Recoverable Sugar of Sugar Beets Yield Increased Using Huma Gro® Program

Field Trial

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Huma Gro® Products: Jackpot®, Calcium, Super Potassium®

Objective

This field trial was conducted to observe effectiveness of additional preharvest applications of Huma Gro® products on recoverable sugar of sugar beets and return on investment.

Materials & Methods

This trial on sugar beet (*Beta vulgais*) was conducted in Homedale, Idaho. The crop was seeded on April 18 and was harvested on October 18. A basic grower's standard fertilizer program was applied to all plots (300 lb/ac made up of MAP 11-52-0, potash 0-0-60, Tiger 90 sulfur, ammonium sulfate, Zn, Mn, and B). The additional Huma Gro® preharvest treatments were foliarly applied in September, 21 days before harvest (DBH) for Treatment 2 and Treatment 3, and in October, 10 DBH for Treatment 3.

The plots were established in a randomized design with three 25 ft x 30-inch center rows with 4 replications. Three treatment programs were implemented as shown in Table 1.

Table 1. Preharvest, 1 Untreated and 2 Huma Gro® Treatment Programs

Treatment	Product	Application Amount	Application Timing
1	Untreated	—	—
2	Jackpot® Huma Gro® Calcium Super Potassium®	2 qt/ac 1 qt/ac 1 qt/ac	21 Days Before Harvest
3	Jackpot® Huma Gro® Calcium Super Potassium®	2 qt/ac 1 qt/ac 1 qt/ac	21 Days and 10 Days Before Harvest

The sugar beets were harvested on October 18 with a small digger, picked up and hand-weighed from 24 feet of row. Sugar content was taken by cutting out small chunks of several sugar beets, freezing them, then squeezing the juice from them. The juice was measured with a refractometer. Yield was recorded in tons of beets per acre and percentage of sugar. The amount of recoverable sugar produced per acre was calculated.

Results

Table 2 demonstrates that the additional preharvest Huma Gro® treatments yielded higher recoverable sugar (9.63 tons/ac for Treatment 2, 9.84 tons/ac for Treatment 3) than the untreated grower's standard (8.91 tons/ac). The one application of Treatment 2, which had a smaller yield increase than the 2 applications of Treatment 3, resulted in a larger return on investment (ROI) than Treatment 3.

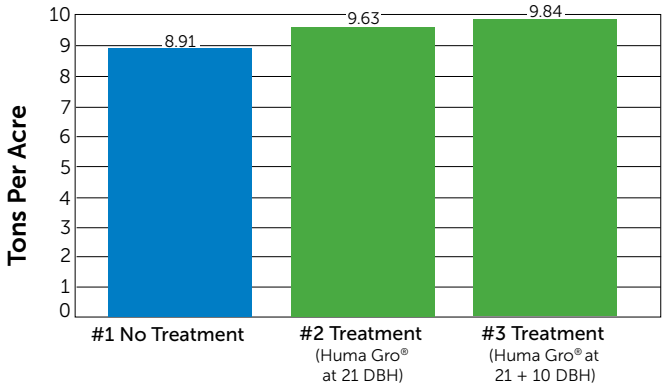

Figure 1. Recoverable Sugar Yield Results in Tons per Acre, by Treatment

Table 2. Yield, Percentage Yield Increase, Percentage Net Income Gain, and ROI Ratio of Huma Gro® Treatments Over Control

Treatment	Recoverable Sugar (tons/ac)	Recoverable Sugar % Yield Increase	% Net Profit	ROI Ratio
1	8.91	—	—	—
2	9.63	8%	6%	4:1
3	9.84	10%	7%	2:1

Conclusions

Even though the recoverable sugar yield differences among the three treatments were not statistically significant, the Huma Gro® preharvest treatments yielded 8% to 10% higher recoverable sugar than the grower's standard program. Applying the Huma Gro® products once at 21 days prior to harvest gave a higher ROI than applying the products two times before harvest. This single application returned $4 for every $1 spent.

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