PRODUCTIVITY AND QUALITY TRAITS OF SUNFLOWER INBRED LINE COLLECTION OF KAZAKHSTAN

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ABSTRACT

Assessment of 43 restore (R) lines, 36 male – sterile (A) lines and 44 maintainer (B) lines on seeds quality and productivity was done for the searching linkage between economic valuable traits and protein, molecular characteristics. 41 lines were selected as sources for breeding hybrids with high level of oil content, weight of 1000 seeds, total seed number per head and low percent of seeds hull. Screening purity of inbred lines on the base of seeds storage protein electrophoreses revealed 3 heterogeneous lines among restore lines collection (VKU 34RR, VKU 250R, VKU 360R), 3 heterogeneous mail-sterile lines (CMS): VKU 270 A, VKU 116 A, VKU 136 A and 5 heterogeneous maintainer lines : VKU 1B, VKU 183B, VKU 108B, VKU 286B, VKU 110B. According to helianthinin spectra in all sets of inbred lines 4 types of band composition were revealed. Ratio of 1: 2: 3: 4 types in a set of R lines was 79,1%; 4,7%; 11,6% and 9,3%, in a set of A lines 56,4%; 7,7%; 25,6% and 10,3%, in a set of B lines – 61,3%; 4,5%; 25%; 9,0%.

Key words: sunflower, inbred lines, seeds quality, productivity, line purity