

1411 Molecular diversity of A-genome cotton

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The diploid Asiatic cotton species constitute a valuable gene pool for the more agronomically desirable cultivated tetraploid cultivars and offer a good resource to study gene structure and function through gene knockout strategies. Both Asiatic species, *Gossypium arboreum* L. and *G. herbaceum* L. are considered "Old World" cotton crops. The South African perennial *G. herbaceum* race *africanum* is truly wild, and is a modern representative of the wild ancestor of the cultivated "Old World" diploid cottons. Genetic diversity is the basis for genetic improvement. By studying the genetic relationships between strains of diploid cotton in various ecological regions, it is possible not only to establish a theoretical basis for conserving diploid cotton germplasm resources, but also to target and improve certain ideal characteristics such as early maturity, resistance to stress, and fiber quality, and to exploit this germplasm in modern cotton production. Our work is to evaluate SSR primer sets from different series for polymorphisms and additional accessions of both A genome species in order to determine the putative diversity as extensively as possible.