

AN ACID SOLUBLE HUMATE FOR SWEET CORN

OBJECTIVE:

To determine if sweet corn production is affected by the addition of BorreGRO® HA-1 to standard fertility programmes.

RESULTS:

- A test plot treated with fertiliser and 5 pounds of BorreGRO HA-1 soil conditioner per acre produced an average of 8.5% more sweet corn than a control plot treated with fertiliser alone (Table 1).
- Nutrient uptake was improved in the BorreGRO HA-1 treated plot (Table 2).
- Gross income to the grower increased by 43 dollars per acre (Table 3).

Treatment	Yield	
	Bushels/acre	Lbs/acre
Control	138.4	7613
BorreGRO HA-1	150.1	8258

Table 1: Sweet Corn Yield Results (Monte Alto, TX). Trials conducted by the USDA-ARS.

PROCEDURES:

The trial was performed in Monte Alto, Texas by the USDA-ARS. The control plot was treated with fertiliser alone. The test plot was treated with fertiliser and 5 pounds BorreGRO HA-1 per acre. The product was diluted prior to application for more accurate delivery. Application was split as follows: 2 pounds per acre were applied side-dress at planting, 1 pound per acre was applied at 30 days after planting in-row; 1 pound per acre was applied foliarly at

50 days after planting and 1 pound per acre was applied foliarly at 76 days after planting. Yield was determined by hand harvesting representative samples from each test plot.

Treatment	Control	BorreGRO HA-1
%N	2.16	2.32
%S	0.16	0.18
%P	0.22	0.24
%K	3.61	3.32
FE (ppm)	102	209
B (ppm)	32	33
Cu (ppm)	19	24
Zn (ppm)	32	40

Table 2: Tissue Results

DISCUSSION:

Plots treated with fertiliser and 5 pounds of BorreGRO HA-1 per acre produced an average of 8.5% more sweet corn than a similar plot treated with fertiliser alone. Thus, this range of product application is recommended for future plantings. BorreGRO HA-1 should be diluted for application and applied in-furrow to maximise response. BorreGRO HA-1 can be applied with acid fertilisers. This increase produced a positive financial gain for the potato grower.

The results of these trials clearly indicate that sweet corn production can be increased by the addition of BorreGRO HA-1 to standard fertility programmes.

CONCLUSIONS AND RECOMMENDATIONS:

A plot treated with fertiliser and 5 pounds of BorreGRO HA-1 per acre produced an average of 8.5% more sweet corn than a similar plot treated with fertiliser alone. Thus, this range of product application is recommended for future plantings. BorreGRO HA-1 should be diluted for application and applied through the irrigation system. Application of BorreGRO HA-1 should be as close to planting as possible, although subsequent foliar applications can also be made. BorreGRO HA-1 can be applied with acid fertilisers.

Treatment	Yield (lbs/acre)	Return ¹ (\$/acre)	Increase (\$/acre)
Control	7613	514	-
BorreGRO HA-1	8258	557	43

Table 3: Gross Economic Return. Based on a selling price of 135 dollars per ton.

WHAT DOES BORREGRO DO?

Through extensive crop trials, BorreGRO has been shown to improve the structure of soil by aiding aeration, improving water penetration and increasing water holding capacity.

BorreGRO can also act as a complexing agent, making natural or supplemented soil nutrients such as iron or zinc available to the plant and soil microbes. In addition to being a source of organic carbon, BorreGRO is also a source of the essential nutrient sulphur. Consequently, use of BorreGRO can result in:

- Increased crop yield
- Increased root mass
- More vigorous early stage growth
- Increased vegetative mass
- Increased chlorophyll content

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