



2012 AgroVantage Plot Results

Location: Plymouth, IN

Corn Test Plot

Amplify® -D Seed Treatment

	Check	Amplify-D	Advantage
Yield, BPA	159.22 bpa	173.17 bpa	+13.95 bpa
Population, planted at 36,500/acre	30,190	31,370	+1,180 plants/acre
Test Weight lbs.	58.3 lbs.	59.5 lbs.	+1.2 lbs.
Moisture %	21.3%	20.3%	-1.0 pts.

Amplify-D is a seed germination aid based upon the concept of providing an extra source of adenosine mono-phosphate as a seed treatment. Research has shown that maintaining adequate levels of this critical bio-chemical in the germinating seed enhances the rates of germination and emergence. The end result in this study, better plant stands (increased 4%), higher test weight (over 1 pound higher), lower grain moisture at harvest (1 point lower) and nearly 14 bushels more grain! Amplify produced an extra \$97.00 income on a \$3.00 investment.

WEX® Multipurpose Wetting Agent

	Check	WEX 1 quart	Advantage
Yield, BPA	180.12 bpa	185.7 bpa	+5.58 bpa
Test Weight lbs.	59 lbs.	58.3 lbs.	-0.7 lbs.
Moisture %	18.06%	21.5%	+3.44 pts.

WEX Multi-Purpose Wetting Agent is used for two primary purposes; as an adjuvant to optimize pesticide spray applications and as a soil amendment to enhance crop root development which can lead to higher yields and quality. In this study the soil amendment aspect of the product was tested. Two significant responses were observed where WEX was applied; higher grain moisture at harvest and higher grain yield. Higher grain moisture is not a typical response to WEX treatment but, if the larger root mass produced by WEX allowed for more moisture, a longer time to maturity could be a result. Higher yield is a typical WEX response and the extra 5.58 bushel is fairly usual. Thanks to better than average grain prices this year, the return of almost \$40.00 on a \$5.00 investment is better than average.

Guardian® -DL Nitrogen Fertilizer Additive

	Check 100 lbs. N	Guardian-DL – 1 qt/acre with 100 lbs. N	Advantage
Yield, BPA	181.72 bpa	184.16 bpa	2.44 bpa
Test Weight lbs.	59.4 lbs.	55.6 lbs.	-3.8 lbs.
Moisture %	19.2%	20%	+0.8 pts.

The Guardian technology's mode of action is primarily providing inhibition of nitrification; the transformation of ammonia form nitrogen into nitrate form. Ammonia form nitrogen is positively charged and therefore held in place by the negative charge of the soil, therefore leaching loss will not occur. Nitrate form has a negative charge and is therefore repelled from the soil and subject to loss by leaching. Yield response to Guardian usage is variable because of the variable nature of nitrate loss by leaching. If moisture is plentiful more leaching occurs and Guardian provides more benefit. If moisture is less plentiful then less nitrate is lost and benefits to Guardian use are less. In this study moisture was less plentiful and the benefit to Guardian use was relatively small and provided a 2 to 1 ROI.