



Pesticide dinitrofenolice: activitate biologică, toxicitate și mecanism de acțiune

Ramona MOLNAR, Dorina CREANGA, A. PUI, Raluca RUSCANU - Universitatea "Al. I. Cuza" Iași

Manuela MURARIU - Universitatea Tehnică "Gh. Asachi" Iași

Catalina CIOBANU, M. NEICA, G. DROCHIOIU - Universitatea "Al. I. Cuza" Iași

Several dinitrophenyl ethers such as dinitroanisole, 2,4-dinitro-1-(octadecyloxy)benzene, 3-(2,4-dinitrophenoxy)propan-1,2-diol have been synthesized and tested within the germination experiments comparatively to the classical dinitrophenols and dinitrophenol pesticides. Both ethers and phenol derivatives inhibited seed germination, most probably by blocking oxidative phosphorylation. Germination tests were carried out according to ISTA rules. A novel mechanism of action of these pesticides was proposed, which is concordant with Macovski's biostructural theory and not with proton translocation hypothesis by Peter Mitchell.