Michigan State University

Field Crop Advisory Alert

Information Resources about the Movement and Risk of Infection of Soybean Rust

Modeling and forecasting websites for Soybean Rust

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Asian soybean rust (SBR) is caused by the aggressive fungus *Phakopsora pachyrhizi,* and it has the potential to cause severe damage to soybeans and other legume hosts. Because of this potential, a number of Web sites have been established to track and discuss this disease. The USDA developed a public *Soybean Rust Information Site* to track the movement of SBR in the U.S. at: http://www.sbrusa.net/. The *North American Plant Disease Forecast Center* site at :http://www.ces.ncsu.edu/depts/pp/soybeanrust/ includes a current forecast for the potential of epidemic spread. There are a number of good sites for information about soybean rust, including the *American Phytopathological Society* information site, http://www.plantmanagementnetwork.org/infocenter/topic/soybeanrust/, and the USDA/APHIS soybean rust Web site: http://www.usda.gov/soybeanrust/ . The United Soybean Board provides partial funding for the commercial website, *Stop Soybean Rust*, at: http://www.stopsoybeanrust.com . The *North Central Soybean Research Program* (NCSRP) website, http://www.planthealth.info/ provides the latest research information from twelve North Central land-grant universities not only on soybean rust, but on other soybean insect and disease problems as well. The *National Sustainable Agriculture Information Service* (ATTRA) hosts a website with soybean rust information and management for organic soybean growers at: http://attra.ncat.org/attra-pub/asian_soy_rust.html .

http://www.sbrusa.net/ Formerly the *USDA Soybean Rust Information Site*, it has been renamed the *USDA Public PIPE* (Pest Information Platform for Extension and Education) mapping web site, and has been expanded to include soybean aphid. There are now separate maps of soybean rust including maps of current locations of rust, management tips, and information on scouting for the disease. The first time that you go to this site, click on "getting started". This describes the commentaries printed below each map: i.e. observations, disease management and scouting (you will have to load each map). The site consists of an interactive map, calendar, map thumbnails, overlays, map description and links. Look for map commentaries below the printed maps. These commentaries will provide information on new occurrences of the disease as well as recommendations for rust management. Another new feature is a pest management toolbox, containing tactics, guidelines, a GFP (Good Farming Practices) tool, insurance documents and a chronological commentary of soybean rust reports for each state. Currently, under Tactics- USA you'll find national soybean rust fungicide guidelines updated for 2006. Clicking on Guidelines-USA brings up information related to good farming practices.

The GFP tool is a printable, interactive form that can be filled in to generate a report to document good farming practices taken by a grower to control soybean rust and/or aphids, information that is needed for crop insurance claims. Under Insurance Docs you'll find a list of documents that are needed to substantiate best management practices or to file an insurance claim. The chronological commentary allows you to view or print state commentaries and guidelines for a particular date or range of dates.

http://www.ces.ncsu.edu/depts/pp/soybeanrust/ is the *North American Plant Disease Forecast Center*. Current forecast displays three colors for recommendations: green (low risk), blue (moderate risk), and red (high risk). Below the recommendations, you will see the forward trajectories using the NOAA HYSPLIT MODEL in the same three colors. Please note that there will be more than one predicted trajectory and altitude. Below the trajectories, you will see the altitudes of the predicted trajectories in the same three colors. Under Threat and Risks (click on this site) on the left of the screen, you will see a description of how the Threat from a Disease Source and Associated Risk Assessment for Soybean Rust is determined. This site produces forecasts/outlooks that apply only to disease development from Airborne Transport of spores.

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Information websites for Soybean Rust

http://www.plantmanagementnetwork.org/infocenter/topic/soybeanrust/, hosted by the *American Phytopathological Society*, is an information site on Asian soybean rust. This site includes *News and Perspectives, Soybean Rust Website and Soybean Rust Resources.*

http://www.usda.gov/soybeanrust/ The USDA site provides up-to-date news as well as links to other sites. Among the information you will find here is: identifying soybean rust ,fungicides labeled for rust, a link to locate your county extension agent, Good Farming Practices and information about crop insurance.

http://www.stopsoybeanrust.com is a commercial site, sponsored by both the United Soybean Board, and industry. It includes links to the PIPE site and other rust websites, news stories related to soybean management issues from a number of sources, an "ask the experts" column, a table of labeled fungicides for soybean rust, fungicide labels, MSDS and a list of States where each fungicide is registered for use.

http://www.planthealth.info/ This *Plant Health Initiative* website, sponsored by NSRCP, covers more than soybean rust. There is current research on other soybean diseases and pests, including soybean aphid. It includes diagnostic tools such as scouting guidelines for common insect and disease problems, soybean growth stages, and photos of injury caused by insects, diseases, and nematodes.
All web sites mentioned present other information on Asian soybean rust, and no one site is preferred over the other. All provide good information and can be used to find other Web-based information on soybean rust.

http://attra.ncat.org/attra-pub/asian_soy_rust.html The *ATTRA* website contains information for organic soybean growers about Asian soybean rust and organic production, current research on organic methods of control, organically acceptable products and practices to control rust, and soybean rust references and resources.

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