# Fertiactyl GZ Foliar Application — Sweet Potato

## OBJECTIVE

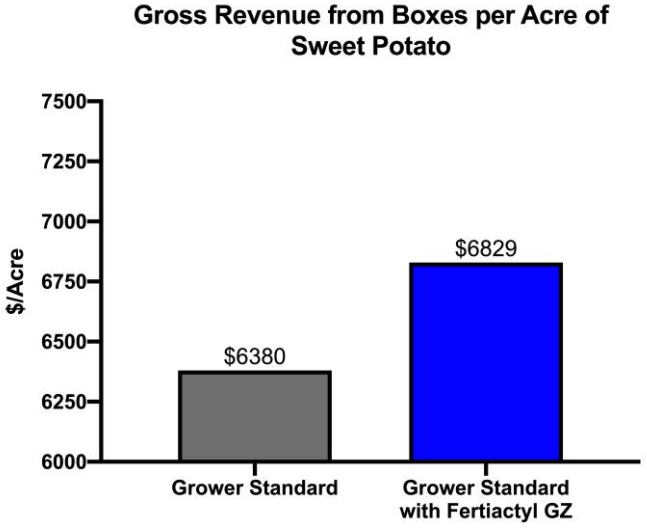
To assess the total yield and crop quality response for sweet potato when Fertiactyl GZ was foliar applied 13 days after planting.

**Site Location:**
Newton Grove, NC

**Researcher:**
Jonathan Schultheis, Ph.D.
North Carolina State University

## TIMAC AGRO PRODUCT

FERTIACTYL® GZ

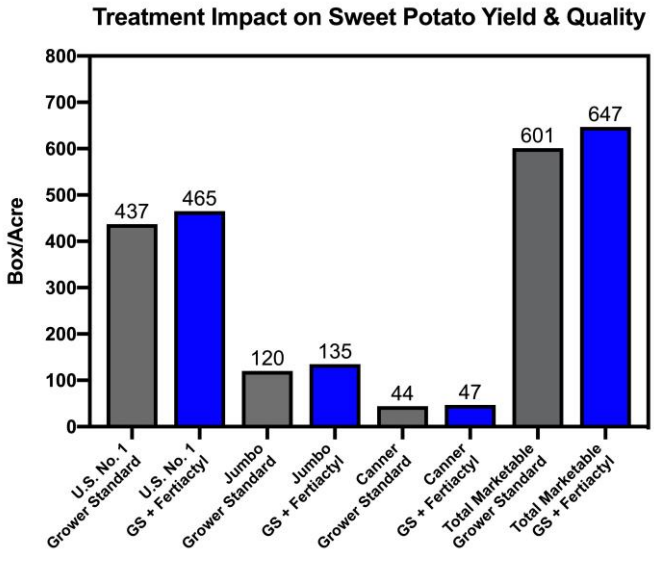



**Graph:** The Gross Revenue above was calculated at $12/box for U.S #1, $8/box for Jumbo and $4/box for Canner. Return on treatment was calculated at Fertiactyl GZ retail cost of $51.25/gallon.

## KEY FINDINGS

**+46 bx/ac**
In Total Marketable category for Fertiactyl GZ treatment over Grower Standard

**$449.00/ac**
Returned from Fertiactyl GZ treatment over Grower Standard




## APPLICATION

| Treatment | Application Rate |
|---|---|
| Grower Standard | N/A |
| Fertiactyl GZ | 3 pints/acre |

Trial ID: RT-15-SE-SPO-GZ

## MATERIALS AND METHODS

This study was conducted on a commercial grower's farm in Newton Grove, NC in a field with a uniform, light sandy loam soil near Clinton, NC. The experimental design was a randomized complete block with 4 replications. Sweet potato variety "Covington" was transplanted on 5 June 2015. Plots were 4 rows, 50 ft long with a distance of 44 inches between row centers. Stand counts were taken nearly 2 weeks after planting in rows 2 and 3. Stands were very uniform across plots and most were at 100% of targeted stand. The first fertilizer application of 9-6-29 was applied 16 June, 11 days after planting, at 300 lb/ac. A second fertilizer application of 11-0-29 was applied 1 July, 26 days after planting at 500 lb/ac. Fertiactyl GZ was applied at 3 pt/ac over the plant rows with a CO2 pressurized back pack sprayer on 18 June, 13 days after planting. The top leaf surface was covered with solution. Harvest was 23 September 2015 (110 days after planting) as roots from 30 ft from one of the middle rows of the plot were collected, graded and weighed according the USDA standards. The grades included U.S. No. 1 (the most desirable and profitable grade), canner, jumbo, and cull (misshapen roots). The results were analyzed using SAS using Proc GLM and significance was determined using a LSD test to make pair wise comparisons of the treatments at the 0.05 level of significance. Yields were extrapolated from the pounds per plot that were measured to the number of 40 pound boxes produced per acre.

## RESULTS AND CONCLUSIONS

The application of Fertiactyl GZ resulted in numerically higher yields of U.S. No. 1, canner and jumbo roots. The treatment reduced number of cull box/acre in the study by 70%.

## RETURN ON INVESTMENT

| Grower Standard | US No. 1/Ac | Canner/Ac | Jumbo/Ac | Cull/Ac | Marketable/Ac | Cost of Treatment | Gross - Cost = |
|---|---|---|---|---|---|---|---|
| Box/Ac | 437 | 44 | 120 | 10 | 601 | | |
| Gross Revenue | $5,244 | $176 | $960 | $0 | $6,380 | (-) | $6,380 |

| Grower Standard + GZ | US No. 1/Ac | Canner/Ac | Jumbo/Ac | Cull/Ac | Marketable/Ac | Cost of Treatment | Gross - Cost = | Change over GS |
|---|---|---|---|---|---|---|---|---|
| Box/Ac | 465 | 47 | 135 | 3 | 647 | | | |
| Gross Revenue | $5,580 | $188 | $1,080 | $0 | $6,848 | $19 | $6,829 | **$449** |

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