Introgression of QTLs for anthracnose resistance (Colletotrichum sublineolum) in an elite sorghum variety from Mali

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Sorghum (Sorghum bicolor), the fifth most cultivated cereal in the world, ensures food security for millions of people in Africa. Anthracnose (*Colletotrichum sublineolum*) is one of the most important disease in sorghum production areas in Mali. Anthracnose causes premature drying and defoliation resulting in low grain yield. The objective of this study is to improve sorghum resistance to anthracnose by introgressing resistance QTLs into an elite Malian sorghum variety. Study was conducted at the Sotuba station. Pathogen source consisted of *C. sublineolum* strains collected in the major sorghum production zones in Mali (Kita, Bougouni, Longorola, Farako, N'tarla, Signé, sirakelé, Bla and Cinzana). Tiandougou Coura, a highly susceptible to anthracnose Malian elite variety was used as a recurrent parent and three varieties (B35, Grinkan and E36-1) were use as donor for resistance to anthracnose. The QTLs were introgressed by molecular marker-assisted backcrossing method in order to obtain three BC3F3 populations (one population per donor parent). Population development was also accelerated by forcing floral initiation to allow the development of three generations per year. The BC3F4 plants are currently being phenotyped for anthrachnose resistance, yield traits, stover and grain quality.

Table of contents