

Changes in the dynamics of germination and growth of flax, garden cress and radish seeds under the increasing dilutions of chosen auxins.

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Introduction: As it has been proved earlier the activity of the enzymes from a phenoloxidase group of bacteria and fungi [1-5] change in accordance's with a sine curve as a result of the incubation with the increasing dilutions of their phenol effectors. This phenomenon seems to be common, however it requires a greater amount of comparative studies with the use of other kind of biological material and its biological effectors.

Aim: To test the action of subsequent dilutions of three auxins, IAA, NAA and 2,4-D within the range of dilution ranging from C1 (100^{-1}) to C30 (100^{-30}) on the chosen plants.

Methods: Selected flax, garden cress and radish seeds were subject to germination in the presence of solutions of the mentioned auxins in the subsequent dilutions ranging from C1 to C30. The series of dilutions were prepared laboratory. The cultures were carried out in the Petri dishes in water environment or in deeper plastic vessels on the sieved soil. The assessed parameters were the length of sprouts, a percentage of germinated seeds and a speed of plants growth.

Results: Among the three kinds of tested plants, a greater differentiation of growth depending on the used dilution and a kind of auxin, had the flax seeds. A certain correlation between a kind of plant and the effectiveness of a particular auxin has been noticed. The smallest differentiation of the speed of growth was observed in case of a garden cress seeds. The third kind of plant, a radish had an irregular rising not only with regard to a fast increase in a plant mass but also to a kind of auxin.

Conclusion: The obtained studies proved sinusoidal relativities of growth with regard to a plants reaction to different dilutions of a growth effector's similarly as it was proved on a fungal and bacterial material. Apart from that they proved a rule that the changes in the amplitude of these transformations are dependent on the affinity between the effectors and the examined biological object.

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