

HIGH-RESOLUTION GENETIC MAPPING OF THE MI-C11 LOCUS ON CHROMOSOME 11**Xinlian Shen****Yajun He****University of Georgia****Tifton, GA****Richard Davis****USDA-ARS****Tifton, GA****Robert L. Nichols****Cotton Incorporated****Cary, NC****Peng Chee****University of Georgia****Tifton, GA****Abstract**

In an earlier study, we identified a major QTL for resistance to root-knot nematodes in the M-120 RNR Upland cotton line (*Gossypium hirsutum* L.) of the Auburn 623 RNR source, located in 12.9 cM interval flanked by two SSR markers CIR069-CIR316 on the distal segment of chromosome11. To identify more markers between the intervals CIR069-CIR196, a bulked segregant analysis was carried out by using two DNA pools consisting of five individuals each that are homozygous for the two parental alleles. From a survey of 1024 AFLP primer combinations and 480 RGA-AFLP primer combinations, eight AFLP and one RGA-AFLP markers closely linked to the target region were identified. An additional 1233 F2 individuals from the same cross was tested for nematode resistance and genotyped to monitor for recombination. The Mi-C11 locus was delimited to 0.7 cM interval flanked by CIR069 and the AFLP marker P2M8-250.