

BiOWiSH® Crop Liquid

BiOWiSH® Field Study: Maize in Brazil



Executive Summary

BiOWiSH Technologies conducted a side-by-side study to determine the efficacy of BiOWiSH® Crop Liquid coated urea on maize in dry-land, Safrinha growing conditions in Brazil. The focus was on BiOWiSH® Crop Liquid enhanced fertilizer's impact on yield and grower economics.

Background

About BiOWiSH Technologies

Headquartered in Cincinnati, Ohio, BiOWiSH Technologies, Inc. is a global provider of biotechnology solutions. As a leader in the agricultural market, we help farmers increase crop production sustainably, safely and cost effectively. Our revolutionary BiOWiSH® Crop Liquid can be coated onto dry fertilizer or mixed with liquid fertilizer to create an enhanced efficiency fertilizer that optimizes yield potential, expresses plant vigor and improves soil productivity across a broad range of operating conditions, climates and environments. By unifying nature and science, BiOWiSH reinvents the way food is grown. For more information, visit biowishtech.com.

Objectives

The field study was conducted to evaluate the performance of BiOWiSH® Crop Liquid in the second crop production (Safrinha conditions) of maize in Brazil.

BiOWiSH® Crop Liquid



- Optimizes yield potential
- Increases nutrient availability
- Enhances root development
- Improves plant vigor
- Enhances native microbial activity in the soil
- Improves soil productivity

Available Sizes

- 50 gal/190 L
- 264 gal/1000 L

Implementation Program

The study was conducted as a side-by-side farm demonstration in Itumbriara, Goiás, Brazil. The Control treatment consisted of a standard grower program of urea applied at 200 kg/ha (178 lbs/acre). This was compared to the Control treatment coated with BiOWiSH® Crop Liquid. The application timing was at V4 crop stage, which was twenty-nine days after planting. The urea was broadcast using a mechanical fertilizer spreader and was not incorporated into the soil.

The urea at V4 crop stage is the common practice in the region for a soybean/maize crop rotation. No phosphorous or potassium fertilizer was applied because the maize crop followed a soybean crop. The study was planted at a rate of 66,000 plants/ha (26,721 plants/acre). The Control plot measured 11.79 hectares (29.12 acres) and the BiOWiSH® treated plot was 12.13 hectares (19.96 acres).

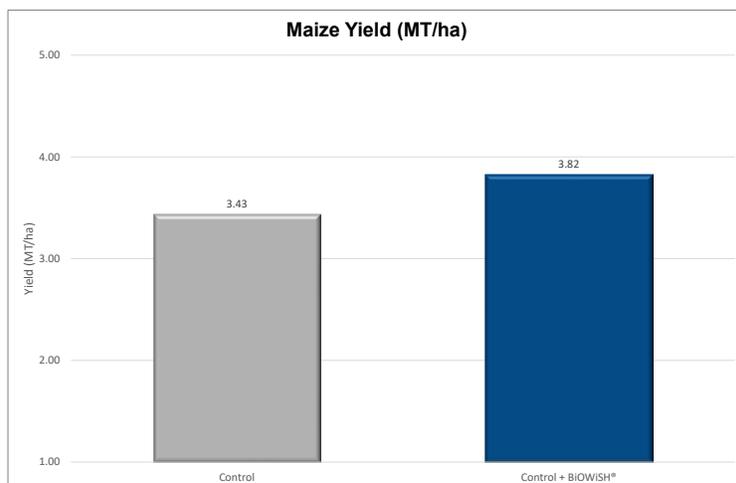
The climate conditions are normally hotter and drier than they are for the earlier planted crop; therefore, there was not consistent rainfall distribution during crop development.

Treatment	Application Rate kg/ha [lbs/acre]	Application Phase
100% Urea (Control)	200 [178]	Sidedress
100% Urea (Control) + BiOWiSH® Crop Liquid	200 [178]	Sidedress

*BiOWiSH® Crop Liquid used at manufacturer's recommended rate.

Results

Yield was measured across the three sample areas and showed that BiOWiSH® Crop Liquid increased yield over the Control by 0.39 MT/ha (0.17 tons/acre) for an increase of 11.38%. This higher yield from the addition of BiOWiSH® Crop Liquid to the Control increased the net income for the grower by \$96 USD/ha (\$39 USD/acre) based upon local prices for maize at harvest.



Treatment	Yield MT/ha [tons/acre]	Yield Increase MT/ha [tons/acre]	Yield Increase (%)	Net Income USD/ha [USD/acre]	Profit Change USD/ha [USD/acre]
100% Urea (Control)	3.43 [1.53]	-	-	788 [319]	-
100% Urea (Control) + BiOWiSH® Crop Liquid	3.82 [1.71]	0.39 [0.17]	11.38	884 [358]	96 [39]

*1 acre = 0.405 hectares

**1 MT/ha = 0.446 US short ton/acre

Conclusion

These trials showed, when coated onto urea fertilizer, BiOWiSH® Crop Liquid increased crop yield over the Control by 11.38% in Safrinha growing conditions. This resulted in increased profit of \$96 USD/ha (\$39 USD/acre) for the grower in a high-risk season.



Contact us:
 agronomy@biowishtech.com
 +1 312 572 6700
 biowishtech.com

BiOWiSH® is a registered trademark of BiOWiSH Technologies International, Inc.

1688-01-EN