

Comparison of Electrolyzed Water (EW) Foliar Spray to Competitor Fungicides in Agriculture Field Applications

Fungal diseases in crops can have negative effects on plant growth and development, and can significantly impact overall yield. Managing these diseases is an essential component of production for most crops. Several studies have confirmed the use of electrolyzed water formulations as an effective biocide, including its efficacy as a broad-spectrum fungicide.

The oxidation-reduction potential (ORP) of a properly formulated electrolyzed water (EW) solution can provide the ability to destroy microorganism structures while maintaining safe and non-toxic properties when exposed to plants, animals, and humans. In addition to the contact fungicidal effects, systemic preservative effects have also been seen in some plants after exposure to EW (Javier Navarro-Rico et al., 2014). Building upon this research, we are looking at the results from using electrolyzed water in large scale commercial agriculture, and comparing its efficacy to competitor fungicide treatments.

After looking at the qualitative observation data from the experimental fields treated with the formulated electrolyzed water, we can confirm that there is no additional disease pressure when comparing the data to the fields treated with the competitor fungicides. Assuming all EW test fields produce equivalent yields to the corresponding fields sprayed with the competitor products, we can confirm that the electrolyzed water formulations had an equivalent efficacy to the competitor fungicide products in current conditions.



Canola – Electrolyzed water (EW) foliar spray
Stettler, Alberta



Canola – Competitor fungicide spray
Stettler, Alberta





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Canola – Competitor fungicide spray
Stettler, Alberta

Healthy, uniform, mature plants seen with both EW fungicide, and the competitor fungicide. It was interesting to see that the canola sprayed with EW had strong visual evidence of a greater healthy leaf biomass under the pod canopy.



Wheat – Electrolyzed water (EW) foliar spray
Stettler, Alberta

Wheat – Competitor fungicide spray
Stettler, Alberta



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Sylvan Lake, Alberta

Healthy plants with no signs of significant disease in both fields treated with EW fungicide, and the competitor fungicide.

Plant health and the above crops studied by

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