THE INFLUENCE OF GRAMOXONE ON PHOTOSYNTHETIC PIGMENTS CONTENT IN ZEA MAYS
INFLUENŢA GRAMOXONELUI ASUPRA CONŢINUTUL DE PIGMENŢI FOTOSINTETICI LA ZEA MAYS

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The mechanism of action of the herbicide Gramoxone is known to be the inhibition of plant photosynthetic system by capture of photosynthetic electron, together with the generation of reactive oxygen species. In previous studies, we found that the active compound of Gramoxone (named methyl-viologen or Paraquat) is influencing the activity of protoporphyrinogen oxidase - essential enzyme of the reaction chain involved in chlorophyll synthesis.
In the present work were studied the modifications of the chlorophyll–a and -b and of carotenes content in Zea mays in the presence of Gramoxone and decreases of concentrations were found for each of them and for all used herbicide concentrations. The obtained results confirm previous similar researches, so the conclusion is that the photosynthetic process is perturb not only by electron capture, but also by the diminution of the most important photosynthetic pigments level.