

SPECIFICATION SHEET

QUANTUM-TOTAL™
Beneficial Soil and Plant Microbial Inoculant

DESCRIPTION

Quantum-Total is a plant and soil inoculant that restores and enhances the foundational levels of soil biology (also known as the soil food web). This product incorporates highly specialized photosynthetic and heterotrophic bacteria into a diverse microbial formulation that provides unprecedented plant enhancement at foliar, root and rhizosphere.

PERFORMANCE CHARACTERISTICS

When used as a foliar or soil application, Quantum-Total directly impacts plant vigor and performance by:

- Improving nutrient uptake
- Improving plant photosynthesis
- Improving root and shoot growth
- Fortifying plant natural defense systems
- Promoting water production and retention

PRODUCT CHARACTERISTICS

Highly concentrated – Provides over fifty million colony forming units per milliliter.

Safe and easy to use – Non-toxic and contains non-pathogenic bacteria. It may be applied as a foliar or root drench and is compatible with most types of irrigation systems to include: speed sprayer, boom sprayer, pivot irrigation, aerial spray, micro-jet, etc.

No re-entry restrictions.

Easy storage – Does not require refrigeration.

Long life – Shelf stable for 2 years (unopened) and 1 year (opened).

Properties

Guaranteed Bacterial Analysis:

<i>Rhodopseudomonas palustris</i>	900,000 cfu/mL
<i>Bacillus amyloliquefaciens</i>	20,000,000 cfu/mL
<i>Bacillus subtilis</i>	10,000,000 cfu/mL
<i>Bacillus licheniformis</i>	10,000,000 cfu/mL
<i>Bacillus megaterium</i>	5,000,000 cfu/mL
<i>Paenibacillus polymyxa</i>	5,000,000 cfu/mL

Fertilizer Analysis:

No NPK; fertilizer analysis of 0-0-0

pH:

6.9-8.0

Specific Gravity:

0.9958

Particle Size:

100% through 100 micron/140 mesh

Appearance:

Brown to black liquid

Odor:

Pungent and distinctive earthy odor

Properties (cont.)

Packaging:

Plastic 1 gallon bottles, 5 gallon totes, 30 gallon & 55 gallon drums and 275 gallon totes (mini-bulks)

Storage/handling:

Shake/agitate before use. Re-cap as soon as possible. Store between 32°F/0°C and 110°F/43°C.

DIRECTIONS FOR USE

Row Crops – 64 oz per acre in furrow or within 14 days of emergence; (optional) 64 oz per acre with side dress

Grains (Irrigated) – 64 oz per acre at planting; 64 oz per acre at seed head development.

Grains (Non-irrigated) – 1 gallon per acre at planting.

Turf (Golf) – Initial application of 8 oz per 1,000 ft² on tees and greens; 4 oz per 1,000 ft² every 14 days.

Turf (Sod & Sport) – Initial application (including at planting) 1 gallon per acre; 64 oz every 30 to 45 days.

Vegetables (Greenhouse) – Water in seeds with 4 oz per gallon.

Vegetables (Outplanting) – Root dip or drench with 4 oz per gallon; 64 oz per acre every 14 to 21 days.

Citrus (fair to good condition):

1 gallon Pre-bloom or early bloom
 Full bloom or 2/3 petal fall
 With summer spray*
 With fall spray*
 6 to 8 weeks prior to harvest

Citrus (poor condition):

1 gallon As a foliar* or through ground irrigation every 30 days

Optional Foliar Spray Program:

2 gallons Feb/Mar
 Jun/Jul
 Sept/Oct
 Nov
 6 to 8 weeks prior to harvest

New Plantings/Resets:

2 oz per tree At transplant with watering in solution

* if spray includes and form of a pesticide, apply Quantum Growth through injection into ground irrigation system

DO NOT MIX WITH FUNGICIDES OR PESTICIDES. When tank mixing, add the Quantum-Total last and apply within 0 to 12 hours.

For crop specific application rates and timing, visit www.GrowQuantum.com/product-application-rates.aspx

