

## Corn Yield Response to Seed-Applied Micronutrients

2013

## Rationale and Objective

- Previous research in the United States has shown evidence of a potential corn yield benefit from seed-applied micronutrients.
- On-farm trials were conducted in eastern Ontario and western Quebec to determine yield response of corn treated with Awaken® ST seed-applied micronutrients compared to untreated corn.

## Study Description

<b>Plot Layout:</b>	Field-length strips
<b>Replicates:</b>	1-2 per location
<b>Locations:</b>	14 locations in eastern Ontario and western Quebec in 2013
<b>Treatment:</b>	Awaken ST, Untreated
<b>Rate:</b>	390 ml/100 kg of seed
<b>Pioneer® Hybrid:</b>	P9675YXR (YGCB, HXX, LL, RR2)



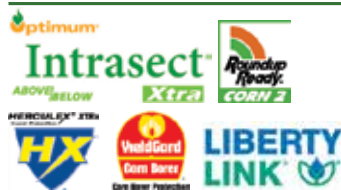
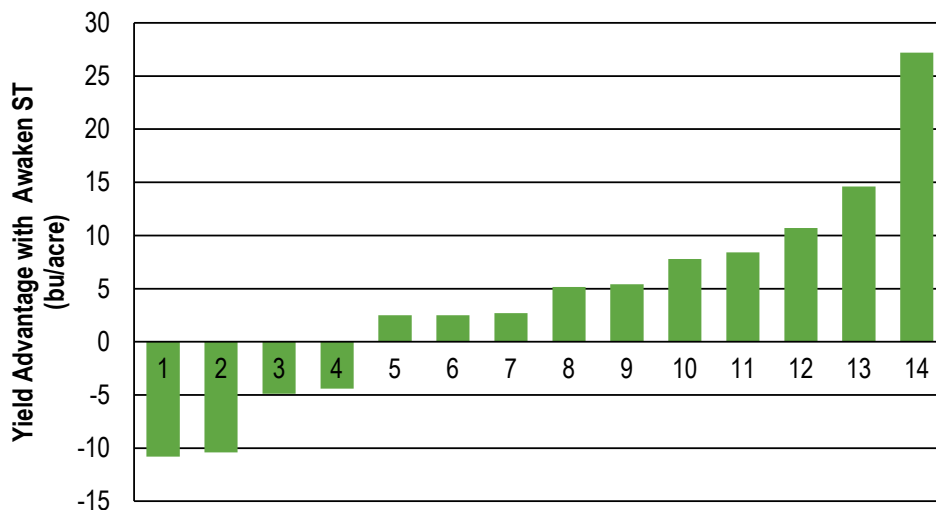
Location of the 14 seed-applied micronutrient trials conducted in eastern Ontario and western Quebec in 2013.

## Awaken® ST

- Awaken ST is a nutritional seed treatment containing 6% nitrogen, 1% soluble potash, 5.05% zinc, 0.25% copper, 0.25% manganese, 0.25% iron and 0.03% boron.

## Results

- Corn yield was significantly increased ( $\alpha = 0.1$ ) by an average of 4.1 bu/acre when treated with Awaken ST seed treatment compared to corn without seed-applied micronutrients.
- A positive yield response was observed in 71% of the trials.
- Awaken ST seed treatment did not significantly affect grain moisture or test weight (data not shown).



YGCB, HXX, LL, RR2 – Optimum® Intrasect® Xtra contains the YieldGard® corn borer gene and the Herculex® XTRA genes for resistance to corn borer and corn rootworm. YGCB – The YieldGard® Corn Borer gene offers a high level of resistance to European corn borer, southwestern corn borer and southern cornstalk borer; moderate resistance to corn earworm and common stalk borer; and above average resistance to fall armyworm. HXX – Herculex® XTRA contains the Herculex I and Herculex RW genes. LL – Contains the LibertyLink® gene for resistance to Liberty® herbicide. RR2 – Contains the Roundup Ready® Corn 2 gene that provides crop safety for over-the-top applications of labeled glyphosate herbicides when applied according to label directions. YieldGard®, the YieldGard Corn Borer design and Roundup Ready® are registered trademarks used under license from Monsanto Company. Herculex® XTRA Insect Protection technology by Dow AgroSciences and Pioneer Hi-Bred. Herculex® and the HX logo are registered trademarks of Dow AgroSciences LLC. Liberty®, LibertyLink® and the Water Droplet Design are trademarks of Bayer. PIONEER® brand products are provided subject to the terms and conditions of purchase which are part of the labeling and purchase documents. 2013 data are based on average of all comparisons made in 14 locations through November 22, 2013. Multi-year and multi-location is a better predictor of future performance. Do not use these or any other data from a limited number of trials as a significant factor in product selection. Product responses are variable and subject to a variety of environmental, disease, and pest pressures. Individual results may vary. All products are trademarks of their manufacturers.

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