

Protein and eight enzymatic systems in three varieties of *Helianthus annuus* L.

Andrzej Kalinowski¹, Małgorzata Klimko², Liping He³, Magdalena Kluza².

- 1- Institute of Plant Genetics, Polish Academy of Sciences , Laboratory of Molecular Genetics, 60-479 Poznań, Strzeszyńska 34. Poland.
- 2- Department of Botany, Agriculture Academy, 60-625 Poznań, Wojska Polskiego 71c, Poland.
- 3- Faculty of Agriculture, Yunan Agricultural University, Kunming, P.R. China 650201.

Abstract

The paper reports results of analysis of total proteins including eight enzymatic systems of three varieties of *Helianthus annuus* L. (WIELKOPOLSKI, CORIL, and FRANKASOL) performed by three electrophoretic methods. Electrophoretic analyses allowed finding isoenzymes markers for each of variety. The two interline hybrids CORIL and FRANKASOL shared more features in common than the population variety WIELKOPOLSKI with each of the former. Mean values of the polymorphism index for the total protein and the eight enzymes indicate that the variety WIELKOPOLSKI is more homogeneous than CORIL and FRANKASOL.

Key words: electrophoresis, enzymes, isoelectrofocusing, proteins, sunflower, variability