



SP-1™



OR/WA

GUARANTEED ANALYSIS:

CONTAINS NON-PLANT FOOD INGREDIENTS:

Soil Amending Ingredients:

- Microbial Content 0.1%
- Bacillus amyloliquefaciens 7x10⁵ cfu/ml
- Bacillus licheniformis 2x10⁶ cfu/ml
- Bacillus megaterium 7x10⁵ cfu/ml
- Bacillus pumilus 1x10⁶ cfu/ml
- Bacillus subtilis 7x10⁵ cfu/ml

Total Inert Ingredients (water based culture medium): 99.9%

Product Specifications:

- Weight per gallon 8.3 lbs
- Weight per liter 0.99 kg
- pH 7

Product Description:

SP-1™ is a diverse mix of microbes known to build soil biology. The SP-1™ formula supplies the soil with a proprietary blend of beneficial microbials to support a balanced and healthy soil environment.

The microbes in SP-1™ prefer aerobic conditions and thrive in the upper portion of the soil near the plant roots. Microbial activity near the roots of your crops is ideal to:

- Fix nitrogen, solubilize phosphorus, and cycle nutrients to become more plant available

Storage & Handling:

SP-1™ should be stored in clean containers that are vented. Not for use on stored seeds. Shelf Life: Microbe count may begin to decline 2 years from Manufacturing Date printed on container. Do NOT store in direct sunlight. If using chlorinated water, call representative for instructions.

Mixing Directions:

We recommend preforming a jar test prior to mixing with any pesticide or fertilizer products. SP-1 can successfully be premixed with many

fertilizers no more than forty eight hours prior to the application.

Organic Grower Considerations:

This product is intended for use according to an approved organic system plan.

It is each certified organic grower's responsibility to get approval from his/her certifying agency before using this product. Because of differences among the various certifying agencies, and differences between NOP/EU/JAS/COR ingredient lists, Douglas Plant Health cannot guarantee that our products will be allowed by your certifier on your farm.

Crop Application Recommendations		
Crop	Rate	Application Timing / Intervals - Foliar, Broadcast & In-Furrow
Berries such as, but not limited to, Blueberry, Blackberry, Raspberry, Strawberry	3-5 gal per acre	Planting: Apply at 3 to 5 gallons per acre up to 10 days after planting. Spring Green Up: Apply recommended rate immediately following bud break. Repeat every 14 - 21 days until harvest.
Root Vegetables such as, but not limited to, Onions, Garlic, Shallots, Sugar Beets, Carrot, Radish and Turnip	2-4 gal per acre	Planting: Apply recommended rate to beds or rows. Secondary (optional) applications every 30 to 45 days following planting. Stop application 3 weeks prior to desired harvest.
All Citrus Production	2-4 gal per acre	Production Groves: apply 10 days before full bloom, again 5 days post bloom. Repeat application every 60 to 80 days throughout the growing season. Planting: Apply at a rate of 2 to 3 gallons per acre; repeat every 30 to 60 days until trees establish (recommended 3 applications)
Cole Crops such as, but not limited to, Broccoli, Cauliflower, Cabbage, Brussels Sprouts, Collards	2-4 gal per acre	Planting/Transplanting: Apply recommended rate with base fertility program, or broadcast 24 hrs prior to planting in stale seed bed system. For best results reapply prior to head formation.
Field/Silage Corn Popcorn, Sweet Corn and Sorghum	1.5-5 gal per acre	Planting: Apply 1.5 to 5 gallons per acre in-furrow, broadcast or with 2x2 fertility program. Side-dress: Apply 1.5 to 5 gallons per acre mixed with side-dress fertility program. Optional Broadcast Application: Apply 1.5 to 3.0 gallons per acre with pre or post emergence pesticide applications.
Cucurbits such as, but not limited to, Cucumber, Cantaloupe, Squash, Pumpkin, Melons	2-5 gal per acre	Planting: Apply recommended rate to seed bed, Emergency through production: Reapply every 3 to 4 weeks following crop emergence. Final application should be 3 weeks from final harvest.
Small Grains such as, but not limited to, Barley, Oats, Rice, Wheat, and Grasses grown for Seed	1-3 gal per acre	Planting (Winter and Spring) Apply recommended rate at seeding or in combination with standard fertility program. Winter Grains: Reapply at green up with standard fertility program, nitrogen or with post emergence pesticide program.
Soybeans	1-3 gal per acre	Planting: Apply 1.5 to 3 gallons per acre in-furrow, broadcast or with 2x2 fertility program. Side-dress: Apply 1.5 to 5 gallons per acre mixed with side-dress fertility program. Optional Broadcast Application: Apply 1.5 to 3.0 gallons per acre with pre or post emergent pesticide applications.
Fruiting Vegetables such as, but not limited to, Peppers, Tomato, Eggplant, Okra, Tomatillo	2-10 gal per acre	Planting: Apply recommended rate to soil. Repeat prior to blooming and again prior to first picking. Or soil apply every 7 - 14 days after planting.
Grapes such as, but not limited to, Wine and Table Grapes	3-5 gal per acre	Soil apply at green up. Repeat every 14 - 21 days until harvest.
Grasses Grown for Seed, Sod Production, Pasture, Forage and Alfalfa	1-3 gal per acre	Soil apply at green up and after each harvest.
Perennial Herbs and Spices such as, but not limited to, Chives, Rosemary, Sage & Mint, Ginger, and Ginseng	3-5 gal per acre	Planting: Apply recommended rate at initial planting or spring green up. Reapply to soil every thirty days and reapply after harvest.

Greenhouse Propagation Rates		
Greenhouse plants, injection systems	1 pint to 1 quart per 1,000 square feet. Initial plug planting or seeding: 32-64 ounces per gallon per stock tank at 1:100. Constant feed, 4-8 ounces per gallon stock tank at 1:100. Metric: Initial plug planting or seeding, 1-2 liter per 3.75 liter stock tank at 1:100. Constant feed, mix 60-120 ml per 3.75 liter stock tank at 1:100	Drench, srench or spray at appropriate rates to insure proper soil penetration.
Seed Piece or Bulb Treatment	Mix 1:1 with water and spray the seed piece or bulb	
Root Dip Application	Mix 1:1 with water and thoroughly soak roots prior to transplant	

NOTE: Higher rates may be appropriate. Contact your representative for more information about rates and crops.



CROP APPLICATION RECOMMENDATIONS (CONTINUED)

Crop	Rate	Application Timing / Intervals - Foliar, Broadcast & In-Furrow
Leafy Annual Vegetables and Herbs, such as, but not limited to, Lettuce, Celery, Spinach, Parsley, Radicchio, Basil, Coriander, Collards	3-5 gal per acre	Planting: Apply recommended rate at planting. Reapply to soil every 2 to 3 weeks after emergence.
Legumes and Pulses such as, but not limited to, Beans, Green Beans, Lentils, Peas, Dry Edible Beans	1-4 gal per acre	Planting: Apply to soil. Reapply to soil prior to first blossom appearance.
Potatoes Irish, and Sweet	1-5 gal per acre	Planting: Apply recommended rate in furrow. Optional: Repeat application at tuber initiation, and early tuber sizing may be applied every 2 to 4 weeks until harvest.
Tree Fruits and Nuts such as, but not limited to, Almond, Apple, Apricot, Cacao, Cherry, Coffee, Filbert, Nectarine, Olive, Peach, Pear, Pecan, Pistachio, Plum, Prune, Quince and Walnut	1-5 gal per acre	Apply first application at green tip, pink bud, bud swell or early bloom. Apply at 30-day intervals up to harvest. Apply post-harvest in 1 or 2 applications.
Tropical / Sub Tropical Fruits such as, but not limited to, Avocados, Bananas Coffee, Mangos, Pineapples and Rubber Trees	3-7 gal per acre	Make a soil application at the time of major new growth and at successive growth flushes.