

Guarantee® Seaweed Extract

Increases Yield in Chip Potatoes

STUDY OBJECTIVE

To evaluate the effect of Ocean Organics **Guarantee®** on chip potato yield compared to a grower standard.

LOCATION/SCIENTISTS

Location: North Carolina

Investigator: Robert Schafer,
Mid-Michigan Agronomy

Study Director: Sarah Williams,
Ph.D., Ocean Organics

CROP

Crop Name: Potato

Crop Scientific Name:
Solanum tuberos

Crop Variety:
Snowden chip potato

RESULTS

Yield

Guarantee® statistically increased total yield by 20% (Figure 1, Table 1). Yield of large potatoes was statistically increased by 27% (Figure 2, Table 1). Yield of small potatoes was numerically increased by 4% (Figure 3, Table 1).

METHODS

This field trial took place in North Carolina and was initiated in March of 2024. The Grower Standard Program consisted of the products in Table 2.

Guarantee® was applied on top of the Grower Standard Program three times via foliar applications: first at hooking followed by two additional applications 14 days apart. Product was applied at the same time as a



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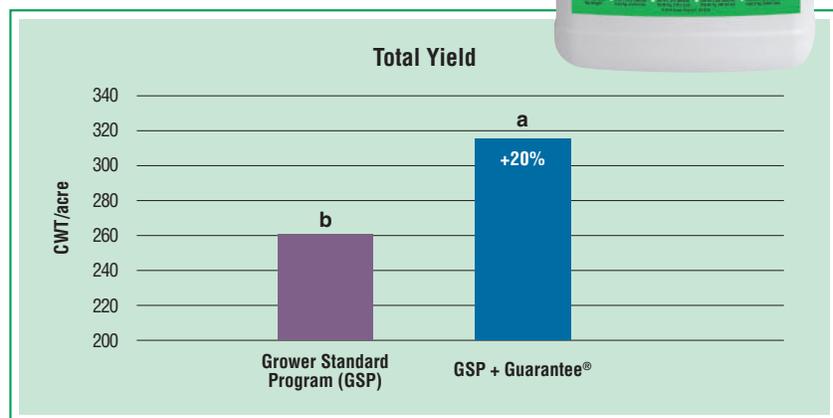


Figure 1: **Guarantee®** increased total potato yield by 20%.

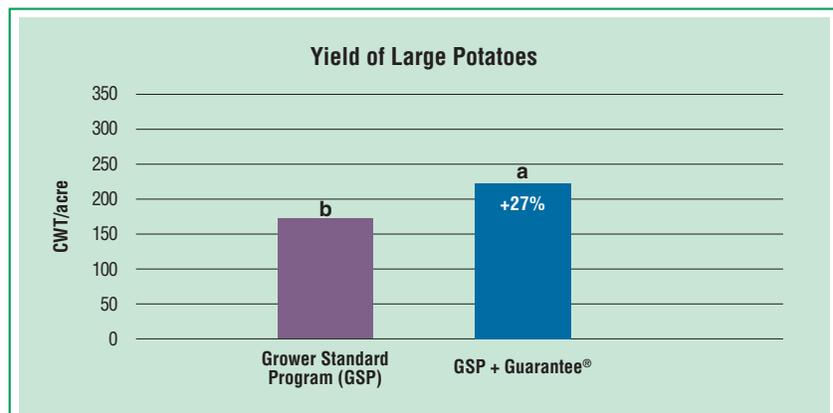


Figure 2: **Guarantee® Hi K** statistically increased yield of large potatoes by 27%.

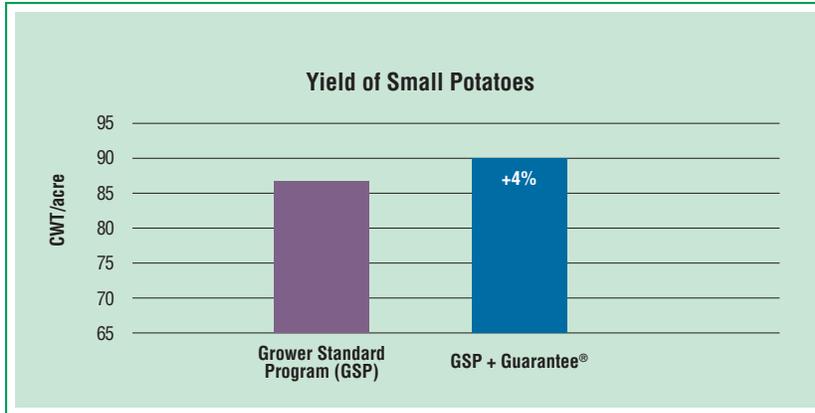


Figure 3: Guarantee® increased yield of small potatoes by 4%.

Table 1: Guarantee® increased yield of large potatoes statistically by 27%, yield of small potatoes numerically by 4%, and total yield by 20%.

| Yield | | | |
|-------------------------------|------------------------------------|------------------------------------|------------------------|
| | Yield of Large Potatoes (CWT/acre) | Yield of Small Potatoes (CWT/acre) | Total Yield (CWT/acre) |
| Grower Standard Program (GSP) | 173.1 b | 87 | 262.3 b |
| GSP + Guarantee® | 219.7 a | 90.2 | 314.6 a |

Table 2: The Grower Standard Program + Guarantee® consisted of the following products, rates and timings (Grower Standard Program alone is in purple).

| Treatment | Rate | Rate Unit | Application Code | Application Description |
|---------------------------|-------|-----------|------------------|--|
| DAP | 135 | lb/a | A | A = preplant |
| Urea | 350.5 | lb/a | A | A = preplant |
| Sulphate of Potash (Kg/K) | 300 | lb/a | A | A = preplant |
| Ammonium Polyphosphate | 117 | lb/a | B | B = at planting |
| Muriate of Potash 0-0-60 | 265 | lb/a | C | C = sidedress 4 weeks after planting |
| Guarantee® | 2 | qt/a | D | D = at hooking, two additional foliar applications |

fungicide spray. Yield was measured at the end of June. The researcher considered large potatoes 1.5 inches or larger, small potatoes as below 1.5 inches. Potatoes smaller than 0.75 inches were not harvestable.

CONCLUSION

This field trial showed that Guarantee® increased yield of large potatoes by 27% (statistically), yield of small potatoes by 4% (numerically) and total yield by 20% (statistically).

In 2024, the growing conditions were challenging and included both drought conditions and intense heat stress. Improved yield under these conditions was especially noteworthy.

Ocean Organics has been processing seaweed and formulating fertilizers for over 45 years. Our innovative processing technology yields products richer than others yet with fewer solids and lower viscosity. This means our extracts can be used with a broader range of materials with better blending, mixing and stability characteristics. Our seaweed-based fertilizers, plant health materials and soil conditioners lead the industry in quality, effectiveness, cost efficiency and environmental sustainability.



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