

2007 Progress Report

Screening of Soybean Cultivars for Resistance to Major Diseases

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We tested 302 soybean cultivars (the 2007 OVT) for resistance to soybean stem canker in the stem canker field nursery at Hope. Conditions were outstanding for disease development this year and we were able to obtain very consistent results across replications. In addition, 255 cultivars (all OVT cultivars except the EPT) were screened at the Southwest Research & Extension Center for resistance to the soybean cyst nematode (SCN) races 2, 5, and 6 which are the most common races encountered in the state. These cultivars were also screened for resistance to the southern root-knot nematode. One hundred thirty three new cultivars were screened for resistance to the reniform nematode in trials conducted at UAF.

Due to extremely dry conditions during most of the summer, very little foliar disease developed in any of our locations. We initiated two trial programs at the Kibler Substation and in a field near DeWitt this year to develop a protocol for inoculating field plots with the frogeye leaf spot and aerial blight pathogens. These protocols will allow us to ensure that we have ample and consistent disease pressure each year in the future to screen cultivars for these important foliar diseases. We plan full-scale screens for both diseases in 2008.

All screening results were posted on the University of Arkansas Variety Testing website in mid-November (www.arkansasvarietytesting.org), and we are currently using the results to revise and update the 2008 Soybean Update.

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