

X-TEND® Increases Soybean Yields

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HUMA® PRODUCT: X-TEND®

BACKGROUND

Huma's X-TEND® has been applied to dry fertilizer and liquid blends to improve fertilizer effectiveness and to decrease nutrient losses. X-TEND may also be utilized to treat the soil and the plants directly to improve nutrient use efficiency, and act as a biostimulant to improve plant growth, and ultimately look at an increase in yield. Huma's Brazil team decided to test this direct application on soybeans.

OBJECTIVE

The focus of the study was to assess if Huma's X-TEND (Base Pro) could improve soybean yields and to see if those yields could be sustainable at different application windows and methods. X-TEND applied directly to the soil is designed to release tied up nutrients and act like a magnet to bring the unavailable nutrients from the soil solution to the roots and therefore to the plant. Also to be able to act as a biostimulant for the beneficial microbiology in the soil. X-TEND applied as a foliar directly to the plant leaves is designed to stimulate the plant and push the plant to aid in vegetative and reproductive growth.

MATERIALS & METHODS

The trials were conducted on 25+ acre fields in the Southeastern portion of Brazil. Applications of X-TEND were separated into 3 different methods: In furrow, broadcast application after planting, and as a foliar at V4. The 13oz/A rate of X-TEND was used on every single treatment method. These applications were on top of current grower's standard protocol, which averaged 116lbs/A of 11-52-0 and 36lbs/A of 0-0-60. Market price per bushel of soybeans was \$9.39. Using the application rate of 13oz/A and a cost of \$12/A, growers needed to increase yield by 1.3bu/ac to break even. All yields were calculated on a scale and signed by the growers. Averages were calculated below. ROI = (net profit/cost *100)

RESULTS

Adding X-TEND to an in-furrow application increased yield by 6.2 bushels or 9.66%, and net profits above \$46.53/ac with an ROI of 387.76%. Adding X-TEND as a broadcast application after planting increased yield by 7.8 bushels or 11.48%, and net profits of \$61.24/ac with an ROI of 510.35%. Adding X-TEND as a foliar application at V4 stage increased yield by 9.6 bushels or 13.50%, and net profits of \$78.14/ac with an ROI of 651.20%.

CONCLUSIONS

Adding X-TEND at any one of the tested applications showed a very positive trend towards increasing yields and giving a sizeable ROI. The Micro Carbon Technology® in X-TEND shows a very beneficial effect at improving plant growth. These effects are known to include direct plant stimulation, increasing nutrient use efficiency, and improving microbial populations. Further studies should look at applying X-TEND at all 3 stages to see if yields and ROI can be increased further.

Acres	Application	Rate	Cost	Control Yield	X-Tend Yield	Yield Change	Profit	Net Profit	Yield %	ROI
37.08	In Furrow	13oz/ac	\$12.00	65.45bu/ac	71.68bu/ac	6.23bu/ac	\$58.53	\$46.53	9.66%	387.76%
54.00	After Planting	13oz/ac	\$12.00	67.27bu/ac	75.07bu/ac	7.80bu/ac	\$73.24	\$61.24	11.48%	510.35%
25.00	Foliar at V4	13oz/ac	\$12.00	71.10bu/ac	80.70bu/ac	9.60bu/ac	\$90.14	\$78.14	13.50%	651.20%
40.95	Average of 3 Methods	13oz/ac	\$12.00	67.94bu/ac	75.82bu/ac	7.88bu/ac	\$73.97	\$61.97	11.55%	516.44%

Figure 1. X-TEND application and yield information.



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