

2015 - 2016 Blackmax™ 22 Trial

Purpose: Soybean producers are looking for ways to become more profitable and they want to know if commercially available products such as Blackmax 22 from Loveland Products Inc. will help them meet this objective. Blackmax 22 contains a humin component, a carbohydrate package, humic and fulvic acids and potassium. It is advertised as increasing nutrient availability, moderating salt toxicity, improving plant and microbial activity and increasing crop yields. The purpose of this trial was to evaluate the effect of a single application of Blackmax 22 on soybean yields and income in 2015 and 2016.

Procedure: A single foliar application of Blackmax 22 was compared to an untreated control at eight locations in 2015 and four locations in 2016. The Blackmax 22 was applied at one gallon per acre between the V3 and V5 or between the R1 and R3 growth stages in 2015 and between V3 and V5 in 2016. All sprayers were equipped and operated to optimize spray droplet deposition in the canopy.

Table 1. The effect of a single foliar application of Blackmax 22 on soybean yield and income in 2015

Location	Untreated control	Blackmax 22	LSD _{0.10}	Yield difference
	----- Yield (bu/ac) -----			Yield (bu/ac)
Monroe 1	52.4	55.9	5.5	3.5
Monroe 2	44.0	47.5	6.3	3.5
Lenawee	53.9	56.0	3.9	2.1
Monroe 3	26.8	28.8	3.4	1.9
Calhoun	71.8	72.8	2.9	1.0
Bay 1	51.6	52.1	1.7	0.5
Bay 2	39.4	39.3	1.8	-0.1
Ionia	65.3	65.1	3.9	-0.2
Washtenaw	36.3	36.0	3.5	-3.3
Average	49.1 b	50.4 a	0.9	1.3
	----- Income (\$/ac) -----			
*Average income	\$453	\$444		

Blackmax 22 cost = \$20.00 per acre

*Application cost was not included



Table 2. The effect of a single foliar application of Blackmax 22 on soybean yield and income in 2016

Location	Untreated control	Blackmax 22	LSD _{0.10}	Yield difference
	----- Yield (bu/ac) -----			Yield (bu/ac)
Allegan	44.3	45	7	0.7
Monroe	67.0	67.0	2.7	-0.1
Washtenaw	33.7	33.3	7.3	-0.3
Branch	63.5	63.1	2.7	-0.5
Average	52.1	52.1	1.7	0.0
	----- Income (\$/ac) -----			
*Average income	\$479	\$459		

Blackmax 22 cost = \$20.00 per acre

*Application cost was not included

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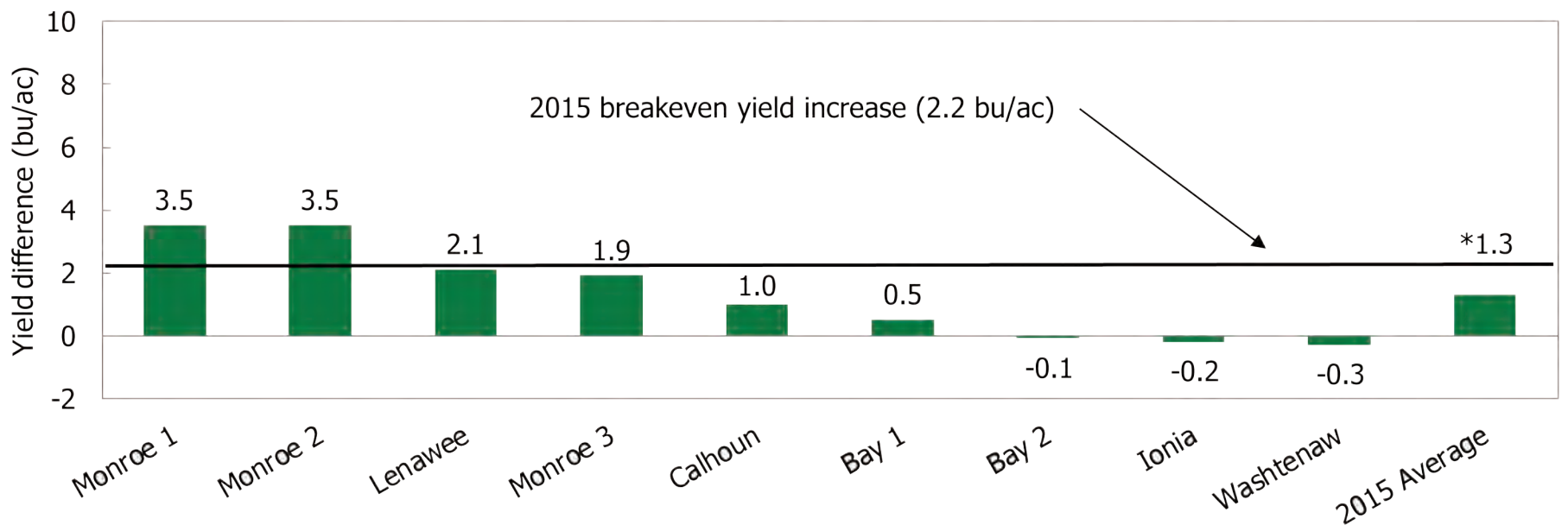
Results: The Blackmax 22 treatment did not significantly increase soybean yields at any of the eight sites conducted in 2015 or any of the four sites conducted in 2016. When the locations were combined and analyzed, the Blackmax 22 treatment produced 1.3 bushels per acre more than the untreated control in 2015 and produced the same yield as the untreated control in 2016. When all locations (2015 and 2016) were combined and analyzed, the Blackmax 22 produced 0.9 of a bushel per acre more than the untreated control. Because the breakeven yield increase for Blackmax 22 is 2.2 bushels per acre without the application cost, a single application of Blackmax 22 was not profitable.

We want to thank Crop Production Services and Loveland Products Inc. for providing and delivering the Blackmax 22 and Ned Birkey and Dan Rajzer for coordinating these trials.

2015 and 2016 Blackmax 22 trial locations

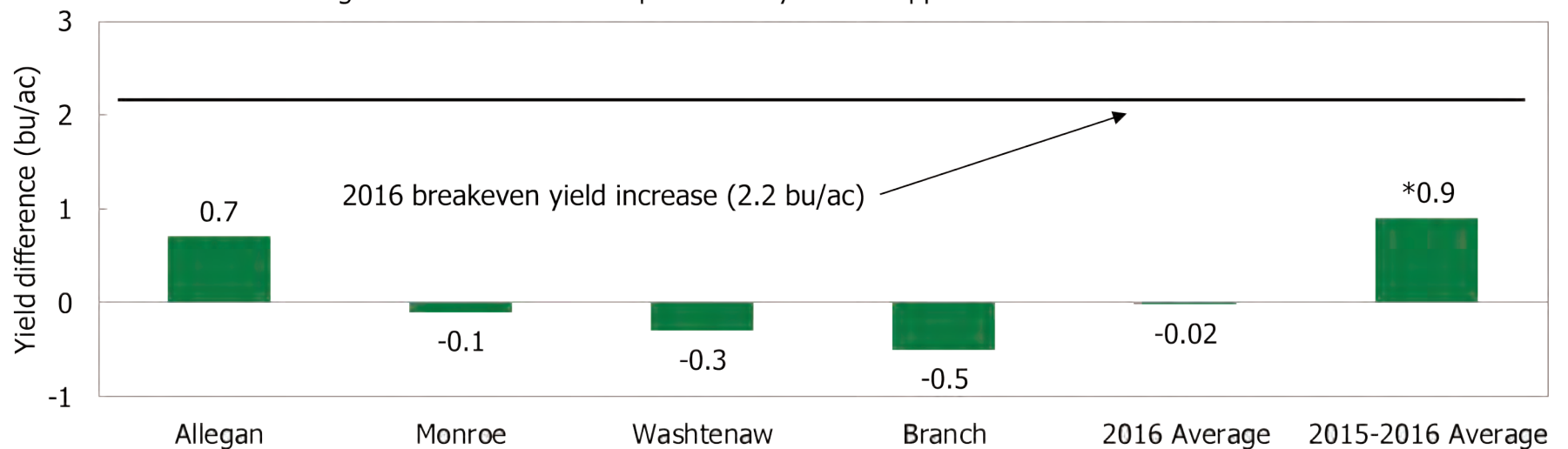


Figure 1. Yield difference produced by a foliar application of Blackmax 22 in 2015



* The yield difference was statistically significant at this location

Figure 2. Yield difference produced by a foliar application of Blackmax 22 in 2016



* The yield difference was statistically significant at this location