

Recoverable Sugar of Sugar Beets Yield Increased Using Huma® Program, Year 1

Research Report

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

Objective

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

Materials & Methods

This trial on sugar beet (*Beta vulgaris vulg. altissima*) was conducted in Homedale, Idaho. The crop was seeded on May 8 and was harvested on October 13. The plots were established in a randomized design with three 25 ft x 34-inch center rows with 4 replications. The beet population was 2-3 plants per foot.

A basic grower's standard (GS) fertilizer program was applied to all plots. The additional Huma® preharvest treatments were foliarly applied in September, 21 days before harvest (DBH) for Treatment 2 and Treatment 3, and on October, 10 DBH repeated for Treatment 3.

Three treatment programs were implemented as shown in Table 1.

Table 1. Huma® Treatment Programs In Addition to Grower Standard

Treatment	Product	Application Amount	Application Timing
1	Grower's Standard	GS	GS
2	GS Jackpot® Huma® Calcium Super Potassium®	GS 2 qt/ac 1 qt/ac 1 pt/ac	GS Foliar, 21 Days Before Harvest
3	GS Jackpot® Huma® Calcium Super Potassium®	GS 2 qt/ac 1 qt/ac 1 pt/ac	GS Foliar, 21 Days and 10 Days Before Harvest

The sugar beets were harvested 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 Brix of juice was measured with a refractometer. The amount of recoverable sugar produced per acre was calculated from Brix percentage. Yield was recorded in tons of beets per acre and percentage of sugar.

Results

Figure 1 illustrates that the additional preharvest Huma® treatments yielded higher recoverable sugar (10.45 tons/a for Treatment 2, 10.81 tons/a for Treatment 3) than the

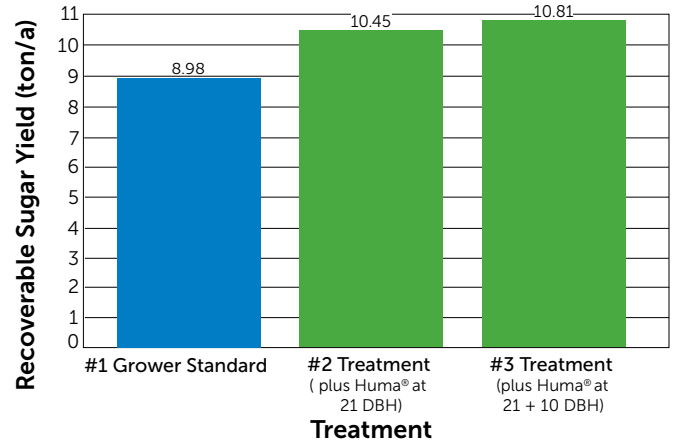


Figure 1. Recoverable Sugar Yield Results in Tons per Acre, by Treatment

grower's standard program of 8.98 tons/a.

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 (Table 2).

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

Treatment	Sugar Beets Yield (tons/ac)	Recoverable Sugar % Yield Increase	% Net Profit	ROI Ratio	Brix %
1	54.2	—	—	—	16.5
2	57.2	16%	14%	9:1	18.3
3	61.2	20%	16%	5:1	17.6

Conclusions

Even though the recoverable sugar yield differences among the three treatments were not statistically significant, the Huma® preharvest treatments yielded 16% to 20% higher recoverable sugar than the grower's standard program.

The single application returned \$9 for every \$1 spent for Treatment 2 and return of \$5 for every \$1 spent for Treatment 3. **Under both scenarios, the net income gain was > \$100/acre.** Such ROIs can be a noticeable incentive for producers to adopt Huma® products into their programs.