Evaluation of Chinese Soybean Accessions for Resistance to Brown Stem Rot. (C01-patzoldt154442-Poster)

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Abstract:

Control of brown stem rot (BSR) in soybeans relies heavily on genetic resistance. Past studies have indicated that genetic resistance to BSR can be readily found in germplasm from central and southern China. Recently, 623 accessions from central China were added to the USDA germplasm collection and tested for response to Phialophora gregata, the fungus that causes BSR. In a preliminarily test, 85 of these accessions showed genetic resistance to BSR. The objectives of this study are to retest the accessions identified as resistant in the preliminary test with multiple isolates of P. gregata, and to confirm biotype infection with a P. gregata genetic marker. While the resistant check genotypes showed a minor level of pith browning, some accessions had no visible browning of the stem pith tissues. Some accessions had significantly ($p<0.001$) less foliar necrosis and chlorosis than the resistant check genotypes. This data suggests that some of these accessions may have stronger resistance to BSR than the current resistant standards.

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Presentation Information:

Presentation Date: Tuesday, November 12, 2002
Presentation Time: 4:00-6:00 pm
Poster Board Number: 1211

Keywords:

soybean, brown stem rot, resistance