2) increase seeding rate from 145,000 to 160,000/A (this amounts to about 12 seed/ft for 36" row spacings). Well-managed late planted soybeans should yield 75-90% of those for May plantings. Late plantings should be completed by July 1.

Option 4. The drought continues through June, but abundant rains begin in July. This scenario does not fit our planting date recommendations for soybeans. The soybean is photo-period sensitive. Most soybean varieties planted after July 1 will have a very

short vegetative growth period (4-6 weeks); they will be very short (less than 18 inches), produce few or no lateral branches, and have low yield potential (less than 20 bu/A). In this setting, many producers would probably fare better to plant summer annual forage grasses for hay, grazing or cover crop.

There is one soybean planting option that could be considered for planting after July 1 in the Coastal Plain region, i.e., to plant a tall growing, later maturing MG VIII varieties such as Cobb or Prichard. For this option to be successful, soybeans should be planted (1) in close rows (30" or less), (2) at a high seeding rate (175,000seed/A), and (3) with full season irrigation. It is not uncommon for well managed Cobb soybeans planted in late July to make 35-40 bu/A.

Who's Going To Grow Soybeans?

There are sparks in the soybean market place. In recent weeks, soybean market prices have rallied to their highest levels since 2004. November 2007 soybeans are trading well above $8.00/bu. So are November 2008 and 2009 futures. The soybean oil market continues to be fundamentally strong. Vegetable oil of any kind is trading at near record high levels. There are a few South American harvest delays and US soybean planting is behind schedule, either because of dry soils in the upper mid-west and lower southeast or wet soils in much of the middle sections of U.S.A. There is also growing concern that our year ending stocks well be uncomfortably low. The market place is responding with higher prices and wondering "Who's going to grow soybeans?" It may be a good situation in Georgia if one has irrigation, but rather frustrating nationwide if one is dealing with the drought or flooded soils. Expect to see more sparks in this market.

Phillip Roberts
Extension Entomologist
May 31, 2007

Thrips Injury: Thrips commonly infest soybeans. Occasionally thrips numbers are high enough that soybean seedlings exhibit damage symptoms (crinkling of leaves, yellowish blemishes on leaves). Under favorable growing conditions, seedlings outgrow feeding injury; injury symptoms will not be present on new growth. It is rare for economic damage to occur from thrips in Georgia. However, if very high thrips populations coincide with hot, dry conditions (poor seedling growth due to drought stress) seedling mortality may occur. Light to moderate thrips injury has been observed on soybeans (see images below). Fields which exhibit thrips injury should be monitored on a regular basis, paying special attention to new growth.

Thrips injury on seedling soybeans (photo by Jeremy Kichler).

Lesser Cornstalk Borer: Hot and dry conditions are conducive for outbreaks of lesser cornstalk borers (LCBs). Soybean seedlings should be monitored for LCB until plants are about 12 inches tall; look for wilting or dying plants and try to determine if future stand loss is probable (insects easily found and actively damaging plants). Treatment is recommended if the stand is threatened and/or 10 percent of seedlings are infested with LCB larvae. Lorsban applied at planting is an effective preventive treatment for control of lesser cornstalk borer.

Soybean Disease Management Update

Bob Kemerait

June 1, 2007

Nematodes and Soybeans

Although we have spent considerable time discussing the importance of Asian soybean rust for the past couple of years, damage from plant parasitic nematodes (southern root knot, reniform, Columbia lance, peanut root-knot, cyst, etc.) is as important of a problem, if not more so. Growers can minimize the damage from nematodes by using resistant varieties and using a nematicide, such as Temik 15G at planting. Growers who find patches of poor growth and stunted plants in their fields this season should submit soil samples for analysis to determine if nematodes are taking away from their yield potential.

Asian Soybean Rust

As of today (1 June 2007), we do not know of any active Asian soybean rust in Georgia. We continue to scout soybean sentinel plots and patches of kudzu across southern Georgia and have not found rust. It is very likely that development and spread of rust has been greatly slowed by the extreme drought that we have faced.

As we monitor sentinel plots, we also monitor spore traps at 10 locations. The spore traps are designed to passively collect all small particulates, to include fungal spores that are carried in the wind. Microscope slides are collected from the traps and sent to the University of Arkansas for analysis. A slide collected from the Plains Station, Sumter County, on 25 May was found to contain several spores that looked very much like spores from the soybean rust fungus. It is impossible, without using DNA analysis (PCR) to determine if they were actually soybean rust or something else; however it would not surprise me if they were from the soybean rust pathogen, the fungus *Phakopsora pachyrhizi*.

One might ask about my concern about these spores as they could have been from the soybean rust pathogen. This is a good question, and easy to answer. At this time, I am interested in the find, but not overly concerned. Soybean growers in Georgia know it is only a matter of time until rust develops; we have faced it now for 3 field seasons. Second, it is important to note that spores of the Asian soybean rust fungus DO NOT equal disease! The current drought coupled with soybeans still to in vegetative growth, or not even planted, means that we have little need for concern.

As our crop approaches first bloom and beyond, growers in Georgia need to be prepared to use fungicides to protect their crop, should soybean rust develop in the state by that time. Our experience tells us that growers will not need to spray prior to first bloom and can likely wait until early pod set (R3) to time a fungicide application. You will receive much more information on this as the season progresses.

New Section 18: TOPGUARD (flutriafol) has recently been given a Section 18 label for use on soybeans in Georgia. TOPGUARD is in the triazole class of fungicides (like Folicur, Laredo, Domark, etc.) and is one of our most effective fungicides for the control of soybean rust.

USDA Soybean Rust Web Site: If you want the most current information on Asian soybean rust in Georgia and elsewhere in the United States, please check out the USDA web site at www.sbrusa.net.