

Quantum Growth™

Agricultural Application Rates

by
Applied and Experimental Microbiology™

WHERE TO USE WHAT Quantum Growth™ PRODUCT WHEN?

Use Quantum-1™ in sandy soils. Do not apply directly to foliage unless thoroughly diluted due to Humic component in product.

Use Quantum-VSC™ or Quantum-HSC™ in heavy clay, organic, compacted, septic or flood damaged soil. Do not apply directly to foliage unless thoroughly diluted due to Humic component in product.

Use Quantum-Light™ in rich, well-drained, high quality soils.

Use Quantum-Light when frequent applications are being used to force growth and/or recover from chemical and/or environmental stress or physical damage. Quantum-Light may be used every 20 minutes in Green House applications, and everyday in Farms, Nurseries and Turf.

AEM has found from our most successful clients that using 50% Quantum-VSC and 50% Quantum-Light provides the highest level of performance in most applications. The application rates presented in this document provide the most cost-effective rates that will yield significant improvement in plant performance.

**SPRAY MIXTURE pH SHOULD BE BETWEEN 6.5 AND 7.5 (OPTIMAL); WILL TOLERATE FROM 3.0 TO 9.0
DILUTION W/ WATER PRIOR TO MIXING WITH LIQUID FERTILIZER IS PERFERRED, HOWEVER NOT REQUIRED.**

Note: If applying only once, apply at full growing season rate at initial application.

CROP	RATE PER ACRE	APPLICATION DIRECTIONS
ALFALFA	2 qts	At planting.
GRASSES GROWN FOR SEED	1 qt	After every cutting.
BEAN (SNAP) NAVY	2 qts - In a Band	Initial Application - Apply at planting.
PINTO KIDNEY BLACKEYE	1 qt at subsequent applications.	Subsequent applications at 14 to 21 day intervals.
CARROT	6 qts per acre over growing season, may exceed as needed	
CABBAGE	2 qts - In a Band	Initial Application - Mix in transplant water or immediately after transplanting through drip lines or as topical spray.
CAULIFLOWER		
CELERY	2 qts at subsequent applications	Apply in drip irrigation water or as topical spray at 14 to 21 day spray intervals.
BROCCOLI		
BRUSSEL SPROUTS	6 qts per acre over growing season, may exceed as needed	

CROP		RATE PER ACRE	APPLICATION DIRECTIONS																					
CITRUS-MATURE TREES		1 gal of Light per year 1 gal of VSC per year	Apply as a foliar spray or through ground irrigation. Apply through ground irrigation. Evenly divide yearly dose between seasonal sprays/irrigation.																					
CITRUS-YOUNG TREES		8 oz	Weekly through drip irrigation.																					
CITRUS-NEW PLANTINGS		2 oz per tree (6 TIMES)	Apply in conjunction with fertilizer applications.																					
CORN (SWEET & FIELD) AND SEED CORN		2 qts - In a Band 1 qt at subsequent applications. 4 qts per acre over growing season, may exceed as needed	Initial Application - Apply at planting. Subsequent applications at 14 to 21 day intervals.																					
COTTON		2 qts - In a Band 1 qt at subsequent applications. 6 qts per acre over growing season, may exceed as needed	Initial application - May be applied with starter fertilizer at planting in furrow as a band. Apply at 14 to 21 day spray interval (may be applied with herbicide or top dressing).																					
CUCURBITS CUCUMBER CATALOPE MUSKMELON HONEYDEW MELON WATERMELON SQUASH PUMPKIN		4 qts - In a Band 2 qts at subsequent applications 6 qts per acre over growing season, may exceed as needed	Initial Application- Apply at planting or at crop emergence. Subsequent applications at 14 to 21 day intervals.																					
FRUIT TREES		4 qts - In a Band October 2 qts at subsequent applications 8 qts per acre over growing season, may exceed as needed	Apply beneath drip-line in 30-100 gallons of solution. Microjet drip or direct band at bud break and shuck split.																					
GRAINS (Wheat, Oats, Barley, Rye)		1 gal 2 qts	Initial Application. Every 14-21 days (if possible).																					
HORTICULTURE Drench Guidelines		<table border="1"> <thead> <tr> <th>Unit</th> <th>Concentration in fl</th> <th>per sq ft</th> </tr> <tr> <th>Type</th> <th>oz/100 gal mix</th> <th>mix volume</th> </tr> </thead> <tbody> <tr> <td>Plug Trays</td> <td>6-12 oz to 12-24 oz</td> <td>1/8-1/4 pt</td> </tr> <tr> <td>Seed Germination less than 2" deep</td> <td>2-4 oz</td> <td>1/4 pt</td> </tr> <tr> <td>Seed Germination 2"-4" depth, 3"-4" pots</td> <td>3-6 oz</td> <td>1/2 pt</td> </tr> <tr> <td>Seed Germination >4" depth, 5" pots</td> <td>3-6 oz</td> <td>1 pt</td> </tr> <tr> <td>6" container or greater (up to 2 gals)</td> <td>6-12 oz</td> <td>2 pt</td> </tr> </tbody> </table>	Unit	Concentration in fl	per sq ft	Type	oz/100 gal mix	mix volume	Plug Trays	6-12 oz to 12-24 oz	1/8-1/4 pt	Seed Germination less than 2" deep	2-4 oz	1/4 pt	Seed Germination 2"-4" depth, 3"-4" pots	3-6 oz	1/2 pt	Seed Germination >4" depth, 5" pots	3-6 oz	1 pt	6" container or greater (up to 2 gals)	6-12 oz	2 pt	Apply at seeding. Second application should be made two weeks after initial application or at germination (whichever is later). Apply third application 14-21 days after second application.
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ONION LEEK SHALLOT GARLIC ONION GROWN FOR SEED		4 qts - In a Band 2 qts at subsequent applications 6 qts per acre over growing season, may exceed as needed	Initial Application- Apply at planting or at crop emergence. Subsequent applications at 14 day intervals.																					
PEANUTS		4 qts - In a Band (2 qts VSC, 2 qts Light) 1 qt VSC, 1 qt Light at subsequent applications. 4 qts VSC, 4 qts Light per acre over growing season, may exceed	Initial Application- Apply at planting. Add to irrigation water or as a topical spray every 14 to 21 days.																					

as needed

CROP	RATE PER ACRE	APPLICATION DIRECTIONS
PINE SEEDLINGS	2 qts.	Initial Application- Apply at planting.
	2 qts	Subsequent applications at 14 to 21 day intervals.
	8 qts per acre over growing season, may exceed as needed	
POTATOES	2 qts - In a Band	Initial Application- Apply at planting.
	1 qt at subsequent applications.	Subsequent applications at 14 day intervals.
	6 qts per acre over growing season, may exceed as needed	
SEEDBEDS	2 qts	Initial Application- Apply at planting or at emergence.
	1 qt at subsequent applications.	Add to irrigation water or as a topical spray every 14 to 21 days.
	6 qts per acre over growing season, may exceed as needed	
STRAWBERRIES	1 pint Light in transplant water 1 pint Light per week	With every fungicide application (use fungicide at lowest rate).
SOD	1 gal	Initial Application.
	2 qts	Every 30-45 days.
SOY BEANS	2 qts (1 qt Light, 1 qt VSC)	In furrow at planting.
	8 oz	With every fungicide application (use fungicide at lowest rate).
TOMATOES PEPPERS	2 qts - In a Band	Initial Application-Mix in transplant water or immediately after transplanting through drip lines or as topical spray.
	1 qt at subsequent applications.	Apply in drip irrigations water or as topical spray at 14 to 21 day spray intervals.
	6 qts per acre over growing season, may exceed as needed	
TOBACCO	4 qts - In a Band	Initial Application-Mix in transplant water or immediately after transplanting as topical spray.
	2 qts at subsequent applications	Apply at 14 to 21 day spray intervals.
	8 qts per acre over growing season, may exceed as needed	

Note: Under stressed conditions, increase rate of product and/or application rate by 50%.
Whenever possible measure improvements via soil and tissue assay and document effect.