

THE SELECTION AND EVALUATION OF PROMISING FORMS OF *SESAMUM INDICUM* L.

Lilia CHISNICEAN¹, Tamara JELEZNEAC¹, Zinaida VORNICU¹

e-mail: chisnicean156@gmail.com

Abstract

Sesame (*Sesamum indicum* L.) is a "historic" species recognized as an oleaginous and medicinal plant since over 5000 years ago. The works on its acclimatization started with 5 seed samples from India and 6 from Bulgaria, all of which were included in the breeding process. The seed material obtained after crossings was subjected to "negative selection", choosing the forms with the shortest growing season and high productivity under the climatic conditions of our region. After six years of selection, a form that corresponded to the initial requirements was obtained. The comparative crops tests (CCT) conducted over several years confirmed the superiority of the selected form by high productivity of 1.2-1.5 t/ha and oil content of 55.4%, making it possible to register it in the National Register as a cultivar with the name 'Deliciu', which is still used by Moldovan farmers. The breeding has continued, in order to obtain cultivars with capsules that ripen simultaneously and do not open before harvesting, another cultivar, which is undergoing CCT testing, was chosen by the method of repeated selections. The new cultivar reaches a height of about 125-127 cm, which contributes to the facilitation of mechanized harvesting, with a production potential of 1.4-1.8 t/ha, the content of fatty oil 60.3% and the duration of the growing season of 132-138 days. Thus, as a result of the selection, the sesame crop was included in the agricultural production as a source of aromatic plant oil, and the seeds being a food additive with high content of Ca, Fe, Zn, Mg, P, Cu vitamins and minerals.

Key words: breeding process, cultivar, productivity, *Sesamum indicum*