



2012 AgroVantage Plot Results

Location: Mooreton, ND

Corn Test Plot

WEX[®] Multi-purpose wetting agent

	Check	WEX 1 pint	Advantage
Yield, bpa	234.25 bpa	252.7 bpa	+18.45 bpa
Test Weight, lbs.	56.1 lbs.	58.9 lbs.	+2.8 lbs.
Moisture %	16.25%	15.3%	+0.2 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. Typical yield response to this treatment is in the 4-5 BPA range, in this case a larger response was measured; 18.45 BPA! A \$129.00 return on a \$5.00 investment! Grain quality in the form of higher test weight was also observed were WEX was applied.

Amplify[®]-L and Magnify[®]-LAI Seed Treatments

	Check	Amplify-L & Magnify LAI	Advantage
Yield, bpa	234.25 bpa	241.9 bpa	+7.65 bpa
Test Weight, lbs.	56.1 lbs.	57.9 lbs.	+1.8 lbs.
Moisture %	16.25%	15.3%	-0.95 pts.

Two of the AgroVantage Systems seed treatment technologies were combined and applied in this study. Amplify-L 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, better plant stands and fewer low vigor plants that fail to produce grain. Magnify LAI is an azospirillum bacterial inoculant. The two primary modes of action are enhanced nitrogen nutrition as the result of fixation of atmospheric nitrogen in the root zone and production of plant growth regulators which produce enhanced plant vigor. Grain yield was increased, by 7.65 bushels per acre; this increase provided a \$53.00 return for a \$4.15 investment for the seed treatments.

Guardian® Nitrogen Additive

	Check	Guardian	Advantage
Yield, bpa	247.1 bpa	258.0 bpa	+10.9 bpa
Test Weight, lbs.	57.4 lbs.	58.7 lbs.	+1.3 lbs.
Moisture %	16.1%	15.4%	-0.7 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 use of Guardian is variable because of the variable nature of nitrate loss by leaching. Adding Guardian adds efficiency to the growers nitrogen program, the AgroVantage System employs a %15 reduction in overall nitrogen requirement when Guardian is included. In this study moisture was adequate and the benefit to Guardian use was average , adding \$76.00 to the bottom line for an investment of about \$15.00 per acre.

Feast® 3-18-18 and Feast 3-18-18 plus micronutrients

	Check	Feast 3-18-18 5 gallons	Feast 3-18-18 5 gallons, Feast Mn – 1 pint, Feast Zn – 2 pints, Feast Cu – 1 pint
Yield, bpa	234.25 bpa	243.2 bpa	245.1 bpa
Test Weight, lbs.	56.1 lbs.	57.8 lbs.	58.1 lbs.
Moisture %	16.25%	15.1%	15.1%
Advantage, BPA		+8.95 bpa	+10.85 bpa

The Feast starter fertilizer products provide two primary benefits. Number one, they are extremely efficient and effective sources for the essential nutrients N-P-K, reducing the need for application of less efficient broadcast applications. Number two, they are made from readily available plant food sources that produce rapid early growth and high vigor plants that are high yielding.

In this study Feast 3-18-18 produced a significant ROI; plus 8.95 bushels of additional grain or about \$62.00 additional dollars revenue for an investment of about \$38.00.

Adding micro-nutrients to the starter fertilizer produced some additional yield improvement.

AgroVantage® System Comparison

	Check no starter	AgroVantage System Feast 9-18-9 – 6 gallons, Side-Kick – 1 gallon, Feast Manganese – 1 pint, Feast Zinc – 1 pint, Feast Calcium – 1 pint	Advantage
Yield, BPA	234.25 bpa	260.2 bpa	+15.7 bpa
Test Weight, lbs.	56.1 lbs.	58.7 lbs.	
Moisture %	16.25%	14.7%	-0.4 pts.

A major aspect of the AgroVantage System’s approach to efficiently providing plant food is the application of fertilizers in-furrow. In this study a combination of plant foods as prescribed by soil analysis were applied in-furrow and compared to a zero starter check. The yield advantage produced by the in-furrow treatment provided about \$110.00 extra income per acre on an investment of about \$52.00.

Soybean Test Plot

WEX® Nonionic Surfactant

	Check	WEX	Advantage
Yield, BPA	61.9 bpa	66.3 bpa	+4.4 bpa
Test Weight, lbs.	55.9 lbs.	56.7 lbs.	+0.8 lbs.
Moisture %	11.8%	11.9%	+0.1 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. Typical application timing for WEX is to include it with pre-emerge herbicides. In this study the soil amendment aspect of the product was tested. The observed yield response of 4.4 BPA returned \$70.00 on a \$5.00 investment!

Feast 3-18-18 & Feast 3-18-18 plus micronutrients

	Check	Feast 3-18-18	Feast 3-18-18 + Micros
Yield, BPA	53.55 bpa	58.4 bpa	62.4 bpa
Test Weight, lbs.	56 lbs.	56.3 lbs.	57.9 lbs.
Moisture %	11.65%	11.9%	12.3%
Advantage		+4.85 bpa	+8.85 bpa

The AgroVantage System employs Feast starter fertilizer products for soybeans; maximum rate is 3 gallons per acre. Starters provide extremely efficient and effective sources for the essential nutrients N-P-K, reducing the need for application of less efficient broadcast applications. Starters also provide readily available plant food sources that produce rapid early growth and high vigor plants that are high yielding.

In this study Feast 3-18-18 produced a significant ROI; plus 4.85 bushels of additional grain or about \$77.00 additional dollars revenue for an investment of about \$15.00.

Adding micro-nutrients to the starter fertilizer produced an additional 4 bushels of beans providing revenue improvement of \$64.00 per acre at a cost of about \$12.00 .

AgroVantage System

	Check	AgroVantage System	Advantage
Yield, BPA	53.55 bpa	69.4 bpa	+15.85 bpa
Test Weight, lbs.	56 lbs.	57.6 lbs.	+1.6 lbs.
Moisture %	11.65%	12.1%	+0.45 pts.

The AgroVantage System’s approach to efficiently providing plant food for soybeans employs the application of fertilizers in-furrow utilizing a splitter and foliar at growth stage V5. In this study a combination of plant foods as prescribed by soil analysis were applied in-furrow and foliar and a comparison made to a zero starter check. The yield advantage produced by the AgroVantage System treatment provided about \$253.00 extra income per acre on an investment of about \$68.00.