Tennessee Soybean Promotion Board

Final Report

Project # 20-149-R

Approximately 60 crosses were made between TN15-4009 and DA10x30-09F to initiate the introgression of the Southern Stem Canker (SSC) resistance gene into the recently released susceptible germplasm line TN15-4009. The backcross to integrate this gene further will be completed in our winter nursery this 2020-2021 season. The first round of backcrosses were made between the newly released high protein high yielding TN15-5007 and (TN15-5007 x SA12-1451) to further integrate the Dt1 indeterminate growth habit gene into TN15-5007. Backcrossing was completed this summer to complete the BC5 conversions of Ellis, TN18-4110 and TN16-520R1 with the indeterminate stem growth habit. Single Nucleotide Polymorphisms (SNP) data shows successful introgression of the indeterminate growth habit Dt1 allele into Ellis, TN18-4110, and TN15-5007 with the majority of rows homozygous for the trait. Approximately 110 pure near isogenic lines differing at the Dt1 allele have been identified in the population selection rows as a result of this project. These will be implemented in a yield trial in 2021 to determine any difference in yield and overall performance related to the indeterminant growth habit.