

Meiotic behavior of a nonaploid accession endorses $x = 6$ for *Brachiaria humidicola* (Poaceae)

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ABSTRACT. *Brachiaria humidicola* (Poaceae), originally from Africa, is an economically important pasture plant in tropical South America. An accession of *B. humidicola* (H038) collected from the wild African savanna (Mbeya, Tanzania) showed irregular microsporogenesis. This meiotic behavior was consistent with an allopolyploid origin. Multivalent chromosome association at diakinesis gave tri- to octavalents, associated with two nucleoli in some cells. Six non-congregated univalents in metaphase I and anaphase I, along with previous lines of evidence for $x = 6$ in *B. humidicola*, confirm H038 as a nonaploid accession, $2n = 9x = 54$. Asynchrony in the genome during microsporogenesis also corroborated this assumption. Its putative origin could be a cross between two related species with different rhythms in meiosis. The meiotic behavior of this accession reinforces the hypothesis of the existence of a new basic chromosome number ($x = 6$) for *Brachiaria*. The use of this accession in the breeding of this important forage grass for the tropics is discussed.

Key words: *Brachiaria humidicola*; Basic chromosome number; Forage grass; Genome affinity; Meiosis