## Determination of Biological Efficiency Values of Some Pesticide Application Methods under Second Crop Maize Conditions

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**Abstract :** Maize can be cultivated both under main and second crop conditions in Turkey. Main pests of maize under second crop conditions are Sesamia nonagrioides Lefebvre (Lepidoptera: Noctuidae) and Ostrinia nubilalis Hübner (Lepidoptera: Crambidae). Aerial spraying applications to control these two main maize pests can be carried out until 2006 in Turkey before it was banned due to environmental concerns like drifting of sprayed pestisides and low biological efficiency. In this context, pulverizers which can spray tall maize plants ( > 175 cm) from the ground have begun to be used. However, the biological efficiency of these sprayers is unknown. Some methods have been tested to increase the success of ground spraying with TX cone jet, domestic cone nozzles, twinjet nozzles, air induction nozzles, standard domestic cone nozzles and tail booms) were used at two application rates (150 and 300 l.ha-1) by a sprayer. In the study, biological efficacy evaluations of each methods were measured in each parcel. Biological efficacy evaluations included counts of number of insect damaged plants, number of holes in stems and live larvae and pupa in stems of selected plants. As a result, the highest biological efficacy value (close to 70%) was obtained from Air Assisted Spraying method at 300 l/ha application volume.

Keywords : air assisted sprayer, drift nozzles, biological efficiency, maize plant

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