

## Identification and numeration of the univalent chromosomes for cotton monosomic lines by means the tester translocations

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We have continued to identify cotton monosomic lines of the cytogenetic collection of Uzbekistan using a well-defined tester set of translocation lines of the USA, kindly provided by Prof. D.M. Stelly, Texas A&M University, USA. Monosomes were identified by analyzing meiotic metaphase I configurations of monosomic translocation heterozygous  $F_1$  hybrid plants. The tests with translocation lines showed, that the monosomes Mo76 and Mo89 are chromosome 4 At – subgenome of cotton, because the monosomic  $F_1$  hybrids from crosses with two translocation lines TT4L-19R and TT4R-15L had the MI pairing configurations  $24^{II}+1^{III}$ . Also the study detected, that the monosomes Mo34 and Mo95 are chromosome 6 At – subgenome of cotton, because the monosomic  $F_1$  hybrid plants of Mo34xTT3L-6L, Mo34xTT6L-14L and Mo95xTT3L-6L, Mo95xTT6L-10R had the MI pairing configurations  $24^{II}+1^{III}$ . The tests indicated, that the monosome Mo93 is chromosome 2 At–subgenome, because the MI pairing configurations in the monosomic  $F_1$  hybrid plants of Mo93xTT2R-8Ra, Mo93xTT2R-8Rb and Mo93xTT2R-14R were  $24^{II}+1^{III}$  and common chromosome 2 had in all translocations. The test showed, that the monosome Mo48 could be from chromosome 7 or 18, because in the monosomic  $F_1$  hybrid of Mo48xTT7L-18R the MI pairing configuration was  $24^{II}+1^{III}$ . Molecular marker data suggested that the monosome Mo48 is chromosome 18 Dt - subgenome. The test with translocation line TT15R-16Ra pointed out, that the monosome Mo82 could be from chromosome 15 or 16 Dt – subgenome, because in the monosomic  $F_1$  hybrid of Mo82xTT15R-16Ra the MI pairing configuration was  $24^{II}+1^{III}$ . The utilization of the translocation lines in our investigation provided the unified numeration of the monosomes for 10 monosomic lines of the Uzbek cytogenetic collection: one is chromosome 2 At- subgenome, two are chromosome 4 At- subgenome, two are chromosome 6 At- subgenome, one is chromosome 18 Dt- subgenome and the monosome Mo82 could be from chromosome 15 or 16 Dt-subgenome of cotton.