

0203-VA-051 Control Wheat Scab with Improved Fungicide Application Technology.

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PROJECT ABSTRACT

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Standard, row-crop, boom spraying systems commonly used to apply herbicide and distribute plant nutrients have proven to be less effective than desired when applying fungicide to post-headed wheat for the control of FHB.

The objective of this study is to conduct a second year of adapting low-volume, air-assisted, small-droplet, fruit spraying technology into a cost efficient, 4 x 4 pick-up truck, mounted, "proto-type" fungicide application system for the control of FHB in wheat.

In 1999 visual deposition analysis and field efficacy studies showed that a modified, ULV (5gpa), blueberry sprayer provided equivalent efficacy to an optimally set-up 13 gpa, boom sprayer with horizontally, rearward mounted flat fan nozzles. 2000 field studies indicate efficacious fungicide control using a tower-type orchard sprayer on fifty-foot-swath centers. 2001 field studies compared the disease control of "non-sprayed", "standard boom sprayed" and "proto-type sprayed" systems. All vomitoxin levels measured in 2001 field studies were below the maximum acceptable commercial quality level. There was no significant difference between the "non-sprayed" and "standard boom sprayed" comparison. The prototype sprayer, used to apply fungicide to a fifty foot wide swath from both sides, resulted in was a very significant reduction of vomitoxin (approx. 1/3 of other observations).