

The Dependence of the Liquid Application on the Coverage of the Sprayed Objects in Terms of the Characteristics of the Sprayed Object during Spraying

Authors : Beata Cieniawska, Deta Łuczycka, Katarzyna Dereń

Abstract : When assessing the quality of the spraying procedure, three indicators are used: uneven distribution of precipitation of liquid sprayed, degree of coverage of sprayed surfaces, and deposition of liquid spraying. However, there is a lack of information on the relationship between the quality parameters of the procedure. Therefore, the research was carried out at the Institute of Agricultural Engineering of Wrocław University of Environmental and Life Sciences. The aim of the study was to determine the relationship between the degree of coverage of sprayed surfaces and the deposition of liquid in the aspect of the parametric characteristics of the protected plant using selected single and double stream nozzles. Experiments were conducted under laboratory conditions. The carrier of nozzles acted as an independent self-propelled sprayer used for spraying, whereas the parametric characteristics of plants were determined using artificial plants as the ratio of the vertical projection surface and the horizontal projection surface. The results and their analysis showed a strong and very strong correlation between the analyzed parameters in terms of the characteristics of the sprayed object.

Keywords : degree of coverage, deposition of liquid, nozzle, spraying

Conference Title : ICAACS 2017 : International Conference on Agriculture, Agronomy and Crop Sciences

Conference Location : Zurich, Switzerland

Conference Dates : September 15-16, 2017