

**Project Title** : Researches on Reducing of Pesticide Application Volume and Improving of Application Quality in The Cotton Fields

**Start /End Date** : 1997-1999

**Supporting Body** : GDAR

**Leader** : Aysel TÜCER

**Co-researchers** : Füsün TEZCAN, Hasan KOÇER, Neslihan ERKAL, Hüseyin GÜLER, Zübeyde ARASİLER

**Summary** : The biological effectiveness of Elektroboom (1/2 and 1/4 dosage ), Ulva+ (1/4 dosage), Micronex (1/4 dosage), conventional sprayer (recommended dosage and 1/2 dosage) and alternate row spraying giving opportunity to use half of the recommended dose rate in basic growth stage of cotton plant were investigated against leaf hopper (*Empoasca decipens* (Paoli.) and *Asymetrasca decedens* (Pao1i)). Micronex and Ulva+ at the 1/4 of the recommended dose rate provided significantly high effect. While conventional field sprayer were not succesful at 1/2 dosage rate, the alternate row spraying gave similar results to conventional spraying with recommended dosage. For that reason, the alternate row spraying seems to be hopeful according to results of one year trials. In fruit formation stage of cotton plant, the effect of Electroboom (1/2 and 1/4 dosage ), Ulva+ (1/4 dosage), Micronex (1/4 dosage), knapsack sprayer (recommended dosage) was determined. Against the same pests (leaf hoppers) the application 1/2 dosage with Elektroboom gave high effects when comparing with the others. In fruit formation stage in spite of 1/4 dosage application with electroboom, Ulva+ and Micronex gave better results than knapsack sprayer, however it has not been able to take under control the pests.

Deposition pattern of the tracer on target area was conducted as qualitative and quantitative. Deposition within all treatments tended to progressively decrease from upper to lower canopy levels. Contamination to non-target area with disc nozzles were lower than knapsack sprayer.