

Title - Can you optimize Sigatoka aerial spraying for phenology & epidemiology?

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Authors

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Location

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Presentation- Summary

Aerial trials show the droplet spectrum output of CP11TTFF nozzles can be adjusted to improve deposition on the candela leaf with little effect on the older, horizontal leaves.

Adjusting nozzle orientation to increase the number of droplets, size range 110-320 μ m, improves recovery in zero and light winds by vertical cylindrical objects owing to increased horizontal droplet velocity combined with their higher catch efficiency on upright, cylindrical objects such as the candela leaf – up to 2.0 cm diameter. Results on horizontal collectors, like the unfurled leaves, show a larger droplet spectrum and no deposit difference in either condition.

These results, disease epidemiology and fungicide mode of action, all indicate that adoption of a 30-degree CP11TTFF angle would improve protectant fungicide bioavailability on the cylindrical candela leaves. In addition, the larger droplet spectrum produced by a 0-degree CP11TTFF would allow maximum volume recovery of systemic fungicides on open banana leaves.

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Figure #1



<p>How does the leaf shape (Phenology) influence the fungal ascospore and spray droplet recovery?</p>		
<p>Why does Sigatoka Epidemiology advocate for a difference in the spray recovery of Protectant vs. Systemic Fungicides?</p>		
	<p>Left - Candela ★ (Cylinders) have a very high capture efficiency for small diameter spores/drops</p>	
	<p>Right - Open leaves (horizontal) have a high capture efficiency <u>but in no</u> wind conditions +</p>	

Figure #2

	<p><u>Protectant Fungicides-</u> CP11TTFF nozzle @ 30° angle</p>
	<p><u>Systemic Fungicides-</u> CP11TTFF nozzle @ 0° angle</p>