

EFFICIENCY OF FERTILIZING IN SUNFLOWER CULTIVATION TECHNOLOGY

L.A. GARBAR, *candidate of agricultural sciences, Associate professor of plant
science department*

National university of life and environmental sciences of Ukraine

N.V. KNAP, *candidate of agricultural sciences*

*Interdepartmental educational laboratory based on SD NULES “Mukachiv
agricultural college”*

e-mail: garbarl@ukr.net

Abstract. An important place among the factors that ensure a high yield of sunflower is occupied by plant nutrition conditions throughout the growing season and technological measures aimed at realizing the genetic potential of sunflower in some regions of Ukraine. It to Deeply study the potential of domestic hybrids under different growing conditions is necessary to identify their competitiveness and promotion, which will increase the quality and yield of the crop as a whole.

Introduction and application in the production of new complex microfertilizers on the background of basic fertilizers, which can increase the efficiency of plant nutrients of mineral fertilizers and soil, is one of the ways to increase crop yields and quality of agricultural products.

Despite the importance of sunflower as one of the traditional crops of Ukraine, the technology of its cultivation in the Steppe zone today has many unsolved problems. Among the technical measures aimed at increasing the yield of sunflower, an important place is occupied by the choice of optimal rates of fertilizer application and micronutrient fertilization in critical periods of crop development.

The purpose of the research was to establish the influence of fertilizers and selection of high-yielding hybrids (NK Diamantis, SI Kupava, NK Neoma) for specific soil and climatic conditions through the formation of their productivity.

Field research was conducted during 2018–2019 on typical low-humus chernozems. As a result of research, it was found that the use of twice foliar fertilization on the background of the main fertilizer Ecoline Bor, Nertus Bor, Bast Bor in phase 4 and 8 leaves of 1 L/ha stimulated the formation of leaf surface, contributed to the accumulation of dry matter and high yields sunflower hybrids.

Maximum indicators of the leaf surface area were formed in the flowering phase of sunflower plants, which under the influence of fertilizer variants changed in the following range: in plants of the hybrid NK Diamantis from 37.6 to 48.7 thousand m²/ha, SI Kupava was 41.1 - 52.39 thousand m²/ha, NK Neoma - 36.5-47.6 thousand m²/ha. The highest indicator of leaf area was formed by plants of the SI Kupava hybrid on the variant with application of N₃₆P₅₆K₁₀₈S₂₈ + N₂₃ + Ecoline Bor ”(4 and 8 leaves), which amounted to 52.39 thousand m²/ha.

Key words: sunflower, fertilizers, micronutrients, boron, hybrids, Ecoline Bor, Nertus Bor, Bast Bor, leaf surface area, dry matter, yield.