

IMPACT OF THE GROWTH REGULATOR ON YIELD AND QUALITY OF SOUR CHERRIES FRUITS

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The aim of the research was to determine the effect of the product Pilarhance SL as a growth regulator in the crowns of sour cherry trees of the Erdi Botermo variety, to maintain a physiological balance between growth, fruiting, and obtaining consistent high-quality yields. In the control variant, tree crowns were sprayed with water. In the second and third variants, two treatments were carried out with the product Pilarhance SL at a dose of 0.8 and 1.3 l/ha. The first treatment was carried out at the end of the flowering period (25.04.2025), and the second during the period when the fruit color changed from green to yellow (12.05.2025). The studies were conducted under field and laboratory conditions according to the accepted methodology for conducting experiments with fruit crops and growth regulators.

The use of the growth regulator Pilarhance, SL, at doses of 0.8 l/ha and 1.3 l/ha increased the leaf area in these variants compared to the control. The minimum average length of annual growth was observed in the control variant (49.3 cm), and the most developed shoots were received in the variant Pilarhance, SL at a dose of 1.3 l/ha (55.2 cm). The highest percentage of fruit set (23.5%) was recorded in the variant treated with Pilarhance, SL at a dose of 1.3 l/ha, i.e., the increase was 2.1% compared to the control variant. The results obtained prove that in the variant treated with the growth regulator Pilarhance, SL at a dose of 1.3 l/ha, the proportion of fruit set in the crowns of trees and the number of fruits obtained were higher compared to the other experimental variants. In variant Pilarhance, SL at a dose of 1.3 l/ha, a significant increase in the number of fruits (780 pieces/tree) and their average weight (5.77 g) was recorded, which led to a significant increase in yield both per tree (4.5 kg) and per unit area (5.62 t/ha).

The effectiveness of using the growth regulator at a dose of 0.8 l/ha to stimulate growth processes and fruit development was insignificantly higher than the control variant, while with an increase in the dose to 1.3 l/ha, the studied indicator was much higher compared to the other tested variants. The greatest intensity of growth processes in the tree crown and sour cherry fruit development was recorded in the variant with Pilarhance, SL at a dose of 1.3 l/ha, treated twice by spraying. The first treatment should be carried out at the end of the flowering period, and the second during the period when the fruit color changes from green to yellow.

Acknowledgments: The research was supported by the Institutional Project, subprogram 020407 „Development and implementation of good practices of sustainable agriculture and climate resilience” GREEN, implemented at the Technical University of Moldova.

Keywords: *growth, leaf area, production, setting.*