

## PHENOTYPIC AND ELECTROPHORETIC ASSESSMENT OF GENETIC PURITY IN SUNFLOWER INBRED LINES

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Success in production of sunflower hybrid seeds depends on genetic purity of the seeds of inbred lines. Factors affecting directly the genetic purity of sunflower inbred lines are migration and random open pollination.

Phenotype may serve as an indicator of genetic purity since genetically controlled quantitative traits define the phenotype.

A laboratory assessment of genetic purity is based on the determination of gene products. Enzyme formation being under a direct control of genes, enzymic variants (isozymes) may serve for the laboratory assessment of genetic purity.

The phenotypic assessments were conducted on plants grown in a field experiment. Experimental materials consisted of 12 inbred lines. The assessments were made at the stage of budding (IV-VI stage of organogenesis) and physiological maturity (XII stage). About 100 plants of each line were assessed.

The laboratory assessment covered enzymic variants controlled by three loci. About 100 seedlings of each line were analysed.

The values of genetic purity obtained on the basis of the phenotypic assessments ranged from 90 to 100%. The assessments made at the stage of physiological maturity produced more reliable results than those made at the stage of budding.

The results obtained by the laboratory estimation indicate that the analysing of genetic purity of inbred line seeds on the basis of several gene markers rendered the most reliable results.