

QTLs for Leaf Spot Resistance, Yield, and Maturity in an Interspecific Peanut Introgression Population in West Africa and Texas using KASP Markers.

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A BC₃F₆ population developed from a cross with the synthetic amphidiploid TxAG-6 [*A. batizocoi* x (*A. cardenasii* x *A. diogo*)]^{4x} as donor and Florunner as recurrent parent resulted in isolation of individual lines having high oil contents, resistance to leaf spot disease, root-knot nematodes, and rust. Genome-specific SNP-based markers were designed and used to make a genetic map from 63 BC₁ individuals for making a genetic map using KASP markers, and genotypes of 317 BC₃F₆ individuals from this population were obtained on the Fluidigm Biomark system. Phenotypic evaluation was performed in Ghana, Burkina Faso, and Texas. QTLs were identified for resistance to early leaf spot, late leaf spot, and rust. Several QTLs were consistent across environments while others were environment-specific. Additional QTLs were identified for yield and maturity. It is expected that resistant accessions and markers will be useful for marker-assisted breeding, to introgress resistance into suitable agronomic backgrounds.