

Technical Report for Advance 3000 Vortex

Farm data

Farm name: Goodyear Farms
Address: 335 Emma Road
Newmarket, ON L3Y-4V9
Farm Manager: Lien Ly
Spraying Manager: Yuki
Sprayer's Operator: Victor
Acreage: 1500 acres

Sprayer data

Model: Advance 3000 Vortex EE
Purchase: April 23rd

Crop & application data

Crop: Bok Choi
Product: Aliette
Rate: 2.5 kg/ha
Days to harvest: 7 days
Pest Controlled: Downy Mildew
Number of Spraying/year: maximum of 5 times

Comparison between conventional and air assisted spraying

Conventional spraying:

Goodyear Farm was using a conventional 14-meter boom sprayer, 2000-liter tank with the following application rate:
Application rate: 467 L/ha
Pressure: 120 PSI
Nozzle type: TeeJet AI 1003-VS
Tractor speed: 5 km/h



Figure 1



Figure 2

Important note: This area has approximately 25-km/h winds and that is reason they need to use air induction nozzles at high pressure, high rates and low speed. Even though it doesn't have as good coverage and penetration as the vortex has.

Air assisted spraying:

They used the Advance 3000 Vortex with 18-meter boom, 3000 liters tank, rate controller with the following application rate:

Application rate: 170 L/ha

Nozzles types: JA-2 at 150 PSI or AVI 110-025 at 60 PSI

Tractor speed: 7 – 8 km/h



Side picture of the Advance



Back picture of Advance



Front picture of the Advance Vortex spraying



Downy Mildew fungus



Downy Mildew underleaf



Fungicide used



Mixing the wettable powder



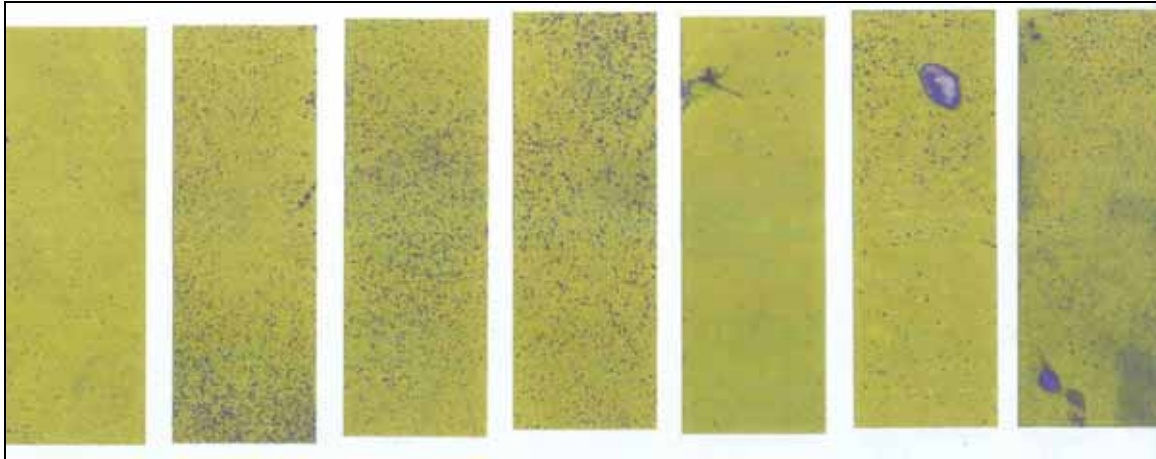
Suctioning the product



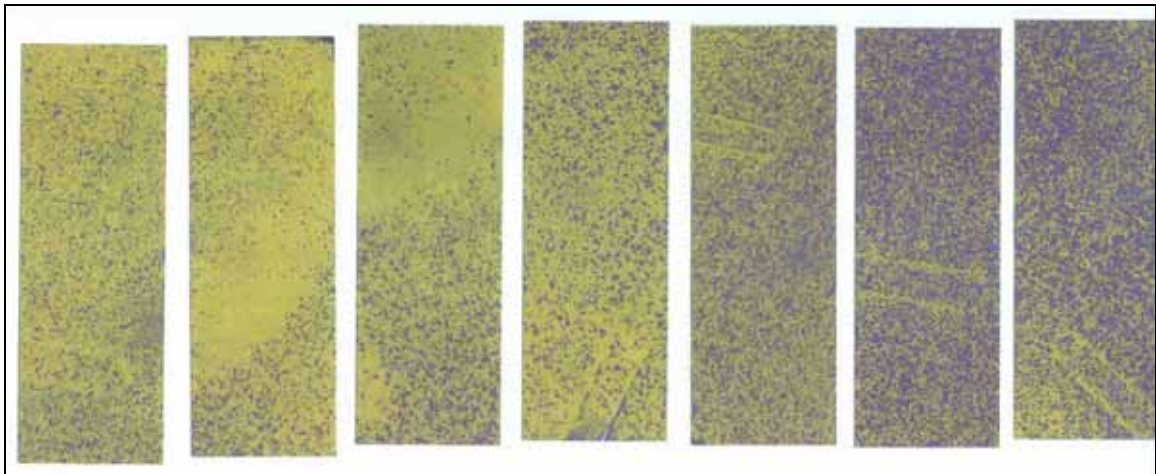
In cabin rate controller

The fungicide used was systemic and it is recommended 50 – 70 droplets per square centimeter. Before they were washing down the plants and wasting too much chemicals polluting the environment.

Following are some pictures illustrating the coverage difference between “convention and air assisted spraying”.



Sprayed without air assisted



Sprayed with air assisted

Summary

The Advance Vortex air assisted sprayer presented an outstanding performance compared to conventional sprayer. In addition, the customer is saving 70% of operating expenses using more concentrated solution. The customer is very satisfied with the results and he will purchase another one in the near future.

Reported by: *Douglas Santos Fernandes*
June 2004