

# IMPEL™

Nutrition

Biostimulant

Timing:  
Foliar

Nutrient Type:  
Micronutrients

Formulation:  
Liquid



## All nutrients are essential – add Impel to your pesticide.





Impel™ is the premium line of foliar micronutrients designed to address and overcome specific micronutrient deficiencies in the plant.

- Four foliar micronutrients available to meet your plant's needs: Impel Copper, Impel Zinc, Impel Manganese, and Impel Boron.
- The Impel line is 100% plant available and crop safe.
- Powered by Convey Technology and Biological Activators.
- Impel improves fertilizer use by increasing the mobility and uptake of the nutrient in the plant.



Powered by  
Convey Technology

## Key Micronutrient Benefits to the Plant:

Micronutrient	Role of Nutrient	Deficiency Symptom	Micronutrient	Role of Nutrient	Deficiency Symptom
<b>Copper</b> <b>Cu</b> 63.55	Increases structural integrity and avoids pollen sterility		<b>Manganese</b> <b>Mn</b> 54.94	Enhances photosynthesis and nitrate assimilation in the plant	
<b>Zinc</b> <b>Zn</b> 65.39	Stimulates the production of natural growth hormones of the plant		<b>Boron</b> <b>B</b> 10.81	Essential for cellular strength, pollination and sugar movement	

### Zn Deficiency in Wheat



Visual Signs of Deficiency: Chlorotic lesions turning to necrotic zones on wheat

### Mn Deficiency in Soybeans



Visual Signs of Deficiency: Intervetial chlorosis on the young leaves of soybean plants

### B Deficiency in Canola

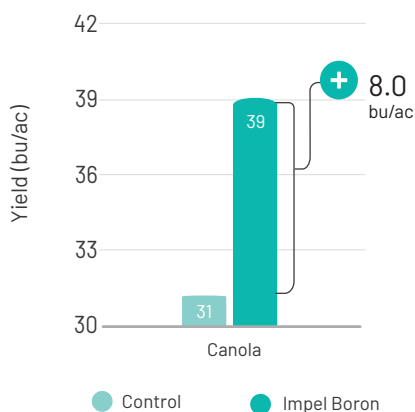


Visual Signs of Deficiency: Distorted leaf growth on the growing points in canola

## Proven Agronomic Performance

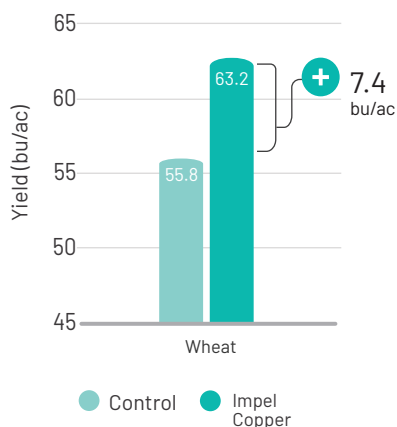
- Data generated across North America from 2012-2013 shows that Impel Boron increased overall canola yield by 8.0 bu/ac on average. Sufficient boron had a direct positive effect on the crop's yield due to stronger cell walls, better pollination and an improved carbohydrate metabolism.
- Trial conducted in 2021 by a third party researcher reported a positive yield response (7.4 bu/ac) to a split application of Impel Copper.
- Data collected from trials from 2012 to 2014 have demonstrated the benefits of supplemental essential nutrition. The addition of Impel Manganese with glyphosate enhanced productivity in soybeans by 3 bu/ac.
- To review the complete Impel data package, please contact your ATP Technical expert today.

### Boron in Canola



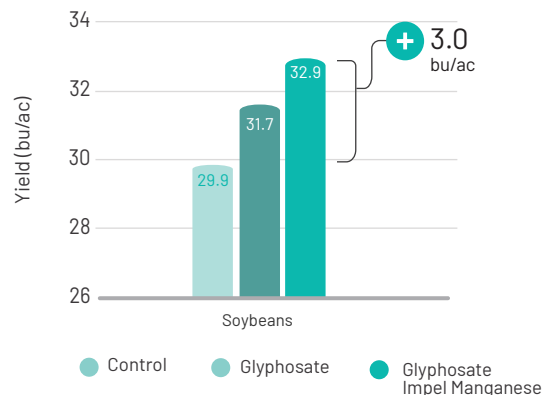
Field Demonstration, North American Trials (2012-2013)

### Copper in Wheat



2021 small plot replicated trials conducted by NDSU. Impel Copper applied at 1qt/ac, 2 times (BBCH 14&45)

### Manganese in Soybeans - Chemtrition



Summary of 5 replicated field trials, 2012-2014.

Data generated across Western Canada from 2012-2013 shows that Impel Boron increased overall canola yield by an average of 8.0 bu/ac.

## Product Recommendations

- Impel products can be applied throughout the growing season. For efficiency, Impel products can be added with the herbicide and/or fungicide application.
- Use proper water volume (minimum 10 gallons) to ensure uniform coverage and optimum uptake.
- Do not spray in the heat of the day or when plants are under moisture stress. Spray in the late evening or early morning.
- Tank mix compatibility is impacted by water quality which may vary by location, so conduct a jar test prior to combining Impel with a crop protection product or visit [www.atpnutritionag.com](http://www.atpnutritionag.com) for product compatibility information.

Product	Analysis	Rate (qt/ac)	Timing
Impel Boron	10.0B + Convey + BA + TE	0.5-1.0	Foliar
Impel Copper	5.0Cu-2.5S + Convey + BA	0.5-1.0	Foliar
Impel Manganese	5.0Mn-3.0S + Convey + BA	0.5-1.0	Foliar
Impel Zinc	9.0Zn-3.8S + Convey + BA	0.5-1.0	Foliar

BA = Bio-Activators, TE = Trace elements critical to optimize nutrient use and proper plant growth

- To view the Impel Line's SDS and Product Labels please visit [www.atpnutritionag.com](http://www.atpnutritionag.com).



At ATP, we believe a proactive, science-based approach to restore the balance between plant and soil health is the single most effective way to deliver the genetic potential of the crop. We challenge the status quo by utilizing agtech to monitor and drive productivity.

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