

FACTORS INVOLVED IN SELECTING NOZZLE TIPS FOR PESTICIDE APPLICATION. Robert N. Klein, Jeffrey A. Golus and Amanda S. Cox, University of Nebraska, North Platte, NE.

The two main factors involved in selection of spray nozzle tips for pesticide application are pesticide efficacy and spray drift management. Other factors include carrier rate which may affect performance and drift but also affects cost of application because high spray volumes require more time spent in filling tanks, mixing, etc, and also more additives since most additives are as percent of carrier. Non-translocated pesticides in general require more spray coverage than translocated pesticides. Research was accomplished with a Sympatec Helos Vareo KF particle size analyzer with a R6 lens capable of detecting particle sizes in a range from 0.5 to 1230 microns. The nozzle tips are mounted on a boom with an electric linear actuator which moves the entire spray plum through the laser beam. Field tests are conducted to determine coverage both with Droplet Scan and visual control. For translocated herbicides the air induction spray nozzle tips are usually the best choice since they reduce the number of small droplets and herbicide efficacy is not reduced.