

Confirming the F₁ Hybridity Using SSR Markers in Sesamum (*Sesamum indicum L*)

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ABSTRACT

A field experiment was conducted during Late summer, 2010-11 at Institute of Biotechnology , Rajendra nagar, involving two parents. In the present study, Swetha til, a high yielding popular white seeded variety and BB3-8 accession of *Sesamum mulayanum*, a wild variety resistant to powdery mildew from RARS, Jagtial were selected as parents for hybridization. F₁ was developed by crossing the resistant parent (BB3-8 accession of *Sesamum mulayanum*) and the susceptible parent (Swetha til) during late summer, 2010. Parentage of F₁ hybrids of sesamum was verified using microsattelite (SSR) markers. Out of 300 primers surveyed, 240 showed clear amplification pattern and 24 markers(10%)were found polymorphic between two sesamum parents (Swetha til and *Sesamum mulayanum*). These highly informative primers not only differentiated the parent genotypes but also confirmed the parentage of their true F₁ hybrids. Our findings revealed that SSR procedures are excellent genomic tools for parentage confirmation and hybridity determination, and would also enhance efficiency of our breeding programmes through marker assisted selection.

Key words :F₁ hybrids, Markers, Sesamum.