

Huma Gro® Program Increases Peanut Yield Under Severe Conditions

Field Trial

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Huma Gro® Products: Breakout®, Calcium, Jackpot®, Start-L®, Super Potassium®, Vitol®, Zap®

Objective

This field trial was conducted in order to compare peanut crop yields and return on investment (ROI) obtained when Huma Gro® products were applied in various combinations in comparison with a grower standard program.

Materials & Methods

This trial on peanut (*Arachis hypogaea*, Var. GA-12Y) was conducted in Memphis, Tenn., in a randomized complete block study with 4 replications in 12.6' x 30' plots. The peanuts were planted on June 25 and harvested on December 14. Seven treatment programs were compared as shown in Table 1.

Table 1. Control and 6 Huma Gro® Treatment Programs

Treatment (Tx)	Product	Application Amount/Ac	Application Timing
1 (Control)	Standard (gypsum + N-P-K + inoculum)	0.5 ton 40 lb / 80 lb / 80 0.2 fl oz	Broadcast preplant Broadcast preplant In-furrow
2	Tx 1 Vitol® HG Calcium Breakout® HG Calcium Breakout® HG Calcium Jackpot® HG Calcium	(See Tx 1 for Amounts) 32 fl oz 32 fl oz 32 fl oz 48 fl oz 32 fl oz 48 fl oz 64 fl oz 32 fl oz	Broadcast preplant / in-furrow Foliar at 6-8 inches w/ insecticide Foliar at 6-8 inches w/ insecticide Foliar, 1st pegging Foliar, 1st pegging Foliar, begin podding Foliar, begin podding Foliar, 21 days before harvest Foliar, 21 days before harvest
3	Tx 1 Jackpot® HG Calcium Super Potassium® Jackpot® HG Calcium Super Potassium®	(See Tx 1 for Amounts) 64 fl oz 32 fl oz 16 fl oz 64 fl oz 32 fl oz 16 fl oz	Broadcast preplant / in-furrow Foliar, 30 days before harvest Foliar, 30 days before harvest Foliar, 30 days before harvest Foliar, 15 days before harvest Foliar, 15 days before harvest Foliar, 15 days before harvest
4	Tx 1 Zap®	(See Tx 1 for Amounts) 64 fl oz	Broadcast preplant / in-furrow Broadcast preplant
5	Tx 1 Zap®	(See Tx 1 for Amounts) 64 fl oz	Broadcast preplant / in-furrow In-furrow
6	Tx 1 w/o inoculum Zap® Start-L®	(See Tx 1 for Amounts) 64 fl oz 8 fl oz	Preplant In-furrow In-furrow
7	Tx 1 Zap® Vitol® HG Calcium Breakout® HG Calcium Breakout® HG Calcium Jackpot® HG Calcium	(See Tx 1 for Amounts) 64 fl oz 32 fl oz 32 fl oz 32 fl oz 48 fl oz 32 fl oz 48 fl oz 64 fl oz 32 fl oz	Preplant / in-furrow In-furrow Foliar at 6-8 inches w/ insecticide Foliar at 6-8 inches w/ insecticide Foliar, 1st pegging Foliar, 1st pegging Foliar, begin podding Foliar, begin podding Foliar, 21 days before harvest Foliar, 21 days before harvest

Results

All the Huma Gro® treatments yielded significantly higher than the grower standard (Control). Treatment 7 resulted in the highest yield (2.34 ton/acre) compared with the Control (0.82 ton/acre), with Treatment 3 next highest at 1.96 ton/ac. The average rainfall in Tennessee ranged from 20% to over 40% higher in 2019 than 2018. Generally, the average peanuts yield for the southern

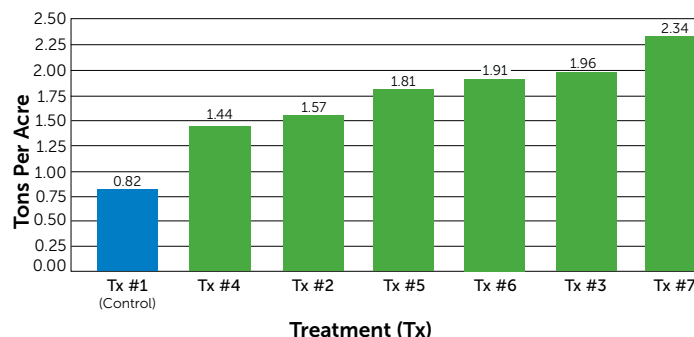


Figure 1. Peanut Yield Results by Treatment, in Tons per Acre

region is about 2 ton/acre. However, due to unfavorable weather conditions in the area the overall yield production was lower than normal for the Control treatment at 0.83 ton/acre. It is noteworthy that Treatment 7 (2.34 ton/acre) yielded 17% higher than the normal regional average peanut yield (2 ton/acre).

Based on a peanut market price of \$440/ton, Table 2 shows yield and net profit, along with the return on investment (ROI) ratio, for the 6 treatments over the control. Treatment 7 showed the highest percentage of yield increase over the control (185%). An ROI ratio of 8:1 occurred for Treatment 6.

Table 2. Yield, Percent Net Profit, and ROI Ratio of Huma Gro® Treatments Over Control

Treatment	Yield (ton/ac)	% Net Profit	ROI Ratio
1 (Control)	0.82	—	—
2	1.57	85%	2:1
3	1.96	139%	4:1
4	1.44	79%	3:1
5	1.81	131%	6:1
6	1.91	149%	8:1
7	2.34	185%	4:1

Conclusions

Micro Carbon Technology® in Huma Gro® soil and foliar products contributed to significant peanut yield and revenue increases in all the Huma Gro® treatments evaluated in this study. Though adding Huma Gro® products increased initial costs, the greater yields and net profits generated by the treatments resulted in a return on investment that paid for the cost and application of the Huma Gro® products many times over (\$2-\$8 dollars returned for every \$1 spent).