

Evaluating the effect of adjuvants on the droplet spectrum

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Authors

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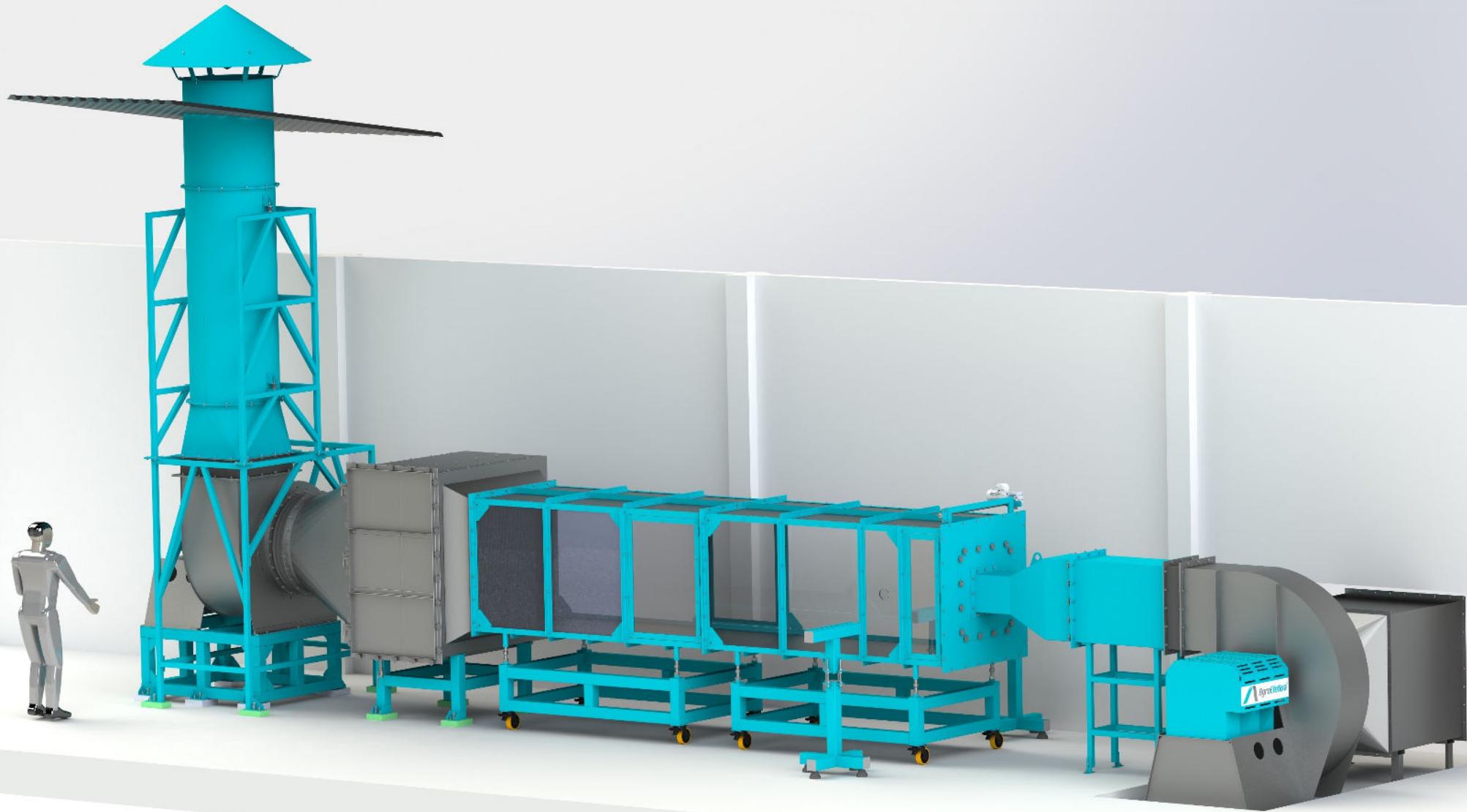


Introduction

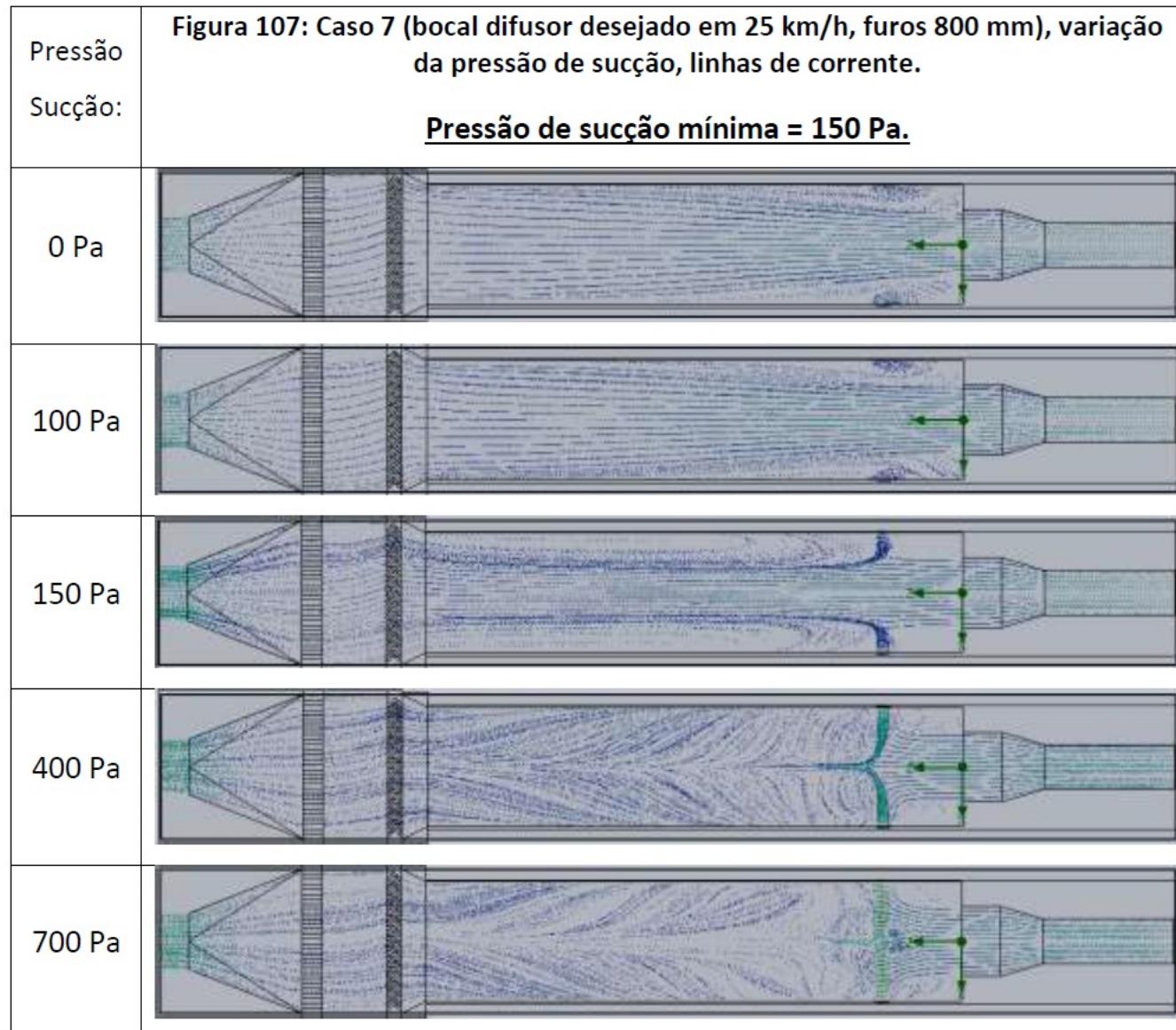


The High Speed Wind Tunnel at AgroEfetiva (Botucatu/SP - Brazil)

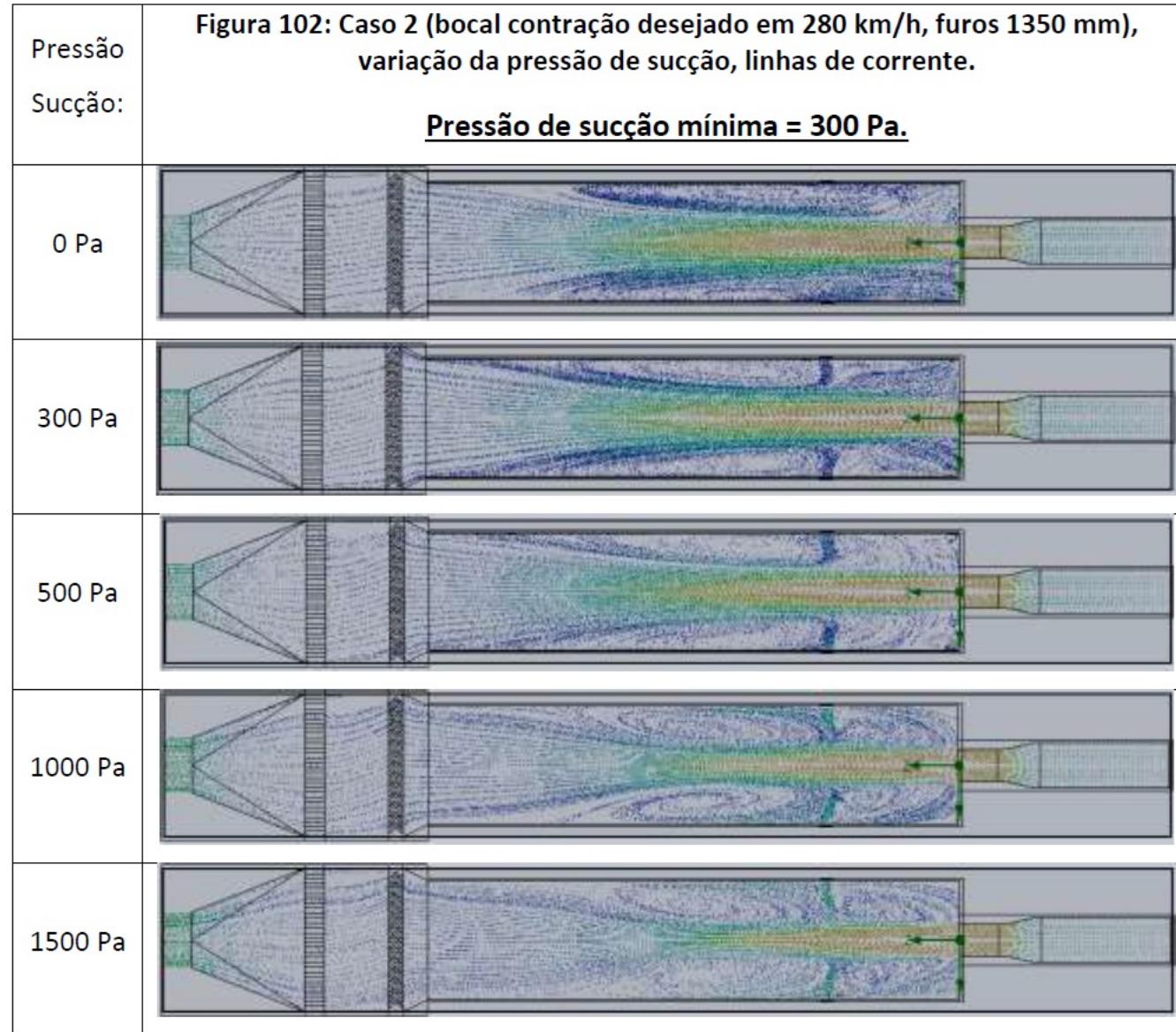




Source: AgroEfetiva



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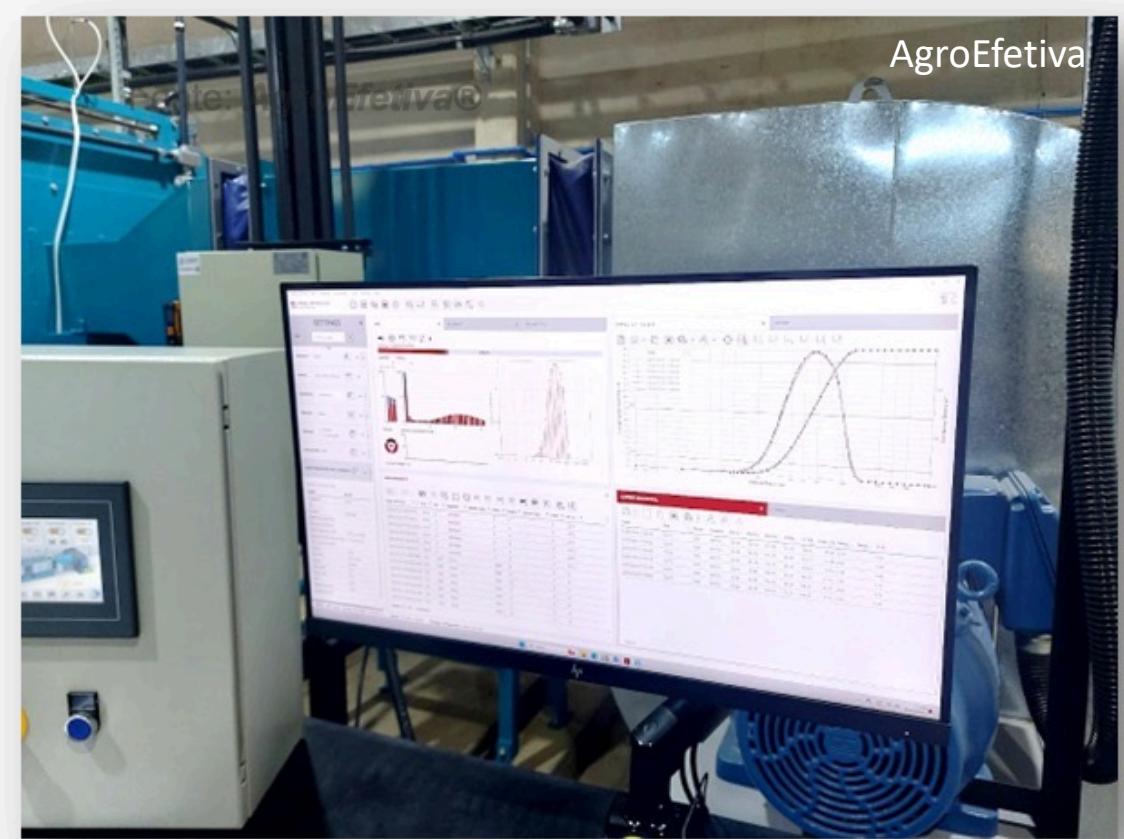


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The High Speed Wind Tunnel at AgroEfetiva



AgroEfetiva



AgroEfetiva

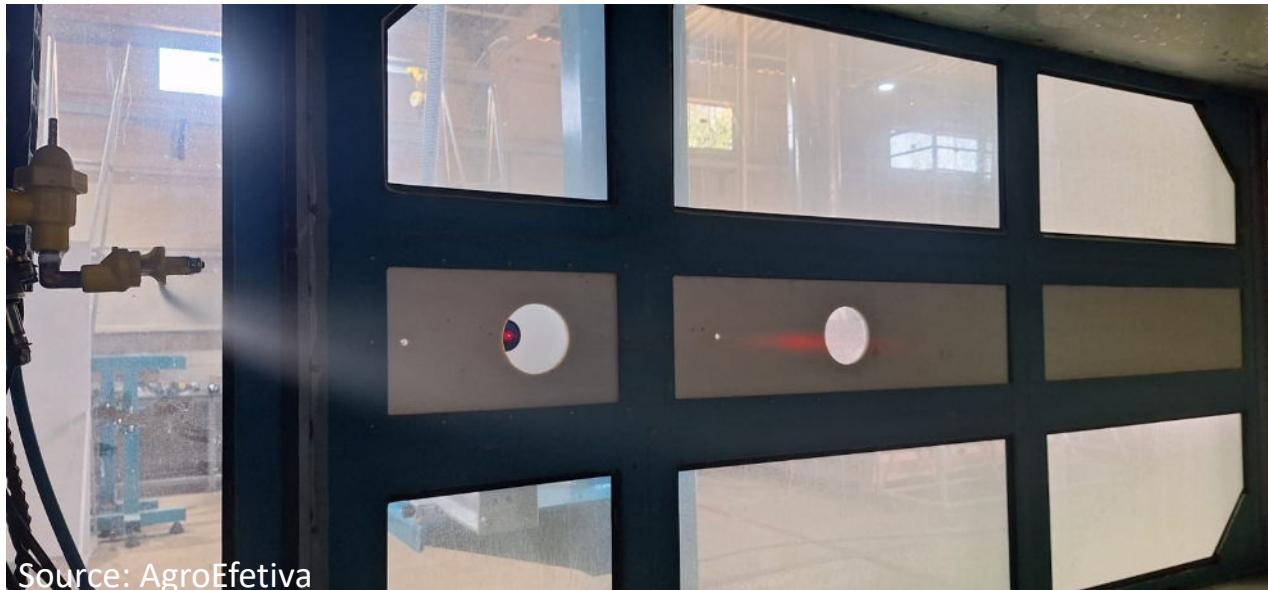
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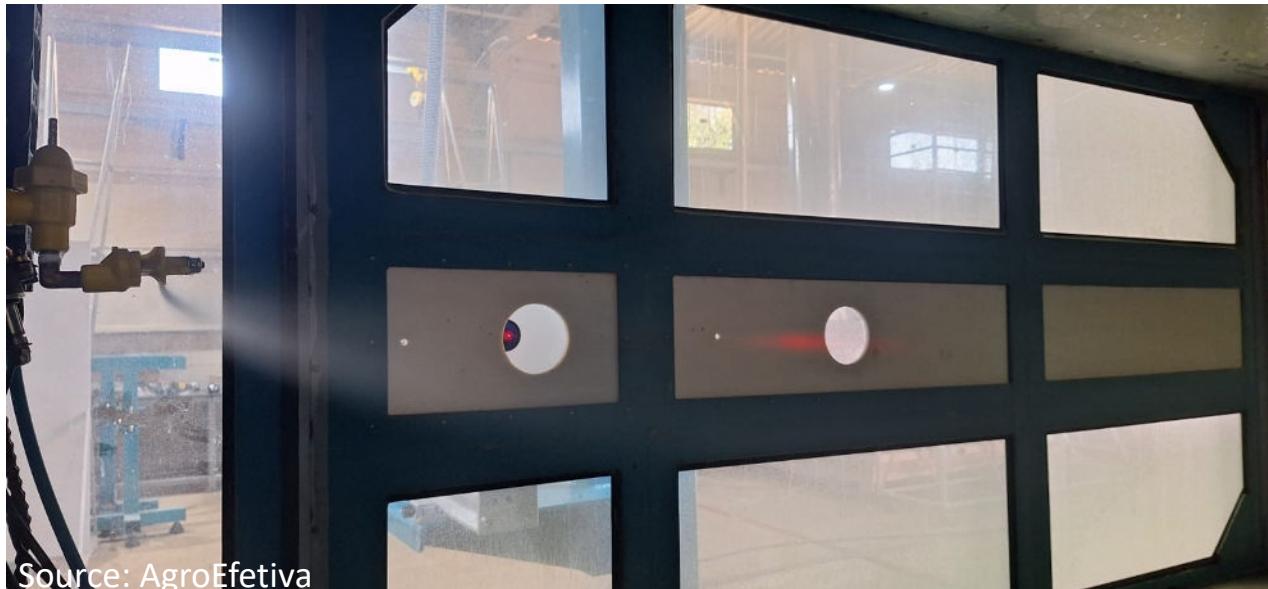
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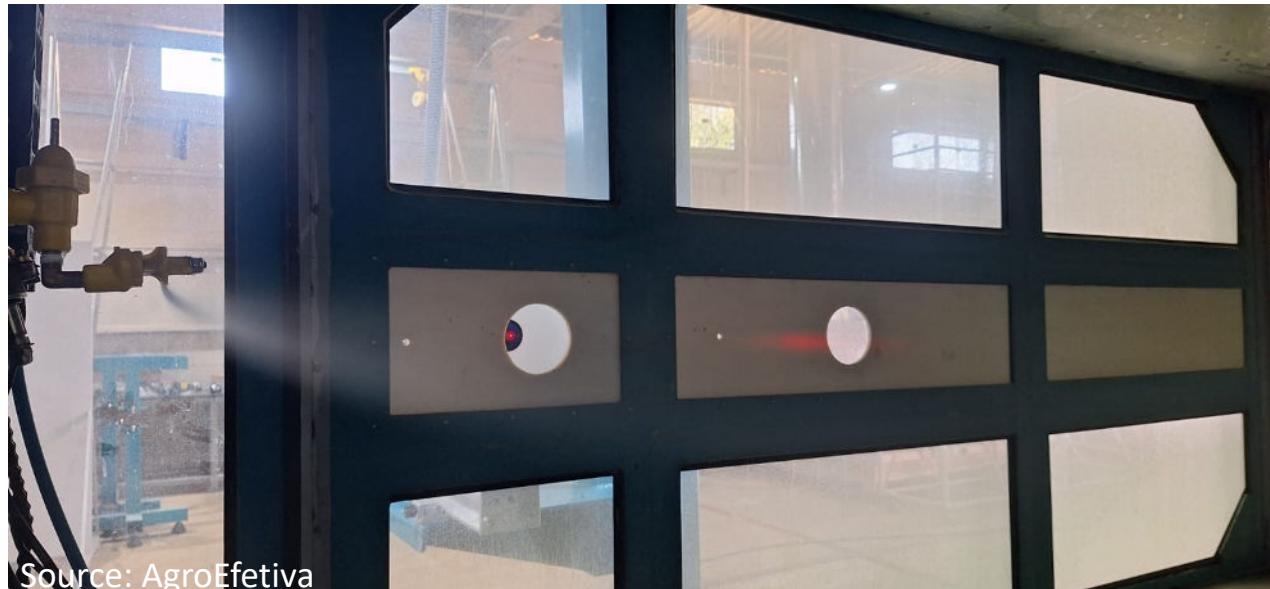
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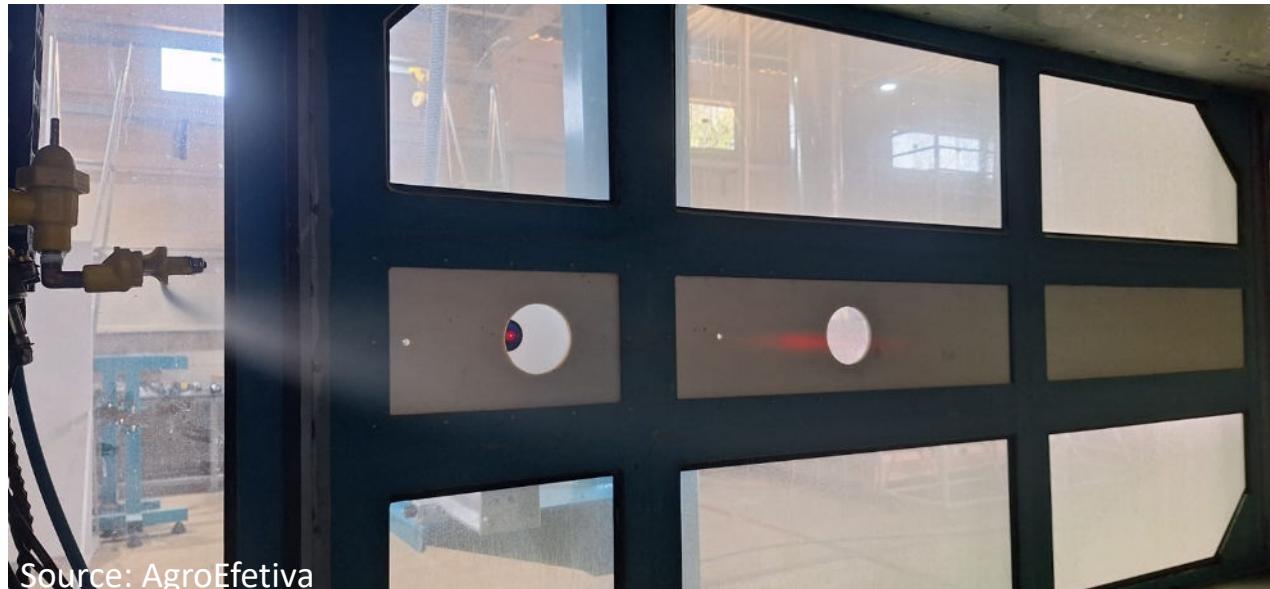
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- Laser Diffraction (LD): Sympatec Helos, Sympatec/Germany.



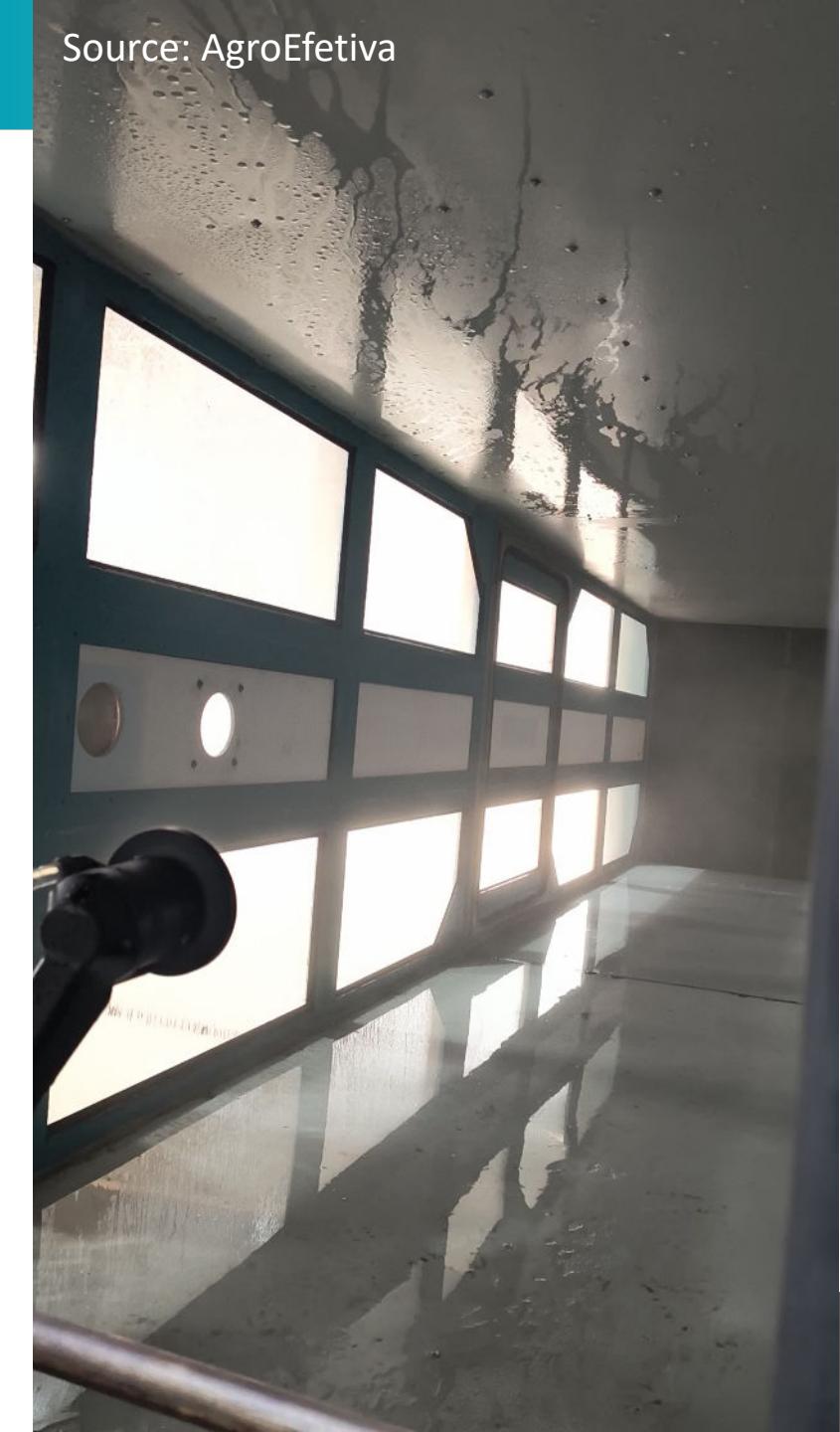
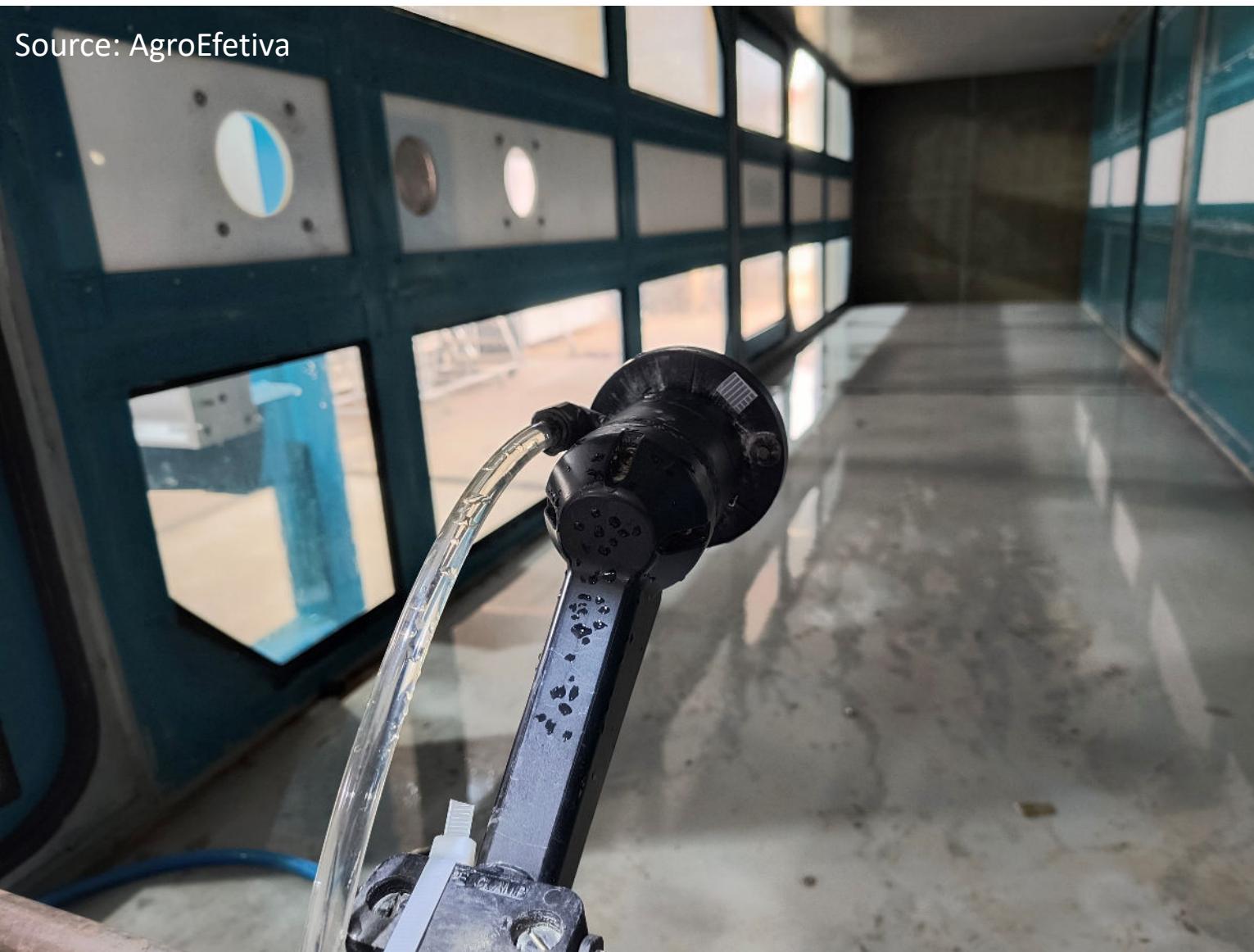
The High Speed Wind Tunnel at AgroEfetiva

AgroEfetiva

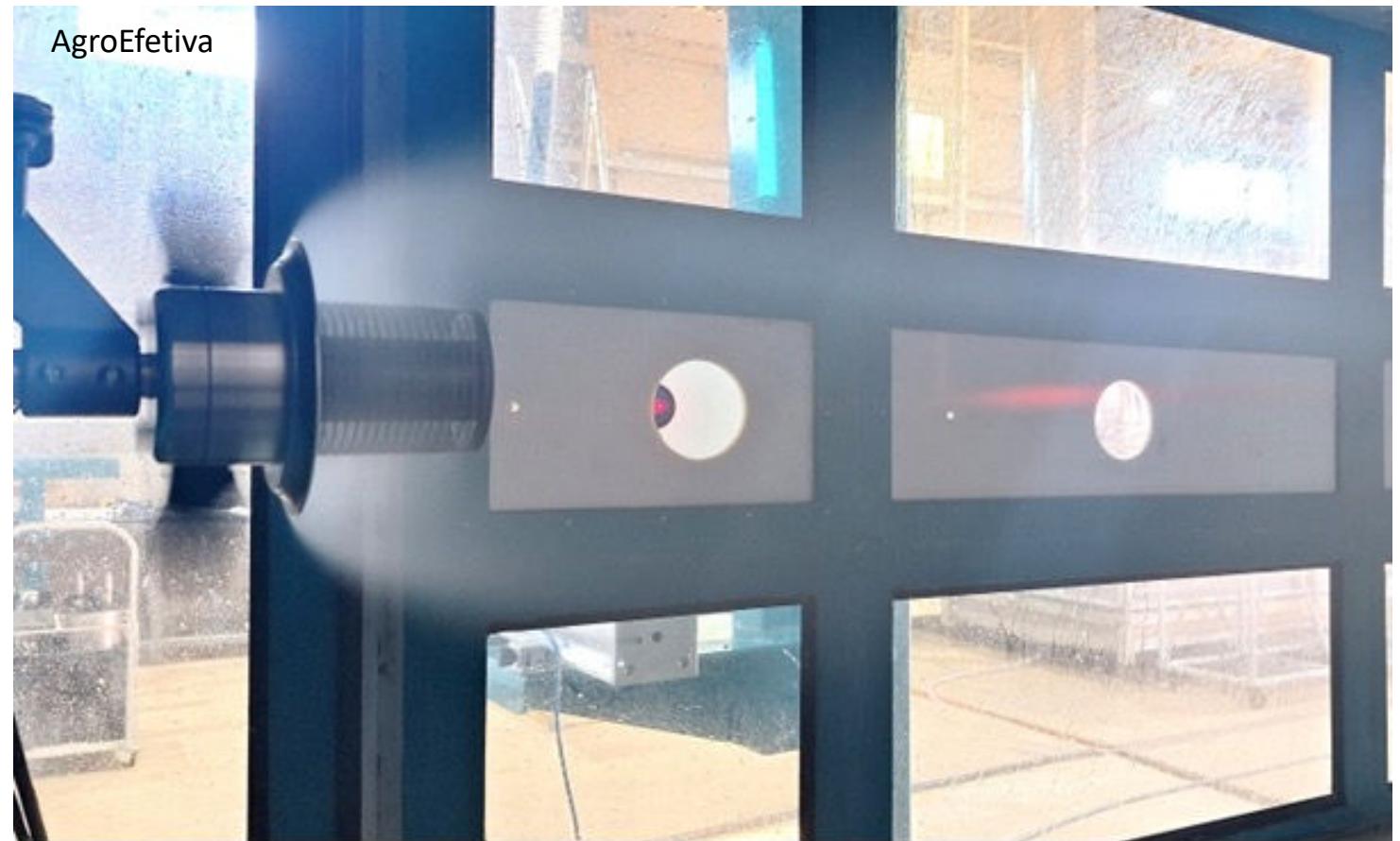


The High Speed Wind Tunnel at AgroEfetiva

Source: AgroEfetiva



The High Speed Wind Tunnel at AgroEfetiva



Evaluating the effect of adjuvants on the droplet spectrum

Several factors affecting droplet spectrum from hydraulic nozzles:



AgroEfetiva

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AgroEfetiva

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AgroEfetiva

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AgroEfetiva

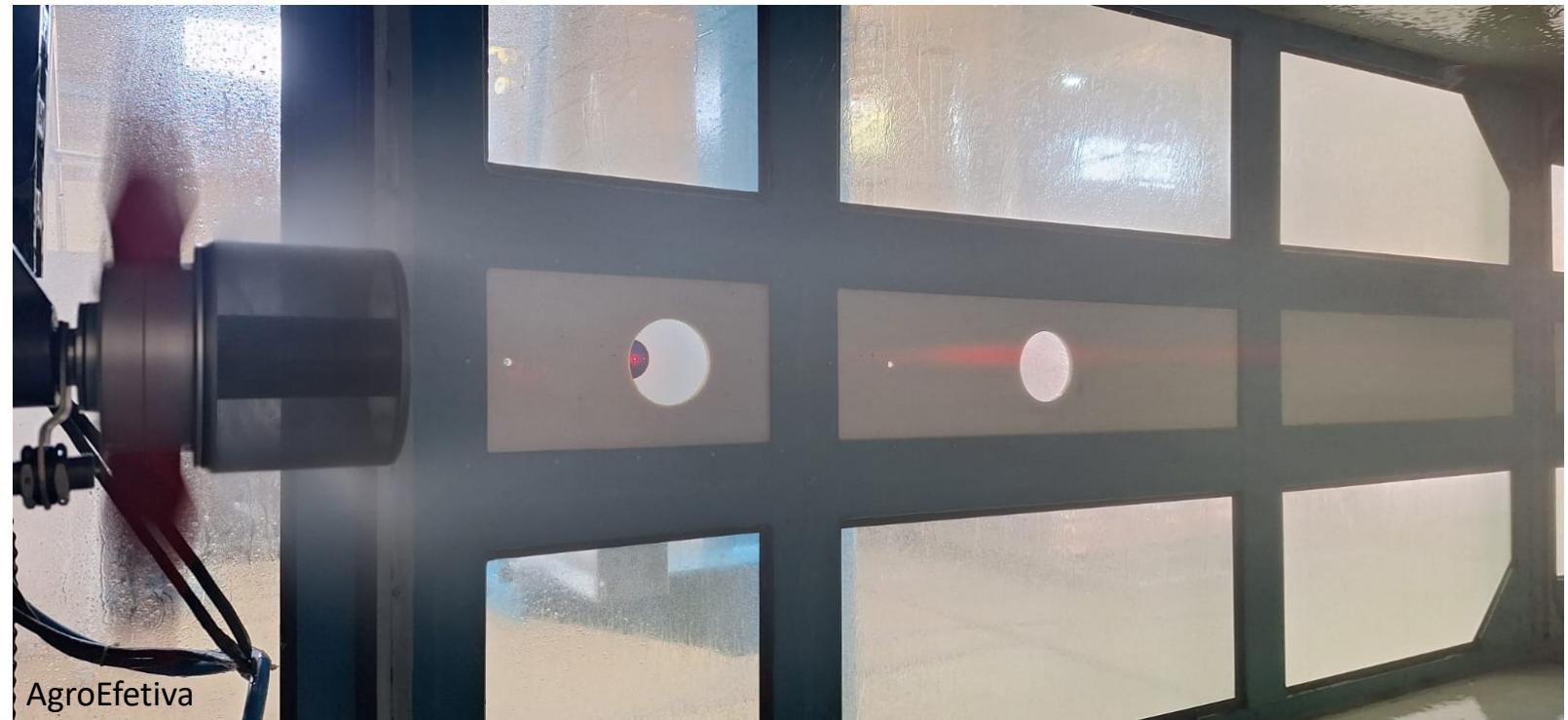
Several factors affecting droplet spectrum from hydraulic nozzles:

- Nozzle design;
- Pressure;
- Angle;
- Air speed;
- Spray solution:
chemical formulations,
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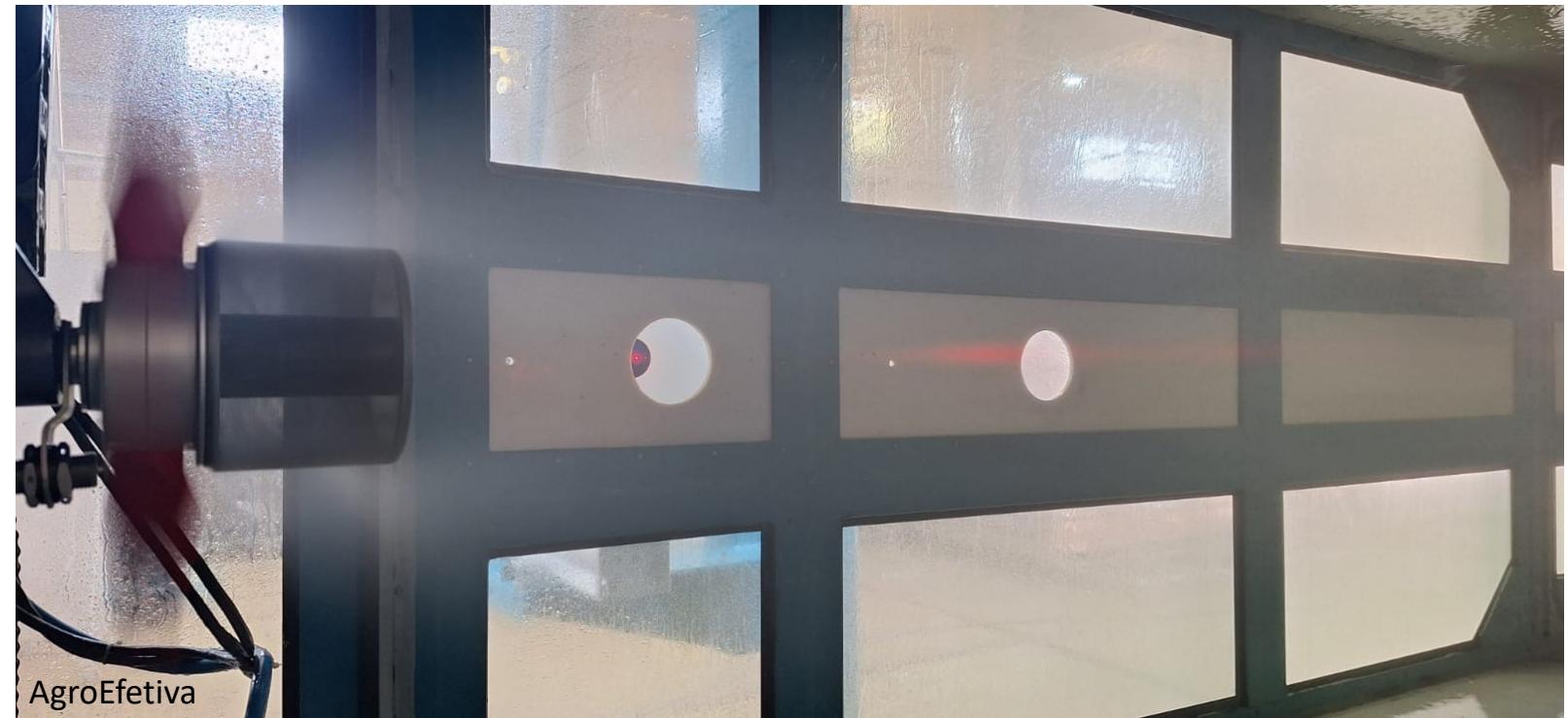
AgroEfetiva

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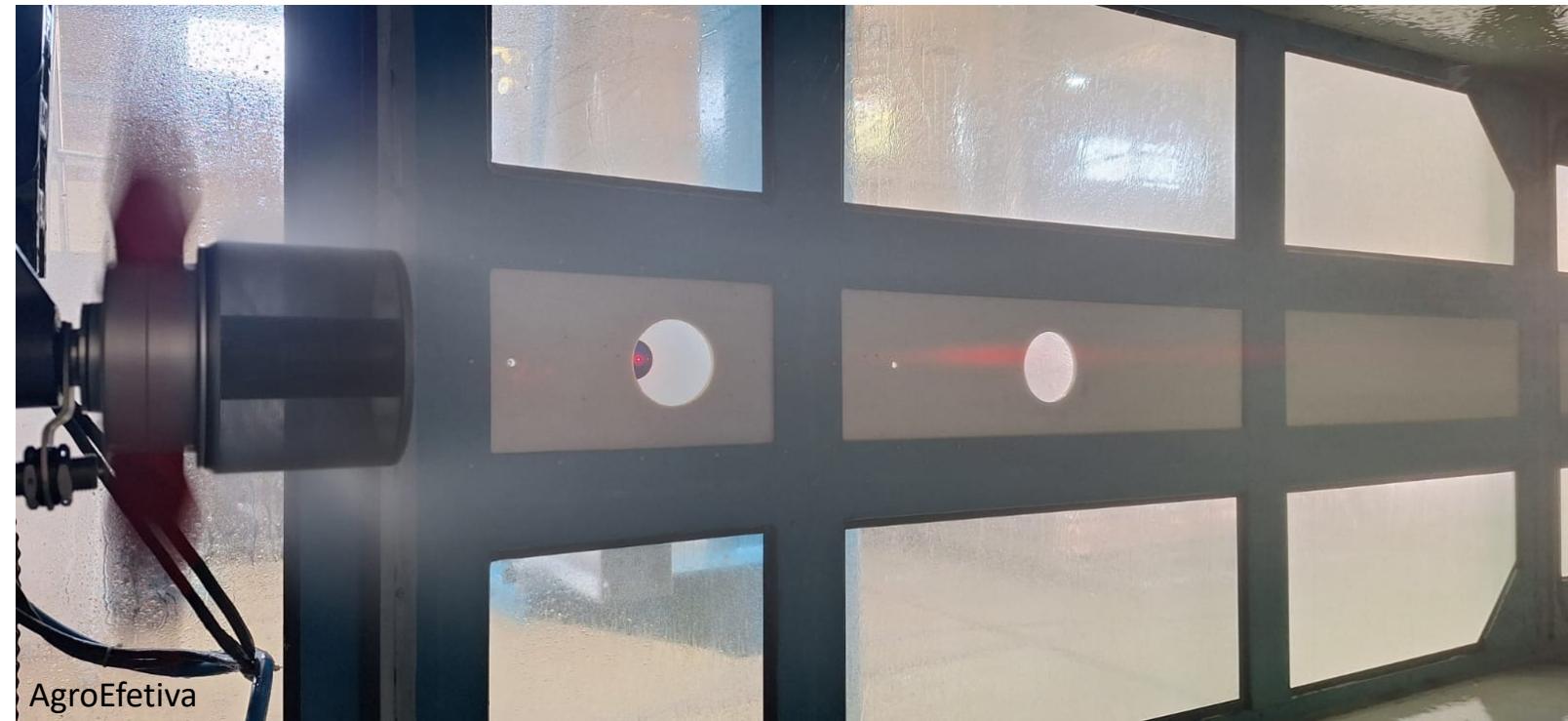
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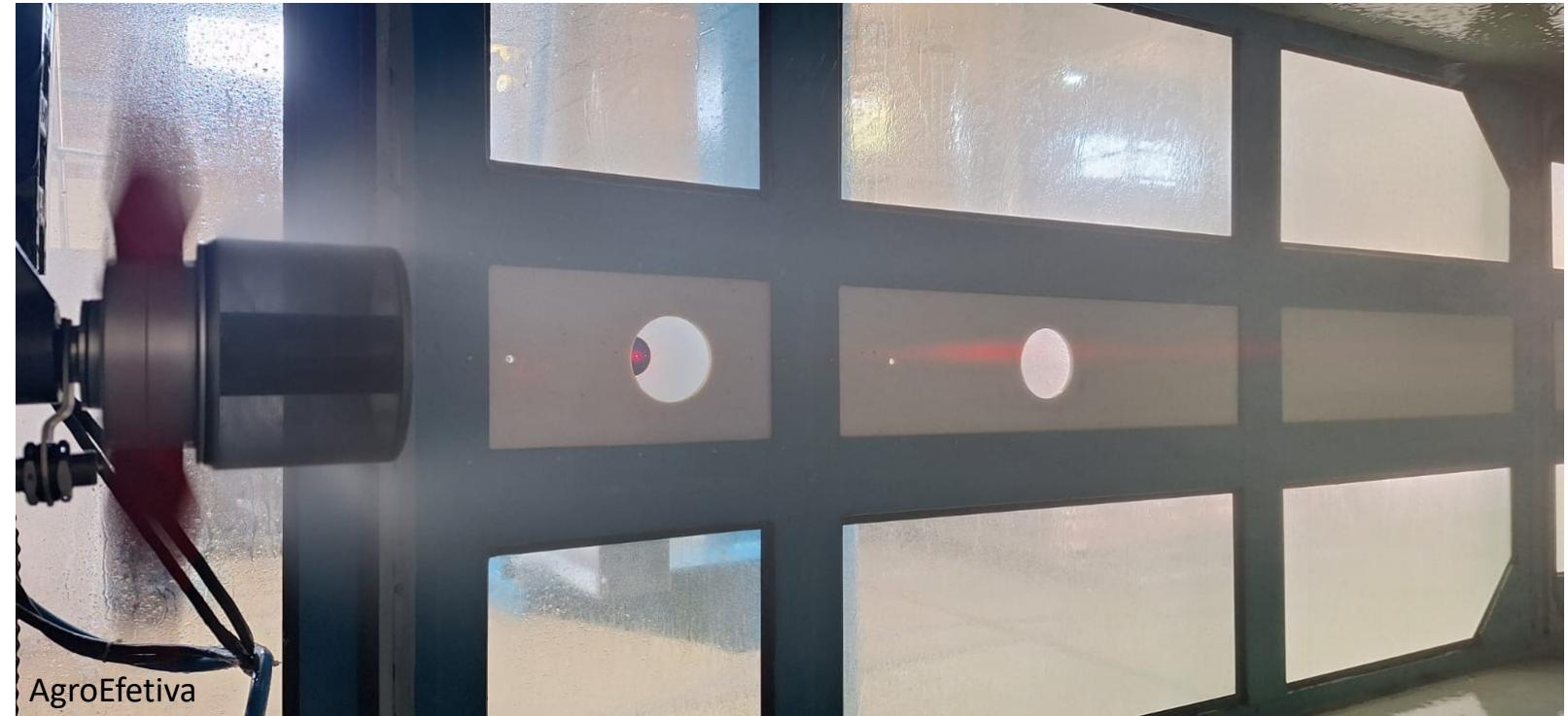
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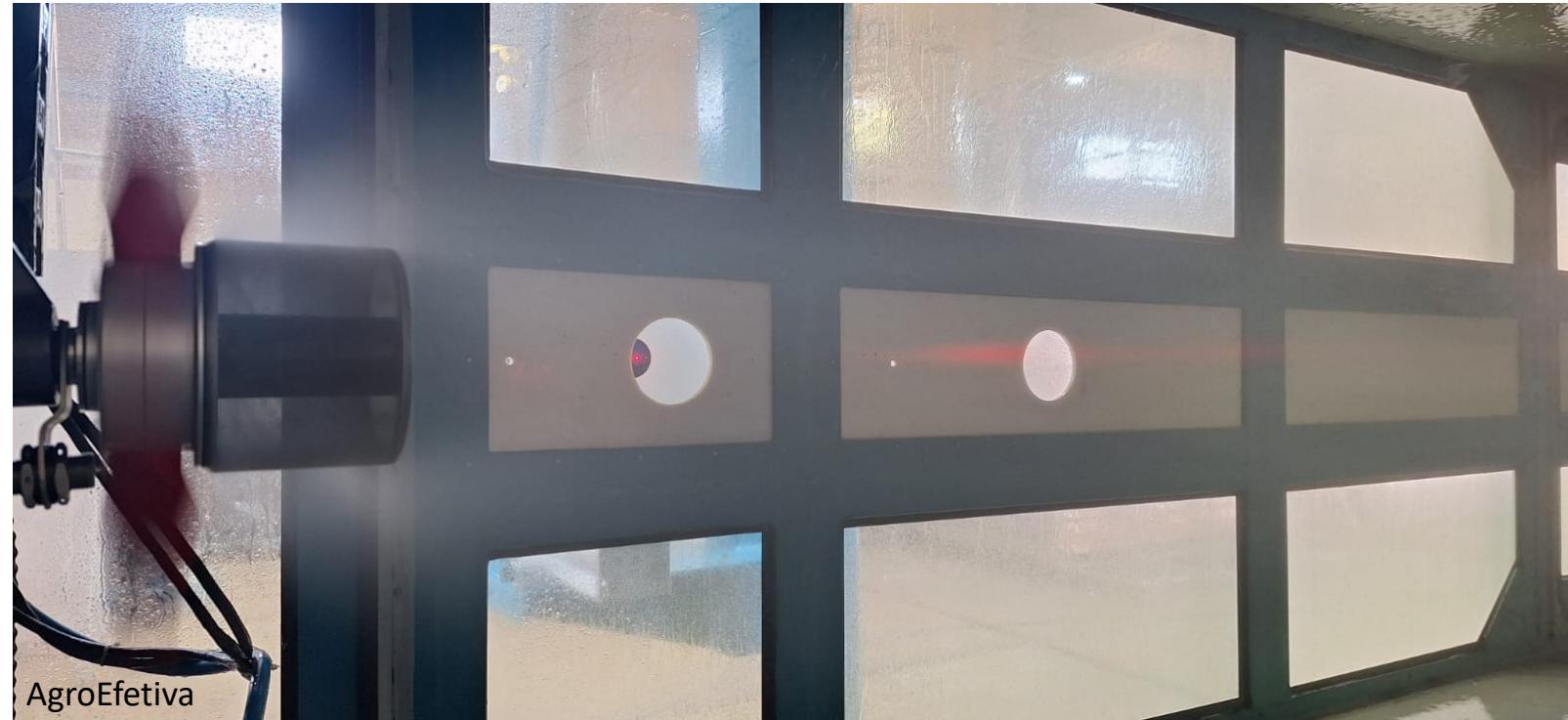
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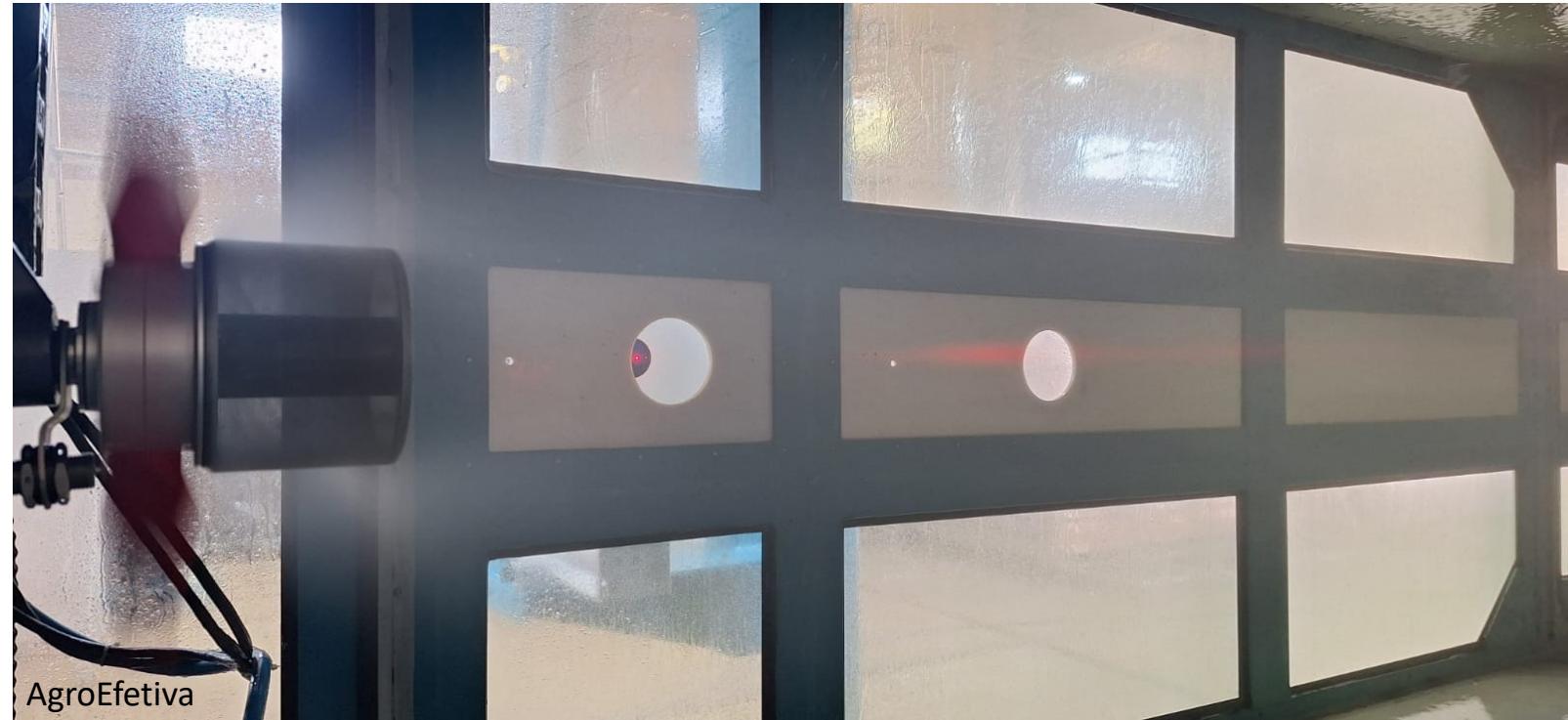
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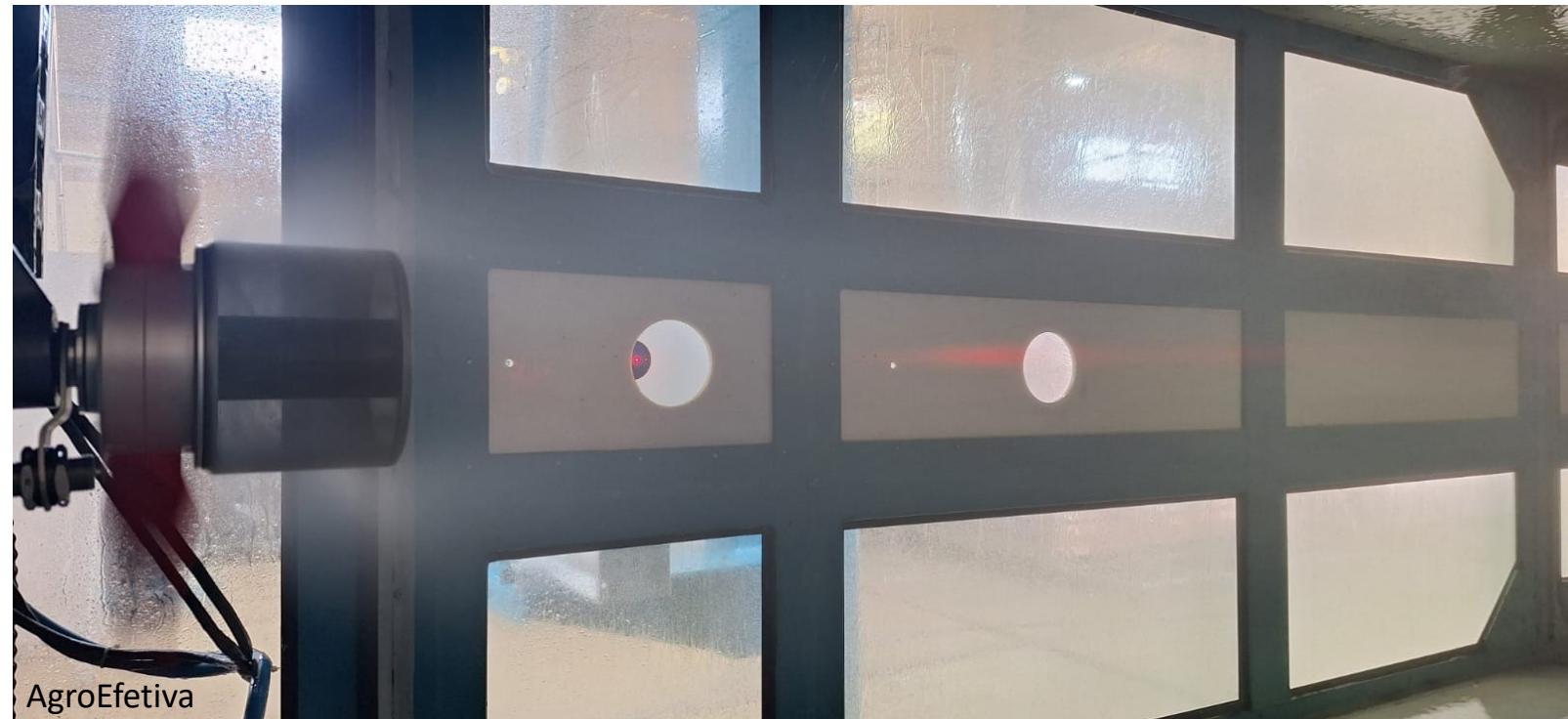
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Methods



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All adjusted to provide a VMD between 160 and 170 µm spraying water.

Spray solutions

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- MSO at 0.25% v/v
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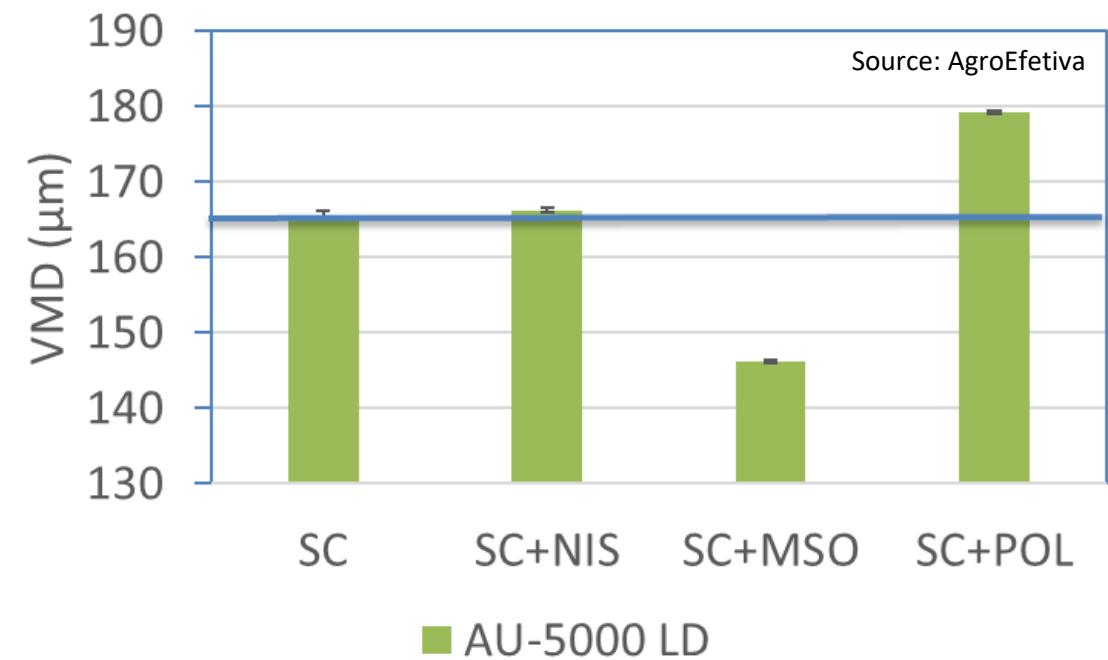
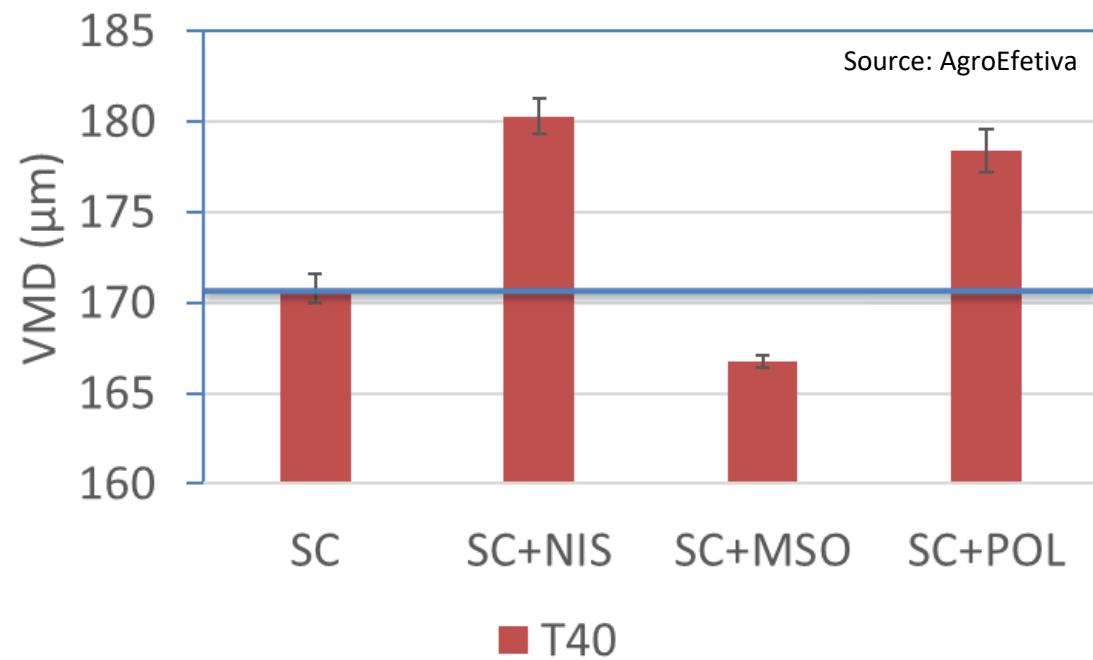
Results



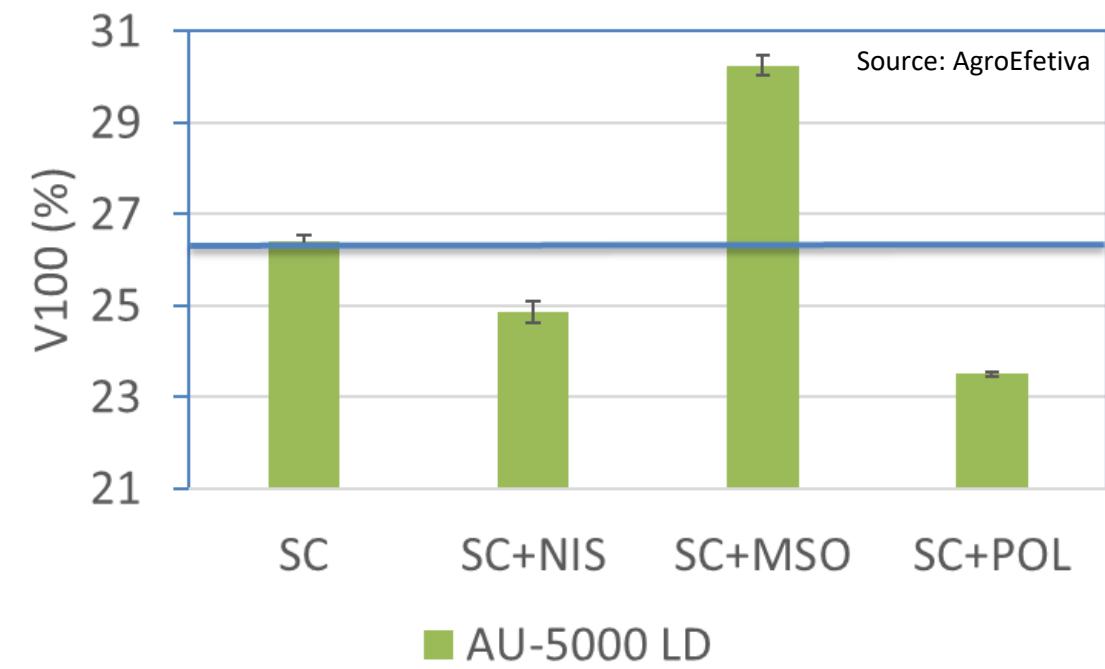
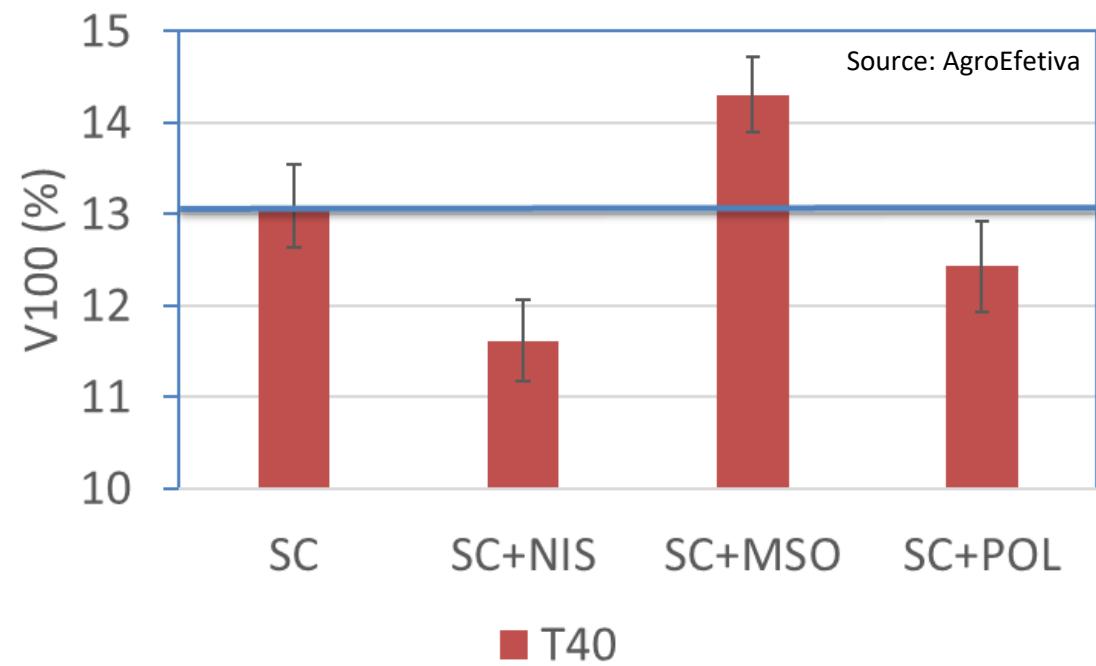
Rotary nozzles



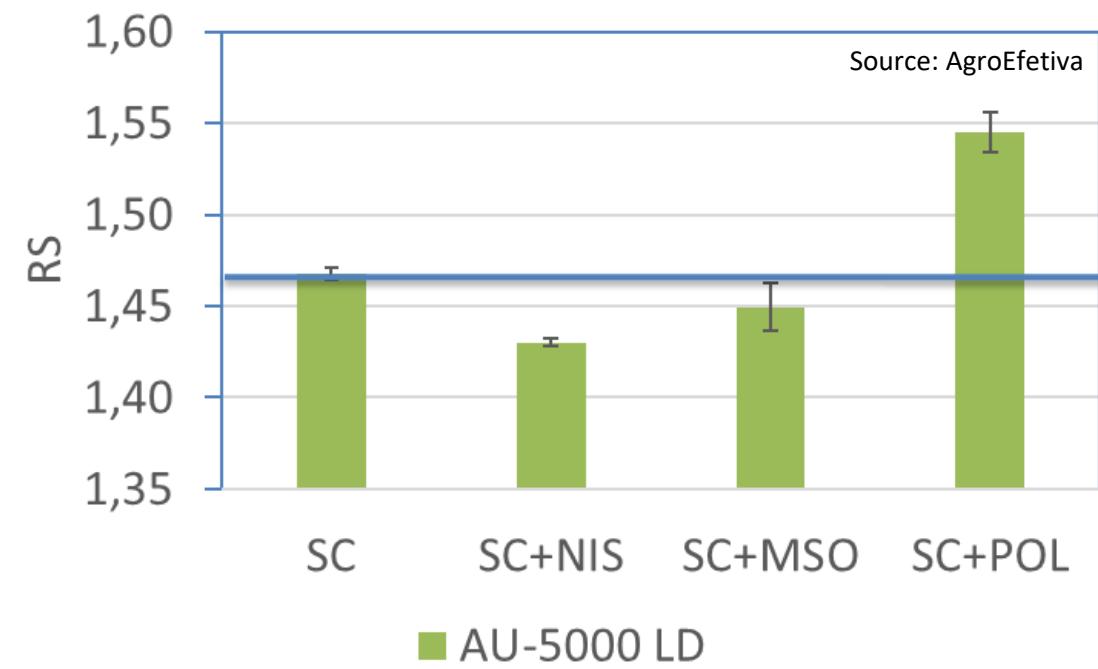
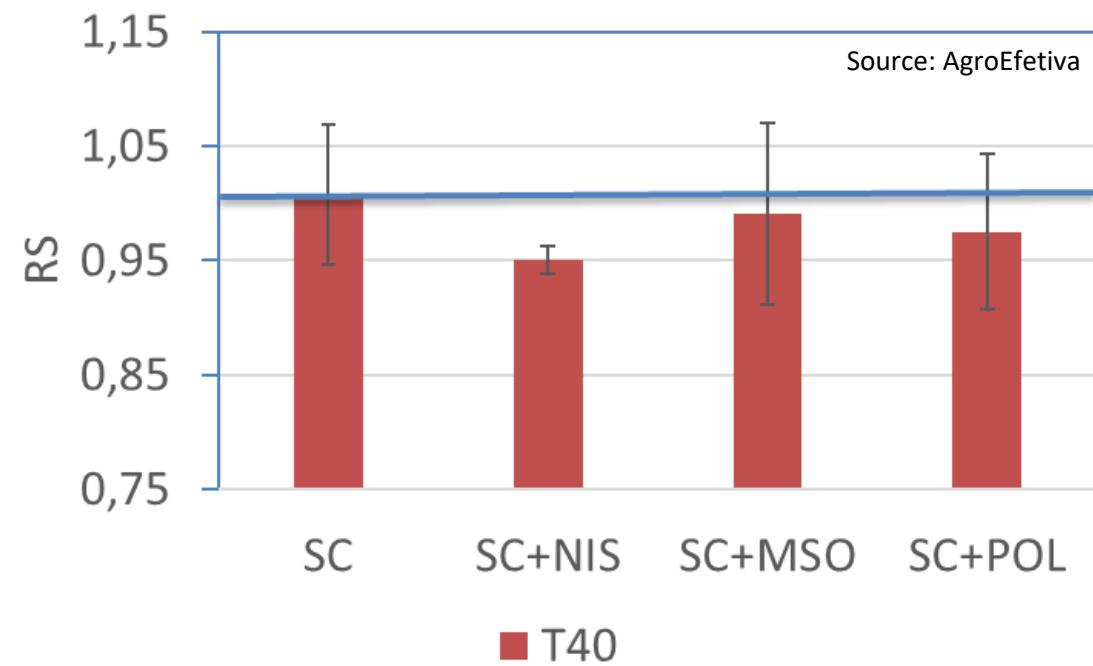
VMD spraying the SC formulation + adjuvants



V100 spraying the SC formulation + adjuvants

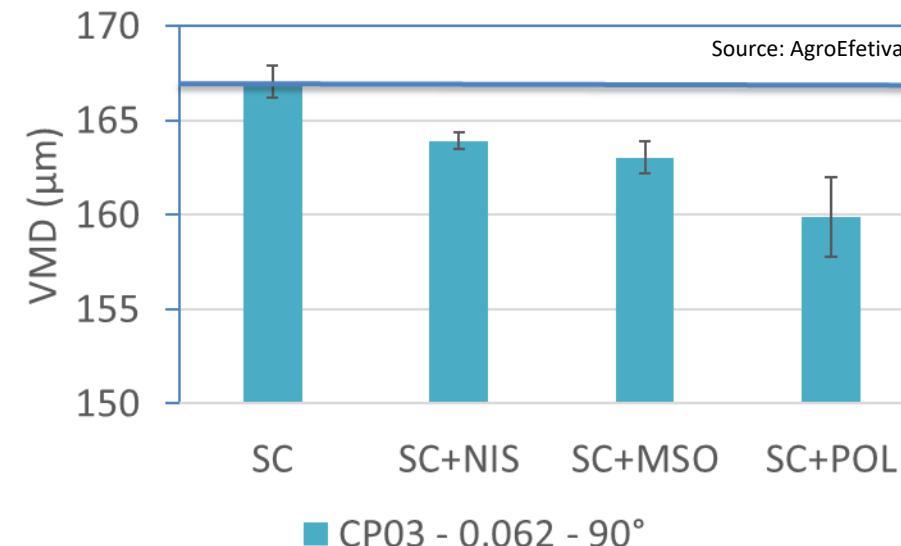
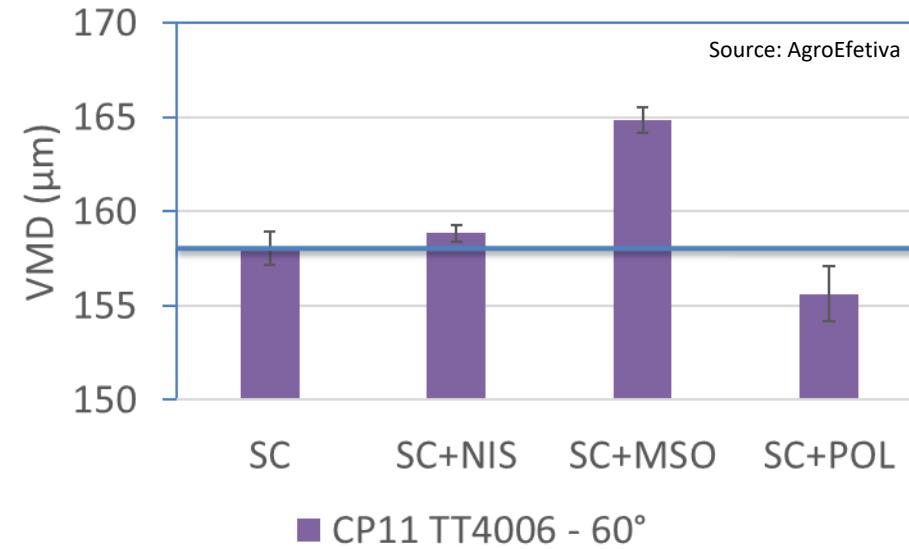
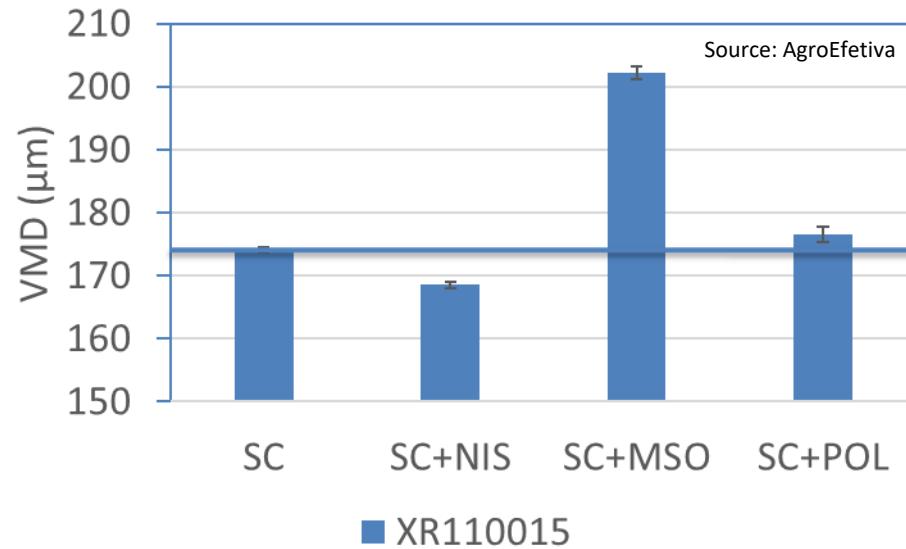


RS spraying the SC formulation + adjuvants

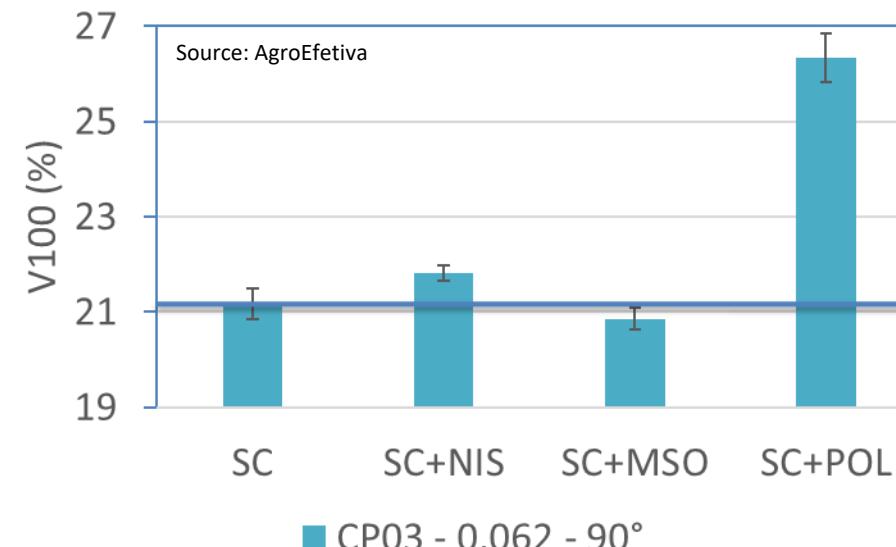
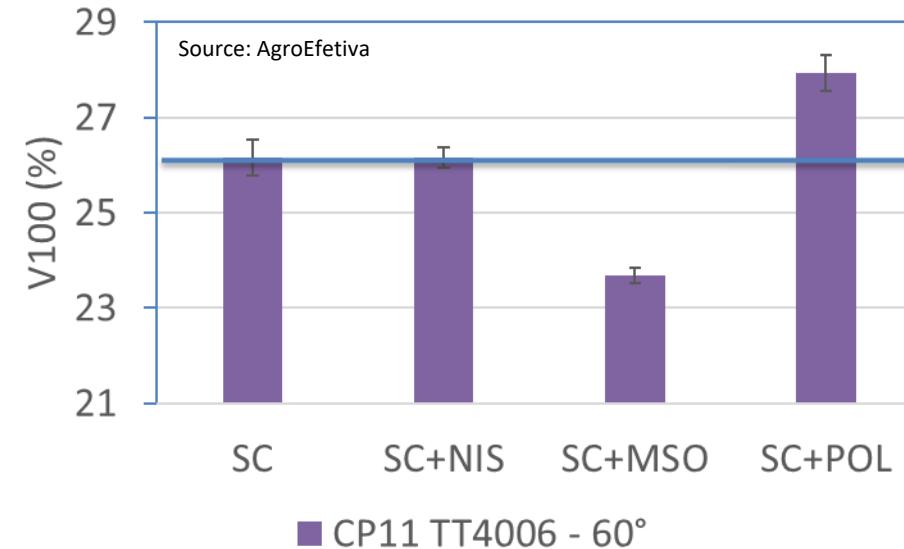
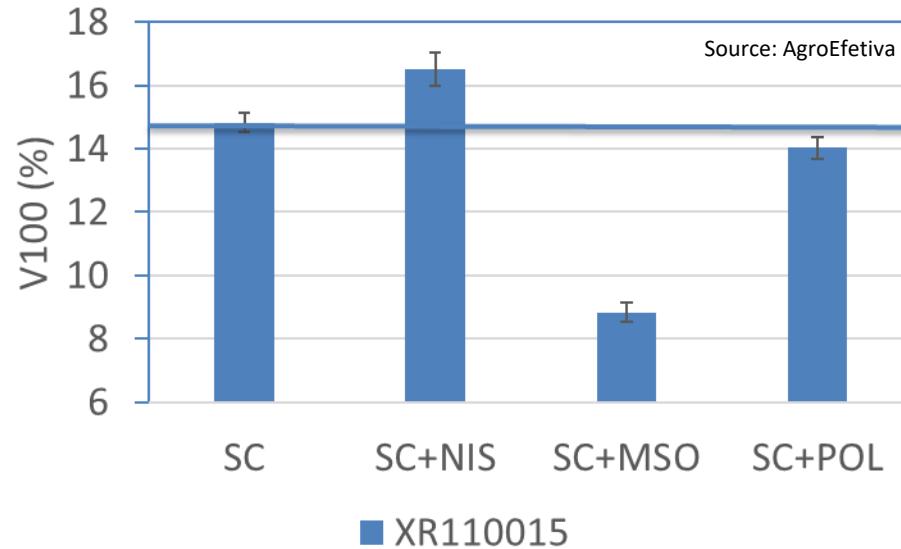


Hydraulic nozzles

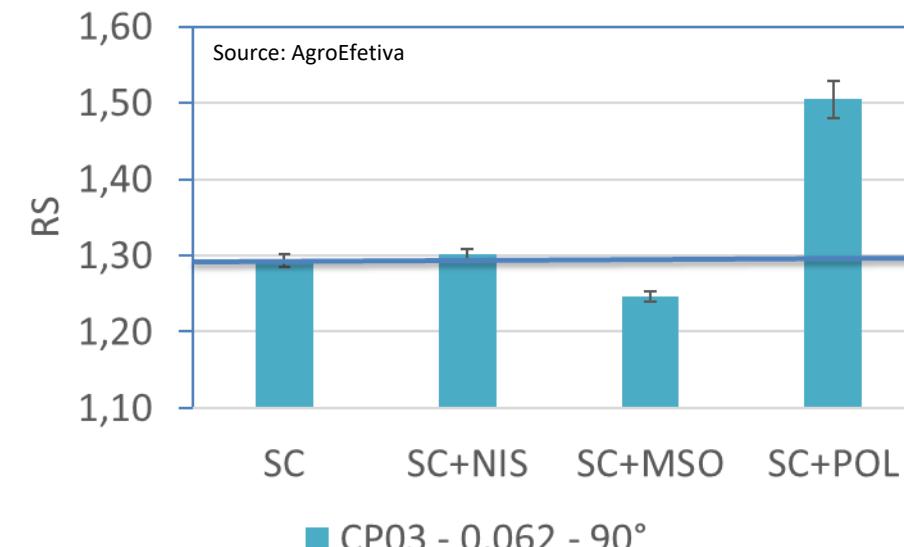
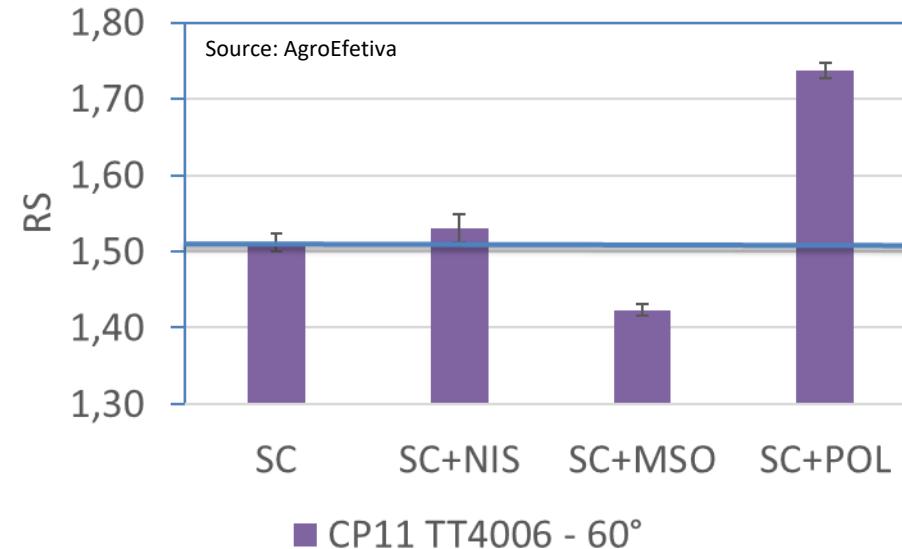
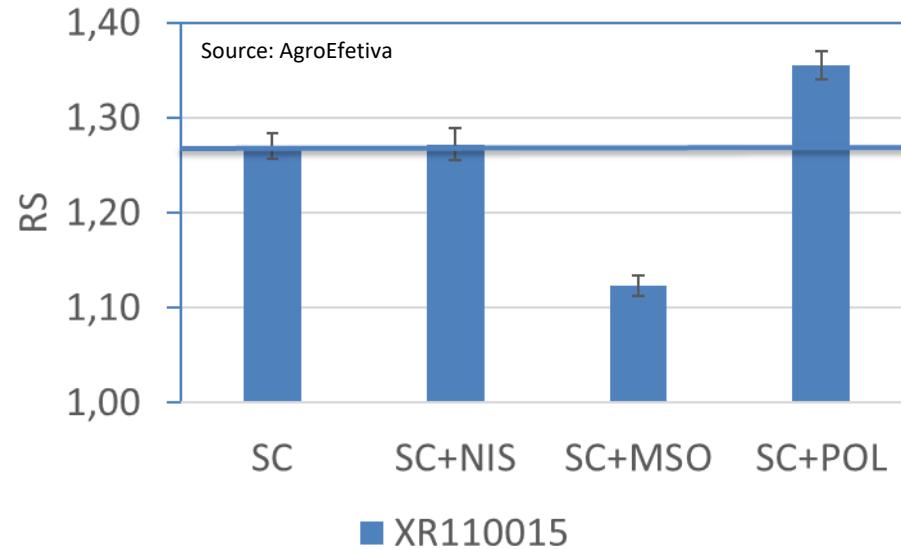
VMD spraying the SC formulation + adjuvants



V100 spraying the SC formulation + adjuvants



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Conclusions

- T40 and AU 5000 LD rotary nozzles showed similar behavior regarding the interference of adjuvants in the droplet spectrum, mainly in V100;

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- XR 110015 and CP11 TT4006 - 60° flat fan nozzles showed the same behavior regarding the interference of adjuvants in the droplet spectrum;

- T40 and AU 5000 LD rotary nozzles showed similar behavior regarding the interference of adjuvants in the droplet spectrum, mainly in V100;
- XR 110015 and CP11 TT4006 - 60° flat fan nozzles showed the same behavior regarding the interference of adjuvants in the droplet spectrum;
- The CP03 - 0.062 - 90° deflector nozzle showed very different behavior regarding the interference of adjuvants compared to other hydraulic nozzles.

Thank you!

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🌐 <https://agroefetiva.com.br/>