Synthesis of some organophosphorus phytoregulators used in vegetable growing. Ii. .onium. Derivatives of 2-chloroethylphosphonate of dipropyl

A. CĂPRIŢĂ, Rodica CĂPRIŢĂ - University of Agricultural Sciences Timişoara

2-chloroethylphosphonate of dipropyl was obtained by the reaction of propanol with the complex of AlCl3, PCl3 and 1,2-dichloroethane. The dipropyl ester of the 2-chloroethylphosphonic acid was reacted with trimethylamine, triethylamine, or triphenylphosphine to give the corresponding .onium. derivatives: Cl-XCH2CH2P(O)(OC3H7)2; X = (CH3)3N+; (C2H5)3N+; (C6H5)3P+. The plant growth regulating activity of the obtained substances was tested. In ripening tomatoes, increasing of the quantity of ripe fruits up to 23% over untreated control was obtained. In cucumber plants, increasing of the portion of female flowers (fruit bearing) up to 36% over untreated control was obtained.