ABSTRACT

COMPARISON OF SOME SPRAYING CHARACTERISTICS FOR DIFFERENT SPRAY NOZZLE POSITIONS ON APPLICATION OF DEFOLIANT BY SIMULATION TECHNIQUE

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In this study, limit dosage figures and drop diameter, effects on surface coverage and deposition quantities in different spray nozzle positions which were taken place were determined of application defoliating agent before machine harvest on cotton plant. Experiments were carried on two phase as indoor area trials and laboratory analysis. In these researches, artificial cotton plants were used. Indoor area trials were conducted 2 different application norms (20-40 L/da) and 3 different in spray nozzle positions (GM, SGM and GMYA) with GKH. 27 pieces of sampling area were determined that they were included the two sides of the plant and plant centre position of the upper-middle-lower in initiative area on plants. Six initiative areas were determined in order to record efficiency in initiative area on plants. For the purpose of deposition of trace amounts of substances were determined in sampling area; water-sensitive paper is placed on top that included both over the leaves and beneath the leaves in order to detect each filter paper, and drop diameter, rate of coverage. In order to determine the amount of pesticide drift to the ground, sampling area was made up of with filter paper on near the plant and plant rows. The amount of deposit on areas that were done analysis in laboratory conditions was determined to with spectrophotometer. Drop diameters and coverage rate detection were done analysis on image analysis. In analysis conclusions is determined that GMYA which is used generally in 40 L/da norm provide the best deposition and coverage rate on applications of defoliant, in addition to pesticide reach on leaf beneath in merely this spray nozzle position.

Key words: Defoliant, conventional hollow cone, coverage rate, droplet size, drift, tracer deposit