Cytogenetic study of some allium species (Subgenus allium and Melanocrommyum) in Iran

ABSTRACT

The karyological data of 7 species of Allium represents information in 2 parts of Iran: East Azerbaijan and Kurdistan is reported here with the basic chromosome number x=8. Most of the karyotypes are symmetrical consisting of metacentric and submetacentric chromosomes. According to the results of this study A. rubellum species is diploid so that its karyotype consists of 16 chromosomes (2n=2x=16) whose sizes are between 8.084–10.268 μm, and chromosomes pairs No. 2 and 3 includes satellites. All of the chromosomes were metacentric type. A. longicuspis species, as this study explains, is tetraploid and its karyotype includes 32 chromosomes (2n=4x=32) of sizes of 4.912–7.462 μm. Chromosomes pairs No.4 and 6 include satellite. Also according to the results of this research, A. staminum species is diploid, with 16 chromosomes (2n=2x=16), with sizes between 6.807–10.456 μm. A. iranicum species, is tetraploid and its karyotype includes 32 chromosome (2n=4x=32), with sizes of 6.719–12.221 μm. A. leave, A. dictyoscordum and A. cardiostemon are diploid with 16 chromosomes. 1B chromosomes were observed for these last 2 species of East Azerbaijan populations (2n=2x=16+1B).

Keyword: Allium; B-chromosome; Chromosome number; East Azerbaijan; Karotype; Kurdistan