

GROWTH AND PRODUCTIVITY OF SUNFLOWER DEPENDS ON SOWING DENSITY IN THE RIGHT BANK FOREST STEPPE

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The latest hybrids and varieties of sunflower differ in both morphological features and adaptation to changing growing conditions depending on soil and climatic conditions and agrotechnical factors.

Sowing methods and seeding density are important in this perspective. Studies conducted in different areas of sunflower cultivation showed that an increase in the density of plant stands on plots was accompanied by a decrease in the leaf surface area per plant, but the leaf surface area increased in proportion to the increase in the level of stand density.

At the same time, an increase in plant density per unit area actively affects morphological and yield indicators. As the density decreases, the diameter of the basket, the area of the leaf surface, the diameter of the stem at the base increases, and the height of the plants decreases. And with an increase in the density of sowing, the number of leaves on the plant decreases.

In this regard, increasing the density of sowing more than 80 thousand/ha leads to the deterioration of productive and quality indicators of plants, and the use of plant density of less than 40 thousand/ha sharply reduces productivity and yield of oil per unit area. The density of plants directly affects such indicators as the weight of 1000 pcs. of seeds, weight of seeds from one inflorescence and total productivity.

The main economic indicators, through the lens of which we considered this problem, were production costs, the value of the harvested crop, profit, unit cost of production and the level of profitability. When calculating the value of the harvest, stock exchange prices for sunflower seeds were used.

The density of plant stands (area of nutrition of one plant) is a factor that is subject to correction, which greatly affects their relationship in the agroecosystem. In a sparse stand, more favorable conditions are created for the development of each plant, their potential productivity is more fully realized: more flowers are laid in the inflorescence, less empty grains, larger seeds.

However, the maximum crop yield cannot be achieved only if the needs are best met and the potential productivity of each plant is fully realized.

Thus, the optimization of the spatial arrangement of plants in agroecosystems in the system of sunflower cultivation technology is one of the decisive factors in increasing crop yield. At the same time, it is important to take into account the soil and climatic features of the growing region and the duration of the growing season of sunflower varieties and hybrids.