

STUDY ON DETERMINING THE DEGREE OF COVERAGE WHEN PERFORMING PHYTOSANITARY TREATMENTS USING WATER SENSITIVE PAPER

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Abstract

Increased coverage when spraying, especially using contact substances, leads to higher efficiency and crops. Conventional nozzles, where the droplets move parallel to the stem of the plant ensures a good covering of the horizontal and inclined parts of plants, the vertical parts (strain) the deposit of the solution particles is lower and thus the coverage is inadequate. The main goal of this paper was to determine and to evaluate the coverage degree for 4 types of nozzles and for the Gamberini 500 orchard spraying machine. Experimental tests conducted with two types of nozzles aimed the coverage assessment of horizontal and vertical parts of the plant using conventional and double jet nozzles. Evaluation of coverage was made using water sensitive paper and the MATHCAD program, which determines the area covered. For the purpose of this paper, the machine Gamberini 500 was used in laboratory conditions to determine and evaluate the coverage degree. This spraying machine is a pneumatic one, with a special boom. In order to evaluate the degree of coverage, a special paper was used, which was placed at different heights (1; 2; 3m)

Key words: coverage, spraying machine, MATHCAD, water sensitive paper, pneumatic distribution