



Huma® Program Increases Peanut Yield Under Severe Conditions

Field Trial

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Huma® 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® 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® 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® Calcium Breakout® Calcium Jackpot® 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® Calcium Super Potassium® Jackpot® 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
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® Calcium Breakout® Calcium Breakout® Calcium Jackpot® 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® 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%

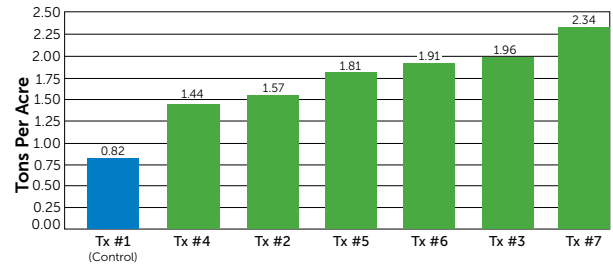


Figure 1. Peanut Yield Results by Treatment, in Tons per Acre

higher in 2019 than 2018. Generally, the average peanuts yield for the southern 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® 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® soil and foliar products contributed to significant peanut yield and revenue increases in all the Huma® treatments evaluated in this study. Though adding Huma® 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® products many times over (\$2–\$8 dollars returned for every \$1 spent).