THE ACTION OF GROWTH REGULATORS ON THE PROCESS OF PHOTOSYNTHESIS IN SUNFLOWER

Mihaela COVAȘĂ[1], Cristina SLABU[1], Alina Elena MARTA[1], Carmenica Doina JITĂREANU[1]

e-mail: miha_bologa@yahoo.com

Abstract

One of the main physiological processes that are directly influenced by the action of biostimulants and which has a decisive factor in the quantity and quality of the crop is photosynthesis. That is why our study aimed to establish the main ways in which growth regulators intensify the process of photosynthesis. We followed the effect of some biostimulants on the intensity of the photosynthesis process in the sunflower crop, a crop that in recent years has remained in the top of UE countries with the largest cultivated land areas but also with high yields. The study was performed on the *NK NEOMA* sunflower hybrid, and the treatments were done with the biostimulants *Atonik* and *Terra - Sorb* in a concentration of 0.3%. Two treatments were made in two different phenophases: at the formation of the floral botton and before flowering. The evaluation of the intensity of the photosynthesis process was performed by: determining the total chlorophyll content (CCI) and by determining the content of photosynthetic pigments in the leaves, maintaining an interval of 7 days from the application of biostimulants. The results showed an intensification of the photosynthesis process in the flowering phenophase I for the variants treated with biostimulators. The group of plants treated with *Terra Sorb* is noted with the highest value, which coincides with the higher number of leaves/per plant recorded in the second phenophase studied. The obtained results demonstrate higher values of the chlorophyll a content for the variants treated with biostimulants, in both phenophases, the control group registering lower values.

Key words: sunflower, photosynthesis, biostimulants