

B-190

Initial screening of South African commercial soybean [*Glycine max* (L.) Merr] cultivars for simple sequence repeats (SSR) conferring resistance to *Sclerotinia sclerotiorum*.  
*Pfano Mbedzi\**, Plant and Soil Sciences, University of Pretoria, Gauteng, South Africa  
*Juan Vorster*, Plant and Soil Sciences, University of Pretoria, Gauteng, South Africa  
*Jacquie van der Waals*, Plant Pathology, University of Pretoria, Gauteng, South Africa  
*Sclerotinia sclerotiorum* (Lib.) de Barry, commonly known as Sclerotinia stem/stalk rot is one of the pathogens that have a potential devastating impact on the growth of soybean industry in South Africa. Several QTLs that play a role in soybean resistance to Sclerotinia stem rot have been identified and mapped on the soybean's integrated genetic linkage map; but, none of these QTLs have been evaluated in any of the commercial soybean cultivars grown in South Africa. The objective of this study was to characterise SSR markers from QTLs that are reported to have an association with stem rot resistance on South African commercial soybean cultivars. Twenty SSR markers that have been reported to have an association with stem rot resistance on soybean were screened on 29 Commercial soybean cultivars that are currently planted in South Africa. Three markers were not polymorphic, while seventeen showed polymorphism in a few or more cultivars. There was a wide distribution of shared alleles across cultivars; some cultivars shared alleles with a cultivar of known resistance (Maple arrow) and some with a cultivar of known susceptibility (Williams 82) to Sclerotinia stem rot. A few cultivars also had alleles that were only specific to them. While this is only just an initial study, knowing which SSR loci contains alleles that are shared between South African cultivars and Maple arrow provides an insight on the genetic resistance of South African soybean cultivars to Sclerotinia stem rot. The information from this study also aids South African soybean breeders in selecting useful stem rot resistance markers among those that have been previously reported.