Considerations on the evolution of Papaver somniferum L. plants, in greenhouse conditions, after treatments with growth stimulators

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In this paper we observed the evolution of opium poppy plants, Papaver somniferum L., in greenhouse conditions, after the foliar treatment with growth regulators. Plant growth regulators are chemical substances that are designed to affect plant growth and/or development.

The growth regulators we used are: 2 chloro, 4 amino-sulphonic phenoxy acetic acid, sodium salt (BCO-2), 2 chloro, 2 amino-sulphonic phenoxy acetic acid, sodium salt (BCO-4) and 2, 4 dichlorophenoxy – acetic acid (2,4-D). All substances were used in two concentrations: 25 ppm and 50 ppm.

The 2 chloro, 4 amino-sulphonic phenoxy acetic acid, sodium salt and 4 chloro, 2 amino-sulphonic phenoxy acetic acid, sodium salt are growth stimulators and the 2, 4 dichlorophenoxy – acetic acid is a growth inhibitor. The 2,4 dichlorophenoxy – acetic acid is used as a herbicide affecting the dicotyledonous plants, increasing the rate of DNA, RNA and protein synthesis and impeding thus an outbalanced, controlled growth. The treatments were made on opium poppy plants, in different vegetation phases. After the treatment we made the biometrical measurements of plants' height at three, five and seven weeks from rising.

A very significant effect had the treatment with BCO-2, at 50 ppm concentration for all vegetation stages and the variant with 2,4 D at 50 ppm concentration. A significant effect had also the treatment with BCO-4 and BCO-2 in a concentration of 25 ppm.