



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



June 7, 2005

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

MANAGEMENT OF ASIATIC SOYBEAN RUST IN GEORGIA	1
LATE PLANTED SOYBEANS	4
THE MARKET	4
UPDATES TO SOYBEAN WEB PAGE	4

MANAGEMENT OF ASIATIC SOYBEAN RUST IN GEORGIA (*Kemerait, Jost, and Brock*) The Asiatic soybean rust continues to dominate discussion among growers, industry representatives, the Extension service, and researchers in Georgia and around the country. Below is the most current information from within Georgia.

1. As you already know, soybean rust was confirmed on 27 April on volunteer soybeans located by county agent Rome Ethredge in Seminole County. We have continually found spores in that field; however spread has been quite slow.
2. Soybean rust has not been found in a field of snap-beans planted in a field directly across a small road from the volunteer soybeans. These snap-beans have been treated with fungicides.
3. We have not found soybean rust in any of our “sentinel” plots scattered around the state, yet....
4. On Friday, 27 May, we did find what appear to be spores of soybean rust on a sample of volunteer soybeans collected by Will Duffie in Terrell County. We use the word “appear” because we always hope for the “perfect sample” with “perfect symptoms”. However, Jason Brock and I cannot come up with any diagnosis other than a rust fungus. Hopefully we can get more samples and further confirm our diagnosis.
5. Because we believe that soybean rust has likely spread into Terrell County, growers who have soybeans approaching the bloom stage need to be prepared to apply fungicides. However, because the level of inoculum appears to be low, spread is slow, and no disease

symptoms can be found in the sentinel plots we are not recommending that plants in the boom (R1) stage be treated at the current time.

Recommendations for Soybean Growers in the Coastal Plain of Georgia

Soybean rust is a new disease to the United States and our growers have never had to fight it before. We in the Extension Service in Georgia are also learning much this season with regards to management. Because we do not know exactly how this disease will behave in the state in 2005, we are taking a very conservative approach to protecting the crop. We are basing our recommendation on the following items:

1. We have confirmed soybean rust in Seminole County and believe that it is also very likely present in Terrell County. This means that the disease has likely spread elsewhere in Georgia as well.
2. We now realize just how difficult it is to identify soybean rust in the field at its earliest stages. Growers will NOT be able to identify the earliest infection in the field without submitting a sample to the disease lab for analysis. Growers will be able to identify the disease once numerous pustules are present; however this may be too late for optimum management.
3. Although the spread of rust in Georgia has been very, very slow, we recognize that the disease can move with explosive force when conditions are right.
4. We know that as soybeans move from vegetative growth to flowering, soybean rust often becomes a much more important problem and moves more quickly.
5. We believe that the FIRST fungicide application made by the grower is the MOST important one.

Based on the points above, soybean growers in Georgia should be considering preparations to make their first fungicide application as their crop nears the bloom growth stage. An update list of fungicides labeled for use in Georgia is noted in Table 1.

Table 1. Fungicides for use on Asiatic soybean rust in Georgia.

Product	class	Active Ingredient	Rate/Acre
Bravo/Echo		Chlorothalonil	16-36 fl oz
Tilt/PropiMax/Bumper	Triazole	Propiconazole	4-8 fl oz
Domark	Triazole	Tetraconazole	4-6 fl oz
Laredo	Triazole	Myclobutanil	4-8 fl oz
Quadris	Strobilurin	Azoxystrobin	6.2-15.4 fl oz
Headline	Strobilurin	Pyraclostrobin	6-12 fl oz
Headline SBR	Strobilurin + triazole	Pyraclostrobin + tebuconazole	7.8 fl oz
Quilt	Strobilurin + triazole	Azoxystrobin + propiconazole	14-20 fl oz
Stratego	Strobilurin + triazole	Trifloxystrobin + propiconazole	5.5-10 fl oz
Folicur	Triazole	Tebuconazole	3-4 fl oz
Orius	Triazole	tebuconazole	3-4 fl oz

Advice on spraying fungicides:

1. When spraying soybeans for soybean rust, it is important to get COMPLETE coverage of the plant.
2. Growers should use a nozzle tip that will offer maximum canopy penetration and coverage.
3. Growers who apply fungicides with a ground rig should use at least a 15-20 gal/A spray volume. Applicators will likely need to use a spray pressure of 50 psi or better to maximize coverage.
4. Aerial applicators should use 5 gal/A spray volume.
5. Applying the fungicide prior to infection, or when infection is very low, is critical to the success of the fungicide program.
6. Strobilurin fungicides, like Quadris and Headline, are protectants and offer little or no curative activity. If a grower chooses to use one of these materials without the addition of a triazole fungicide in the mix, he should only do so if confident that no rust is present in the field.
7. **Growers are cautioned that use of a strobilurin fungicide without a triazole pre-mix partner could be risky.**
8. Triazole fungicides, like Folicur, Domark, Laredo, and Orius (tebuconazole) provide protective as well as some curative benefits. These fungicides are still best used prior to infection, or at least very early in the infection process to be most effective.
9. Not all triazole fungicides are created equal. Folicur, Orius, Laredo, and Domark are more effective than Tilt, Bumper, or PropiMax.
10. We estimate that the interval between applications of triazole fungicides will be about two weeks.
11. There are several products currently available (Headline SBR, Quilt, and Stratego) where a triazole fungicide is pre-mixed with a strobilurin fungicide. **The advantage** that these pre-mixes offer is that they have curative and protective qualities and the strobilurin fungicide in the mix extends efficacy from a two week interval to a three weeks.
12. Syngenta, maker of Quilt, recommends that 1% crop oil be tank mixed with Quilt to improve efficacy.
13. Growers should be prepared to make a second fungicide application 2-3 weeks after the first; however they should consider weather conditions and the spread/lack of spread of the disease before making this second addition.

Benefits of making a fungicide application at bloom growth stage:

1. Rust may be on the move and will be difficult to detect in earliest stages.
2. Soybean rust is difficult to control once it becomes established in a field.
3. You will know that your crop is protected.
4. The first application may be the most critical.
5. Spraying at first bloom knowing that disease is in the state is good “insurance”.

Risks to Georgia’s soybean growers who spray right now:

1. Although we have found that soybean rust has spread, it is spreading slowly and we really do not know how the epidemic will proceed.

2. Although our best understanding is that the disease will spread quickly at some point, we cannot be sure when that will occur.
3. Growers could spray now to be prepared for an epidemic that in reality is delayed for some time, or never even fully materializes.

For more information, you can contact your local county Extension Office, Dr. Bob Kemerait and Mr. Jason Brock at (229) 386-7495 or e-mail at Kemerait@uga.edu, and Dr. Phil Jost at pjost@uga.edu. There are also many excellent sites on the Internet. In particular, http://www.aphis.usda.gov/ppq/ep/soybean_rust/index.html offers a lot of information and links to the UGA-NCSU-Clemson-VA Tech web site.

LATE PLANTED SOYBEANS (*Jost and Kemerait*) Soybeans generally yield comparably in wide or narrow row spacings. Positive yield responses due to closer row spacing are more likely to be observed with either very early or very late planted soybeans, where overall vegetative growth is limited. Recent finds of soybean rust in Georgia may make us want to re-think this row spacing issue. One of the primary factors controlling the efficacy of a fungicide against rust is spray coverage. For this reason wider rows may be the better option this year until we learn more about controlling this disease. Soybean rust infection initiates in the bottom part of the canopy where there is more shading and higher humidity. To effectively control this disease early fungicides must be able to penetrate the canopy, this may be more easily accomplished with wider rows.

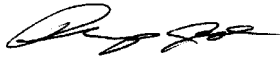
During the spring we did not know if or where soybean rust would over-winter in the United States, nor did we know when the disease would be reintroduced into Georgia. While much is still left to speculation it cannot be denied that spores have been found in Georgia thus growers should plan accordingly. It is also reasonable to think that later planted beans may be more at risk than early plantings.

THE MARKET (*Jost*) The soybean market has made quite a nice rally the past couple weeks. At this writing November prices were greater than \$6.80/bu. According to Dr. George Shumaker, extension economist, this is typically the time of year in which we see a rally with prices often leveling off or declining past this point. While past performance is no guarantee of what will happen in the future, it is worth noting. We have said multiple times that a rust spray program may cost in excess of \$20/A. If taken advantage of, prices in this range could help cover these costs.

UPDATES TO SOYBEAN WEB PAGE (*Jost*) The 2005 UGA Soybean Production Guide is now available on the soybean web at <http://www.griffin.uga.edu/soybeans>.

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:

Jason Brock, Extension Plant Disease Diagnostician

Philip H. Jost, Extension Agronomist-Cotton & Soybeans

Bob Kemerait, Extension Plant Pathologist

Putting knowledge to work

COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES, COLLEGE OF FAMILY AND CONSUMER
SCIENCES, WARNELL SCHOOL OF FOREST RESOURCES, COLLEGE OF VETERINARY SCIENCES

The University of Georgia and Fort Valley State University, the U. S. Department of Agriculture and counties of the state cooperating, The Cooperative Extension Service offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, sex or disability. An equal opportunity/affirmative action organization committed to a diverse work force.