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Soybean Rust Manuals still available in limited supply. Contact Dr. Bob Kemerait or Dr. Phil Jost.

SHOULD I SPRAY MY SOYBEANS WITH FUNGICIDE? (Kemerait and Jost) The two most common questions that we are hearing from soybean growers and from county agents around Georgia in June and early July are 1) “Is this soybean rust in my field?” and 2) “Should I spray my soybeans with fungicides?”

The answer to the first question, “Do I have soybean rust?” has been fairly straight forward. To date, our diagnostician in Tifton, Jason Brock, has NOT found soybean rust on any of the samples submitted from commercial soybean fields in the state or on any kudzu samples. Many of these samples have symptoms that are very close to rust; however thus far they have been the result of some other cause. Dr. Layla Sconyers is now a member of our soybean scouting team and has not found rust on kudzu or in any of our sentinel plots across the Coastal Plain.

Although we have not found rust outside of two small patches of volunteer soybeans in Seminole County, it has been found on kudzu near the Georgia line in Leon, Gadsden, and Jefferson Counties in Florida. We believe that it is likely on kudzu in some of our most southern counties as well; however neither we nor county agents have found it yet.

The answer to the second question, “Should I spray fungicides?” is much more difficult to answer. To begin with, neither Dr. Jost nor I can tell you what soybean rust will do in Georgia this season. The progress of this disease has been much slower than we anticipated and has become a game of “cat and mouse”. We do not know if, or when, this disease will move significantly into the production regions of the state; however the approach of Hurricane Dennis coupled with our beans approaching first bloom WILL cause a potentially volatile mix just right for an epidemic. We believe that growers in southwest Georgia are at greatest risk of the disease initially.

Here is the BOTTOM line for soybean producers in Georgia at the moment and I’ll explain in detail below.

Growers who spray fields approaching first bloom before Hurricane Dennis or immediately after will be well protected should soybean rust explode. If soybean rust does explode with this storm, growers who did not spray will need to scramble to do so.

If soybean rust does not arrive with Hurricane Dennis, those growers who sprayed may wish that they had saved the money and expense of the fungicide application for later in the season.

1. With the approach of Hurricane Dennis from the Caribbean, combined with soybeans in many fields approaching (or beyond) first bloom (R1), and the confirmed presence of Asiatic soybean rust in border counties on kudzu and in sentinel plots in Mobile, Alabama, we believe that the LIKELIHOOD of spread of soybean rust into Georgia is critical at this time.
2. We have not found soybean rust outside of a couple, now apparently destroyed, patches of volunteer soybeans in Seminole County.
3. The Extension Service is not calling for all growers to automatically spray their soybeans as they reach first bloom (R1) at this time because we have not found rust spreading and because we do not know how the disease will spread after Hurricane Dennis, if it will spread at all.
4. For those growers, ESPECIALLY those in the southwest corner of the state, who want to take the most conservative and safest approach to protecting against soybean rust, they should consider applying fungicides ahead of Hurricane Dennis, or as soon after the passage of the storm as they can get into the field or use an aerial application.
5. Growers who choose to apply fungicides ahead of Hurricane Dennis may use 1) a protectant fungicide such as chlorothalonil or strobilurin (as rust is likely not in the field), 2) a curative fungicide such as a triazole (note: curative fungicides are also protectant fungicides), or 3) a combination of a curative fungicide + a protectant fungicide, such as a triazole + a strobilurin.

6. Growers who choose to apply a fungicide soon after Dennis passes should choose a curative or a curative/protectant tank-mix as there is increased likelihood that some infection has occurred.

REASONS GROWERS SHOULD CONSIDER APPLYING FUNGICIDES IN THE NEAR FUTURE:

1. Confirmed soybean rust is as close as kudzu near the Florida-Georgia line.
2. Soybean rust has been found in sentinel plots in Mobile, Alabama.
3. The combination of recent wet weather, Tropical Storm Cindy, Hurricane Dennis, and the approach of first bloom in many fields creates seemingly perfect conditions for the spread of rust.
4. Early detection of rust is very very difficult to determine by the grower or agent in the field.
5. The soybean rust disease is known to spread very quickly.
6. Spore traps collected by Dr. Layla Sconyers in Decatur, Laurens, Washington, Sumter, and Appling Counties have contained spores that are similar to those of Asiatic soybean rust. However, they are not confirmed as soybean rust; the spores from other "harmless" rusts can look similar.

REASONS WHY THE EXTENSION SERVICE IS NOT CALLING FOR AUTOMATIC FUNGICIDE APPLICATIONS AT THIS TIME:

1. Rust is not currently known to be in Georgia in commercial fields or sentinel plots.
2. Although conditions appear excellent for spread of rust at this time, we have thought that before and been wrong. Even with "perfect" conditions, there may not be enough spores available at this time to "fuel" an epidemic. We just don't know.
3. Growers may need fungicides later in the season more urgently than they do now. Spraying fungicides on beans is a tough proposition for our growers financially.
4. Should rust begin to show up, unless it spreads very quickly, our growers may have time to respond if they are watching their fields. NOTE: this is especially true for growers outside of the southwest corner of the state. We believe soybean growers in the southwest corner will likely be the first hit and may have little time to respond.

WHAT IS THIS R1, R2, R3 STUFF? (*Jost*) As the movement of rust continues the spraying vs. growth stage issue is coming to the forefront. Due to the potentially rapid spread of this disease, and the difficulty in identifying it, most literature focuses on spraying soybeans at specific growth stages. Most often mentioned is the R1 stage. In laymen terms all R1 really means is first bloom. It is believed that this is the critical time to spray with fungicides because at this time, or soon thereafter, soybeans become increasingly susceptible to the ravages of rust.

While there are multiple publications out there explaining the different growth stages of soybeans, below is a brief discussion of these stages which will hopefully simplify the issue.

Stage	Comments
VE	Soybeans have just emerged from the ground. The only leaves present are the cotyledons.
VC	A pair of “unifoliate” leaves have developed just above the cotyledons. At this time both sets of leaves, the cotyledons and the unifoliate, are arranged opposite each other on the stem. After this point all new foliage will consist of trifoliate (3-leaflets) arranged alternate on the stem.
V1	One set of trifoliate leaves on the plant in addition to the cotyledons and the unifoliate leaves.
V2-Vn	Until the plant starts to bloom they growth stages are discussed in terms of main-stem trifoliate leaves. In Georgia we may see as many as 16 to 20 main-stem leaves prior to flowering.
R1	One bloom present on the plant. At this point growth stages are discussed in terms of flower and pod development. This first flower will generally appear towards the bottom half of the plant. <u><i>If rust is present in or around your area</i></u> this is the key time to trigger a spray.
R2	Full bloom. Flowers are present to the top of the plant. Occurs 8 to 10 days after R1.
R3	Pods can be observed at the uppermost nodes on the plant. This is generally the time at which we trigger a Boron and Dimilin spray in Georgia. Occurs 2 to 3 weeks after first bloom.
R4	Full pod. Pods at the top of the plant are ¾” long. Occurs 10 to 14 days after R3.
R5	Beginning seed. Seeds in the pods are 1/8” long at the top of the plant.
R6	Full seed. Seeds fill the pod cavity at the top of the plant. After this point beans should be safe from the effects of rust.
R7	Beginning maturity. At least one mature pod can be found on the plant. Occurs 2 to 3 weeks after R4.
R8	Full maturity. Beans are close to being harvest ready

SOYBEAN INSECTS ON EARLY MATURITY SOYBEANS (*Roberts*) During recent days we have received several reports of stink bugs in Group IV soybeans. In some fields stink bug numbers exceed threshold levels. Many of these observations were made as growers were planning applications of Dimilin and Boron on early beans. The threshold levels for stink bugs are as follows:

Growth Stage	Sweep Net	Drop Cloth
	Avg. No. per 25 Sweeps	Avg. No. per Row Foot
Seed Beans	1	0.3
early Pod Fill	2	0.67
after Mid-Pod	3	1

Compared with other crops such as squaring cotton or maturing corn (stink bugs will begin migrating from corn as it dries down), podding soybeans are much more attractive to migrating stink bugs. Perhaps these early beans will “trap” stink bug populations in localized areas. There is not much reason for a stink bug to leave a podding soybean field at this time. Bottom line is that growers should have scouts in the field making counts and treat if populations exceed threshold levels. When using a 15 inch diameter sweep net, several 25-sweep samples (at least 4 sets of 25-sweeps for each 20 acres scouted) should be made in each field. If using a ground cloth, make at least 10 random 3-foot examinations for each 20 acres scouted. Scouts should also be observant and make counts for other pod-feeding insects such as corn earworm and fall armyworm and for foliage feeding caterpillars such as green cloverworm, soybean loopers, and velvetbean caterpillars. In fields I have visited, low numbers of green cloverworms have been observed.

CONTROLLING RR CORN IN RR SOYBEANS (*Prostko*) Volunteer RR corn can frequently be a problem in RR soybeans. Since most growers will be applying glyphosate to control the other weed species in a soybean field, a grass herbicide will have to be applied in combination with the glyphosate. The following grass herbicides can be tank-mixed with glyphosate for the control of RR corn in RR soybeans:

Herbicide	Rate/A	Timing	Adjuvants
Assure II	5 ozs	Up to 18” corn	NIS @ 0.125% v/v (loaded)
	8 ozs	18-30” corn	NIS @ 0.25% v/v (non-loaded)
Fusilade DX	4-6 ozs	Up to 12” corn	COC @ 0.25% v/v
	6-8 ozs	12 -24” corn	
Select, Arrow, Trigger, Clethodim	4-6 ozs	Up to 12” corn	AMS @ 2.5 lbs/A (loaded) COC @ 1 pt/A or NIS @ 0.25% v/v + AMS @ 2.5 lbs/A (non-loaded)
	6-8 ozs	12-24” corn	
Poast	12 ozs	Up to 12” corn	AMS @ 2.5lbs/A (loaded)
	16 ozs	12-20” corn	COC @ 2 pts/A + AMS @ 2.5 lbs/A (non-loaded)
Poast Plus	18 ozs	Up to 12” corn	AMS @ 2.5 lbs/A (loaded)
	24 ozs	12-20” corn	COC @ 2 pts/A + AMS @ 2.5 lbs/A (non-loaded)

I have no preference between any of these grass herbicides. Price and availability should dictate the choice.

A POSITIVE MARKET TREND CONTINUES (*Jost*) While concerns of soybean rust are probably foremost on the minds of soybean producers, some attention should be paid to the market. At this time last month November prices were greater than \$6.80/bu. In the June newsletter I indicated that the common market trend was for prices to decline or remain stable after that point. Well, at this writing November prices were greater than \$7.25/bu. While no one wants to have to spray for rust, if these prices are taken advantage of they could make the spray bill a little easier to take.

The latest acreage report still has Georgia pegged at 220,000 acres. This is down from the 280,000 acres last year but still greater than the average of what we've seen in the past 5 to 6 years. Total U.S. soybean plantings are approximately 1.3 million acres less than last year.

MIDVILLE FIELD DAY (Jost) The annual field day at the Southeast Research and Education Center in Midville will be held again this year. This will be primarily a cotton and soybean field day. Soybean discussions will be centered on the rust issue. Topics will include fungicide trials and variety evaluations. The field day will be held on August 25, 2005 beginning at 9:00 a.m.

Your local County Extension Agent is a source of more information on these subjects

Edited by: **Philip H. Jost**, Extension Agronomist-Cotton & Soybeans



Contributions by:

Philip H. Jost, Extension Agronomist-Cotton & Soybeans

Bob Kemerait, Extension Plant Pathologist

Eric Prostko, Extension Weed Scientist

Phillip Roberts, Extension Entomologist

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