

SPECIFICATION SHEET

QUANTUM-RC™

Beneficial Soil and Plant Microbial Inoculant

DESCRIPTION

Quantum-RC 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 heterotrophic bacteria into a diverse microbial formulation that provides unprecedented plant enhancement at foliar, root and rhizosphere. The addition of humate material to the formulation provides a readily usable carbon source.

HOW IT WORKS:

- **Improving Nitrogen Fixation** – Species within the formulation are capable of producing the enzymes necessary to fix nitrogen from the atmosphere (*Rhodopseudomonas palustris*).
- **Improving Phosphate Availability** – One of the bacterial species in the formulation (*Rhodopseudomonas palustris*) produces the necessary enzymes (i.e. acid phosphatase, phytase, etc.) to break the chemical bonds that bind phosphate in the soil, making it more available to the plant.
- **Improving Plant Photosynthesis** – Photosynthetic bacteria (*Rhodopseudomonas palustris*) in the formulation produce the building material for chlorophyll (aminolevulinic acid or ALA) and the enzymes required in plant photosynthesis. Increased enzyme production supports increased rates of photosynthesis.
- **Improving Root and Shoot Growth** – Several of the bacterial species in the formulation (*Rhodopseudomonas palustris*) produce two kinds of compounds, indole acetic acid (IAA) and cytokinins that stimulate root and shoot growth. Both work by turning on the plant genes responsible for growth.

PRODUCT CHARACTERISTICS

Highly concentrated – Provides one 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>	15,000,000 cfu/mL
	<i>Bacillus subtilis</i>	7,500,000 cfu/mL
Fertilizer Analysis:	No NPK; fertilizer analysis of 0-0-0	
pH:	6.9-7.5	
Specific Gravity:	0.9958	
Particle Size:	100% through 100 micron/140 mesh	
Appearance:	tan to red liquid	
Odor:	Pungent and distinctive odor (hydrogen sulfide)	

Packaging:

Plastic 2.5 gallon totes & 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 (per acre)

Corn

32-64 oz in furrow & 32-64 oz w/ side dress

Soybean

32-64 oz in furrow or at emergence & 32-64 oz w/ 1st herbicide spray (check compatibility)

Peanut

32-64 oz in furrow (optional foliar app 32-64 oz w/ compatible 1st herbicide app)

Cotton

32-64 oz in furrow & 32-64 oz w/ side dress

Small Grain

12" high – 32-64 oz with broadcast fertilizer and repeat 2 weeks before booting

Compatibility information at <https://GrowQuantum.com/Products>, select 'Tank Mix Compatibility'

pH Tolerance: 7 to 8 = optimal, 5 to 9 = okay, <5 or >9 marginal to poor

If product is not on chart, contact us for advice/arrange for potential testing

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

For additional application rates and timings, visit www.GrowQuantum.com/product-application-rates.aspx.

