Abstract

Sorghum is the world's fifth most important cereal, in terms of both production and area planted. *Striga hermonthica* is one of the major constraints of sorghum production globally and particularly so in Eastern Africa. This study aimed at transferring five *Striga* resistances Quantitative Trait Loci (QTL) located on linkage groups SBI-01, SBI-02, SBI-05 and SBI-06 from a genetically mapped donor source line N13 into a locally adapted farmer preferred variety, IS8193 using Simple Sequence Repeats (SSRs). Nine polymorphic SSR markers were used to identify F1 generations and the subsequent BC1F1 progenies carrying *Striga* resistance QTL. Sixteen F1 progenies and twelve BC1F1 were found to have incorporated one to three *Striga* resistances QTL. The twelve BC1F1 lines with *Striga* resistance QTL were subsequently backcrossed to IS8193 to produce BC2F1 generation for further fore-ground and back-ground selection in the future. This work was conducted during March 2010 to August 2011 at University of Nairobi and at Biosciences eastern and central Africa (BecA)-Nairobi Kenya.
Keywords - Molecular markers, Quantitative Trait Loci, Simple Sequence Repeat (SSR) Markers, *Striga hermonthica*