

Stewart, S.M. and Robertson, A.E. 2010. A modified method to screen for partial resistance to *Phytophthora sojae* in soybean. *Phytopathology* 100:S123.

Phytophthora sojae, an economically important pathogen of soybean, has been managed mainly through the use varieties with single gene (*Rps*) resistance. The pathogen, however, has the ability to rapidly adapt and overcome this type of resistance, resulting in populations that are able to infect soybean plants with the deployed *Rps* genes. Partial resistance (PR) is effective against all physiological races of the pathogen. Few cultivars with high levels of PR are currently available because feasible methods that enable effective incorporation of PR into desired germplasm are lacking. The layer test is presently used to screen for PR in breeding programs. In this method, soybean roots are forced to grow through a *P. sojae*-inoculated agar layer, and assessment of PR is based on root rot evaluations that require experience and can be subjective. The layer test was modified by replacing the agar layer with *P. sojae*-inoculated rice. Dry root weight was used to screen for PR. Six varieties of soybean with known levels of PR were evaluated using the layer test and modified method. No differences between methods were observed for PR, and PR ratings correlated well with corrected dry root weight ($r = -0.965$, $P < 0.001$). The modified method has the advantage that handling agar plates is not required, no training is needed for evaluations and more than one pathotype can be easily used to screen for PR by mixing rice inoculum of different isolates.