



The University of Georgia
Cooperative Extension Service
College of Agricultural and Environmental Sciences



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<http://www.griffin.uga.edu/caes/soybeans>

SECOND FIND OF RUST IN A COMMERCIAL FIELD	1
ENTERING THE FINAL STRETCH OF THE 2005 SOYBEAN RUST 500	2
ARE THESE FUNGICIDES CAUSING ANY INJURY?	3
SOYBEAN LOOPERS AND STINK BUGS	4
SOYBEAN YIELD AND PRODUCTION EFFICIENCY CONTEST	4

SECOND FIND OF RUST IN A COMMERCIAL FIELD (*Kemerait*) Raymond Joyce and I found soybean rust in a commercial field in Laurens County on September 7, 2005. Rust has now been positively identified in two commercial fields in the state (Appling and Laurens Co.), though is certainly present in many more.

There are several things of interest about this latest find.

1. The crop is MG VI soybeans (DP6880RR) planted in mid-April, thus this crop is significantly more advanced in maturity than most soybeans in the state. The crop is now at, or very near, R6 and has not been sprayed with fungicide.
2. After notifying the grower of the find, he added he had seen it for the first time yesterday, 6 September and wondered about it. This is of real interest because the severity of the disease in the field had caused significant defoliation of the lower canopy, plenty of pustules in the mid-canopy, and spread to some of the upper canopy. I could see it as we pulled into the field. The grower is conscientious, so it is a learning point that even "obvious" rust may not be recognized when seen for the first time.
3. We also visited a second unsprayed field of soybeans approximately 2 miles away. They are in the R3 growth stage (planted mid-May) and rust was not obvious or found (limited scouting) though frog-eye was abundant. In Georgia, it appears this year that although rust may be found

on R2-R3 soybeans in the lab with a microscope, it is not until R4, and usually R4-R5 before a true "epidemic" is found. As it is, the first grower mentioned here will likely not suffer yield loss despite not applying fungicide. The questions for the second grower are a) will rust appear prior to R5?, and b) if he does not apply a fungicide ASAP, will he lose significant portions of his crop? Lessons from Brazil say he had better spray now; last week was likely better! Georgia lessons say, "This isn't a very easy disease to figure out..."

ENTERING THE FINAL STRETCH OF THE 2005 SOYBEAN RUST 500 (*Kemerait and Jost*) To be honest, it seems as though the 2005 soybean season has been one big blur of speed, much like a NASCAR race on Sunday afternoon at Daytona or Talladega. Like most NASCAR events, the 2005 season started off with a lot of excitement and anticipation of rust and then got a bit slow mid-way though the summer. However, the back half of the race has picked up and now we are heading through the final few laps trying to reach R6-full seed growth stage before rust steals the lead and the yield. I wish I could say that we feel like Jimmy Spencer, Tony Stewart, Jeff Gordon, or even Dale Jr., but we probably feel more like the pit crew, or even the Goodyear tires chewed up in the race.

The good news is that the end of the season is now in sight and for many growers only a matter of weeks away before R6, full seed, growth stage is reached. It is at this growth stage that research shows that the crop is finally "safe". As an example, we have a fungicide trial in Tifton of maturity group VII soybeans planted mid-May that is now at the R5.4 growth stage, i.e. the seed is about 50% final size. Rust is now present in the plots to the point that it can be easily detected with the unaided eye in the untreated border rows. Rust remains much more difficult to detect in the treated rows. Many growers in the state probably have soybeans at a similar growth stage. If you have treated your crop at least once with an effective fungicide, you are probably well on your way to a strong finish in the 2005 Soybean Rust 500. If you have not treated with a fungicide and rust is creeping in your field, then you are still in the thick of the race (see above).

Let's use the Tifton fungicide study as an example. Where the soybeans have been treated twice (late July and mid-August), it is clear that rust will not have time to become severe prior to the R6 growth stage. Where the soybeans were treated only once in this trial, it also seems that the crop will safely reach R6, but with more damage to the foliage. (Note: the overall benefit from a single spray will be determined from a number of trials across the state.) The final result is unclear in the plots that have not been sprayed. True, they are approaching maturity; however the rust is also developing quickly and could take some yield and cause significant defoliation. This would be especially true for growers whose planting date is LATER than Mid-May, because their crop will develop when levels of rust spores are greater than for earlier planted beans.

The bottom line(s) for the 2005 season seems to be the following. 1) Soybean rust is now widespread across the state of Georgia and has the potential to cause yield losses in some fields. 2) Use of fungicides has been effective in slowing the spread of rust in our field trials and likely in commercial fields as well. 3) We in the Extension Service have a lot of work to do in the next few months to interpret results from 2005 and develop recommendations so that the 2006 Soybean Rust season runs even more smoothly and more effectively.

ARE THESE FUNGICIDES CAUSING ANY INJURY? (*Jost and Kemerait*) Fungicides never previously sprayed on soybeans in Georgia are being applied this year. Not only that, but these fungicides are being tank-mixed with Roundup, Boron, Dimilin, and various pyrethroids. I wanted to make a few comments on some injury that has been observed with fungicide and fungicide tank-mix applications. First and foremost, any foliar injury that has been observed to this point appears to be purely cosmetic (see below). No stunting or leaf drop has occurred in any fields that I am aware of or in any research plots. Another interesting observation with this injury is that it takes approximately 2 weeks to show up and seems to be variety and possibly growth stage related.



Trials established in Midville and Washington Co. to examine foliar injury with various tank-mixes have not revealed any negative effects to these tank-mixes. Very slight injury was observed with the use triazole fungicides in the Washington Co. trial. This injury was more evident in plots that received two applications of Folicur at 4 oz/A, two applications of Headline SBR at 7.8 oz/A, or a Headline SBR treatment followed by Folicur.

A trial in Midville was conducted to examine the potential injury of a 2X rate of Folicur on 35 soybean variety of maturity groups ranging from I to VIII. No injury was observed on the later maturity group soybeans which were at R2 to R3 when sprayed. Limited injury was observed some of the earlier maturity group beans which were at R5 to R6.

SOYBEAN LOOPERS AND STINK BUGS: (*Roberts*) The two most common insect pests infesting soybeans are soybean loopers and stink bugs. Tracer, Steward, or Larvin are recommended for soybean looper control. Note that Steward does not have good activity on velvetbean caterpillar and thus would not be a good option when velvetbean caterpillars are also infesting a field. Several pyrethroids and methyl parathion are recommended for control of stink bugs. Orthene recently received a label and would be an option for stink bugs (be sure to check label). Unfortunately, there is not a single product which will provide good control of both stink bugs and soybean looper. Therefore when targeting both soybean looper and stink bugs a tank-mix of insecticides will be needed. Be sure populations meet economic thresholds before treating.

SOYBEAN YIELD AND PRODUCTION EFFICIENCY CONTEST (*Jost*) According to the latest yield estimates Georgia soybean yields are projected to average 33 bu/A. This would tie the record set in 2003. There is no doubt that there are some “loaded” fields out there. I, once again, request your help in documenting these growers’ efforts. The efficiency portion of this contest takes on new importance as growers have made some “extra” inputs to battle rust. While at this point this disease has not blown up, the game is not over yet. It will be interesting to compare last year’s winner with the efficiency winner this year in light of these additional sprays. Please encourage successful soybean growers in your county to participate in this year’s Soybean Production Efficiency Contest. This year’s winners will receive cash awards, plaques, and the agent and grower will be recognized at the 2006 Small Grain/Soybean Expo to be held February, 7 in Statesboro.

Completed entry forms must be postmarked by December 16, 2005 and mailed to:

Dr. Philip Jost
PO Box 8112 GSU
Statesboro, GA 30460

Entry forms have been emailed previously. If you need another copy let me know.

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