# AGRONOMY SCIENCES RESEARCH UPDATE

**OUPOND** 

**B**, **PIONEER**.

## Effect of Iron Chelate on Soybean Performance in Fields Prone to IDC 2012

#### **Objectives**

- Evaluate the effect of an in-furrow application of Soygreen<sup>®</sup> (iron chelate) in fields prone to iron deficiency chlorosis (IDC) on soybean health and yield.
- Determine if an in-furrow application of Soygreen at planting helps mitigate IDC symptoms, allowing varieties with lower IDC tolerance to yield similarly to varieties with high IDC tolerance.

### **Study Description**

Locations:	11 locations with a history of IDC in Nebraska and Kansas	
Plot Layout:	Minimum 4 row width, 1000' in length	
Replicates:	One per location	
Factors:		
• Treatment:		Soygreen Untreated
<ul> <li>Variety IDC</li> </ul>	Tolerance:	Tolerant Moderate Tolerance Low tolerance

Application:	In-furrow, at planting
Rate:	3 lb/acre



Soygreen plot near Fullerton, NE. Photo taken July 3, 2011.

#### Pioneer<sup>®</sup> Brand Soybean Varieties Used:

(Varieties were selected to provide a range of tolerance to field IDC levels.)

Nebraska	Kansas	IDC Tolerance
92Y70 (RR)	93Y93 (RR)	Tolerant
93Y15 (RR) 93Y13 (RR)	93Y72 (RR) 94Y01 (RR)	Moderate Iolerance
30110 (111)	04101 (IXI)	

 All treatments were applied according to label rates (3 lb/acre of Soygreen) and application carrier volumes (in-furrow 4-10 gallons/acre)

#### Results



- In-furrow application of Soygreen at planting time showed a positive yield response across all varieties.
- Although yield differences in some locations were minimal, visual differences were noted, as the varieties treated with an in-furrow application of Soygreen were greener and more robust.
- In several plots, varieties treated with Soygreen in-furrow resulted in higher final populations than varieties not treated with Soygreen in high IDC fields.
- Similar results were observed in a previous study conducted in 2008-2009 in which the average yield advantage with Soygreen was 3.9 bu/acre. In this study, yield response tended to differ among varieties at sites with very high IDC levels.
- Low yields at some locations due to drought stress likely influenced results in 2012.



RR - Contains the Roundup Ready<sup>®</sup> gene. Roundup Ready<sup>®</sup> is a registered trademark used under license from Monsanto Company. PIONEER® brand products are provided subject to the terms and conditions of purchase which are part of the labeling and purchase documents. 2012 data are based on average of all comparisons made in 11 locations through November 21, 2012. 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.