

Tank Mix Compatibility

All products tested for compatibility and reported in this document have been evaluated for impact on *Beauveria bassiana* strain GHA spores and physical compatibility only. Tests were not carried out to evaluate impact on the partner product integrity or for plant phytotoxicity.

Compatibility has been tested at normal tank mix dilutions, not in concentrated stock tank dilutions (such as for injecting at 1:100). Physical compatibility can be impacted by your water quality, tank residues, or the addition of other materials in the spray tank.

All chemistries available have not been tested. As a general rule of thumb, for unlisted products, wait 4-5 days before or after a fungicide application to apply BoteGHA. Most insecticides will not harm BoteGHA. Ask your distributor for information regarding specific products.

Always maintain constant agitation in your spray tank.

Read and follow label directions for all tank mix materials.

Make applications of tank mix solutions as soon as possible after mixing.

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Adjuvants			
1st Choice [®] 2220	Alkylarlpolyoxyethylene glycols and isopropyl alcohol + sodium ethylene diamine tetra-acetate	4 oz/100 gal	Yes
1st Choice [®] Spreader Sticker	Alkylarlpolyoxyethylene glycols and isopropyl alcohol	1 gal/100 gal	Yes
Activate [®] Plus	Alkylaryl polyethylene glycols, free fatty acids + isopropyl alcohol	2 qt/100 gal	Yes
Activator [®] 90	Alkylphenol ethoxylate, alcohol ethoxylate, tall oil fatty acids	2 qt/100 gal	Yes
Agicide Activator [®]	Petroleum oil + polyol fatty acid esters	6 qt/100 gal	Yes
Agra Wet [®]	Ethoxylated soybean derived surfactants	1 qt/100 gal	Yes
Ammonia [®]	Ammonia	1 pint/100 gal	Yes
Amway APSA-80 Spreader [®]	Nonionic surfactant (Alkyl Aryl Alkoxylate) 20% free fatty acids	1 pint/100 gal	Yes
Aquagro [®] 2000L	Ethoxylated Alkyl Phenols	1 pint/100 gal	Yes
Aquatrol [®]		16 oz/100 gal	Yes
Armublend 650 [®]		3 qt/100 gal	Yes
Atlox 775 [®]		3 qt/100 gal	Yes
Atplus 201 [®]	Polyoxyethylene hexitan ester	2 qt/100 gal	No
Atplus 203 [®]		2 qt/100 gal	Yes
Atplus 435 [®]		2 qt/100 gal	Yes
Atplus 530 [®]		2 qt/100 gal	Yes
AtPlus S10 [®]		2 qt/100 gal	Yes

Compatibility with spores applies to BoteGHA[®]ES

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Basic_H®		2 qt/100 gal	Yes
Big Wet®		1 pint/100 gal	Yes
Biocarrier®		10 gal/100 gal	Yes
Bionex®		1 qt/100 gal	Yes
Biosurf®	Aklyl polyethoxy ethers + ethoxylated derivatives	8 oz/100 gal	Yes
Bivert®		7 oz/100 gal	Yes
Blendex®	Alkyl aryl polyethoxy ethanol phosphate esters (64%)	3 pints/100 gal	No
Bond®	Synthetic latex (45%) + primary aliphatic oxyalkylated alcohol (10%)	1 qt/100 gal	No, too sticky
Breakthrough®	Polysiloxane	8 oz/100 gal	Yes
Capsil 30®	100% blend of polyetherpolymethylsiloxane-copolymer and Nonionic surfactant	16 oz/100 gal	Yes
Capsil®	100% blend of polyetherpolymethylsiloxane-copolymer and Nonionic surfactant	16 oz/100 gal	Yes
Cell-U-Wet®	Carboxymethylcellulose	2.5 lb/100 gal	Yes
Coax®	Carbohydrates	1.5 gal/100 gal	Yes
DAP-plus	Acidifiers, polyalcohols and glycols, solvents + adjuvants	13 oz/100 gal	Yes
Ecover® Soap	Coconut oil derived surfactant	1 gal/100 gal	Yes
Flood®		3 gal/100 gal	Yes
Flozine®	Polysaccharide gum (45.1%) + inerts	4 oz/100 gal	No
Foamaster Soap L		3 qt/100 gal	Yes
Freeway®	Silicone-polyether copolymer + alcohol ethoxylates	1 pint/100 gal	Yes
Galactic®	Polydimethyl siloxane + nonionic surfactants	12 oz/100 gal	Yes
Hasten®	Esterified vegetable oil + nonionic surfactant	1 qt/100 gal	Yes
Herbicide Activator	Petroleum distillate and adjuvant	1 qt/100 gal	No
Herbimax®	Pet hydrocarbons (83%) + Mono + diesters of omega hydroxypoly oxyethylene	2 qts/100 gal	Yes
Hold-UP®	(AL-O-Si) x	1 qt/100 gal	No
Hydrogen Peroxide		3%	No
Indicate-5®	Alkyl aryl ethoxylates	24 oz/100 gal	Yes
Intac®	Polymers + copolymers (10%)	2 qt/100 gal	No
Ivory Soap®		2 qt/100 gal	No
Joint Venture®	Polyalkeleneoxide modified organosilicones, etc.	1 qt/100 gal	Yes
Kinetic®	Polyalkyleneoxide modified polydimethylsiloxane + nonionic surfactants	64 oz/100 gal	Yes
K-tonic®		15 gal/100 gal	Yes

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Latron Ag 44 M [®]	Octylphnoxy polyethoxyethylphosphate, butyl alcohol + silicon antifoam	2 qt/100 gal	No
Latron Ag-98 [®]	Nonylphenoxypolyethoxy ethanol, butyl alcohol + silicone antifoam	2 qt/100 gal	Yes
Latron B-1956 [®]	Modified phthalic glycerol alkyd resin (77%)	1 qt/100 gal	Yes
Latron CS-7 [®]	Blend alkyl aryl polyethoxylate + Na salt alkylsulfonatedalkylate (60%)	1 qt/100 gal	Yes
LI Combo	Phosphatidylcholine, esters of alkyl polyoxyethylene ether, methylacetic acid + propyl carbinol	3 pint/100 gal	No
Lure [®]		1 qt/100 gal	Yes
Maximizer [®]	Oil—light paraffinic distillate	2 qt/100 gal	Yes
No Foam [®] A	Nonylphenoxypolyethoxy ethanols, isopropanols and fatty acids	1 gal/100 gal	Yes
No Foam [®] B	Octyl phenoxy polyethoxy ethanol/linear alkyl sulfonate	3 gal/100 gal	No
No Foam [®] powder	Polydimethylsiloxane + carrier	0.5 oz/100 gal	Yes
NuFilm [®] 17	Di-1-p-Menthene (96%)	3 pint/100 gal	Yes
NuFilm [®] P	Poly-p-Menthene	1 pint/100 gal	Yes
Palmolive [®] Dish Soap		1 gal/100 gal	Yes
Pen-a-trate II [®]	Alkyl polyethoxy ethers + ethoxylated derivatives (80%)		Yes
Penatron [®]		1 gal/100 gal	No
Penetrator [®] 3	Paraffin pet oil + polyol fatty acids esters + polyethoxylated derivatives	2 qt/100 gal	Yes
Plyac [®]	Emulsifiable oxidized polyethylene + ethoxylated phenox alcohol (27%)	4 oz/100 gal	Yes
Polyfon H [®]	(2R)-3-(2-hydroxy-3-methoxyphenyl)- 2-[2-methoxy-4-(3-sulfopropyl) phenoxy] propane-1-sulfonic acid		Yes
R-11		1 qt/100 gal	Yes
R-56	A-(P-nonylphenyl)-2 hydroxypoly (oxyethylene) 40%, poly (methylene p-nonylphenoxy) polyoxypropylene propanol 33%	2 qt/100 gal	Yes
Seduction [®]	Carbohydrates	12 gal/100 gal	Yes
Silfact [®]	Polyoxyethylene modified polydimethyl siloxane	5 oz/100 gal	Yes
Silken [®]	Polysiloxane + related	5 oz/100 gal	Yes
Siltrate [®]	Polydimethylsiloxane + nonionic surfactants	5 oz/100 gal	Yes
Silwet [®] 408	Nonionic organosilicone	5 oz/100 gal	Yes
Silwet [®] 560	Organo modified polydimethyl siloxane	5 gal/100 gal	Yes
Silwet [®] 806	Polyalkyleneoxide modified heptamethyl trisiloxane	5 oz/100 gal	Yes
Silwet [®] Gold			Yes
Silwet [®] L-7500		5 oz/100 gal	No
Silwet [®] L-77		5 oz/100 gal	Yes
Sorbit BNS [®]	Butyl naphthalene sulfonate		Yes

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Soy Wet	Soybean derived surfactant	1 qt/100 gal	Yes
Spreader 80 HF	Alkyl polyethoxy ethers + ethoxylated derivatives	1 pint/100 gal	Yes
Staput®	Polyvinyl polymer	3 qt/100 gal	Yes
Stepwet®	DF-90 sodium dodecylbenzene sulfonate	20 oz/100 gal	Yes
Stepwet®	DF-95 sodium lauryl sulfate	20 oz/100 gal	Yes
Stomafeast®	Calcium and secret ingredient	25 oz/100 gal	Yes
Stress-guard	Acrylic polymers		Yes
Sureguard® Dormant		1 qt/100 gal	Yes
Surf-Ac® 820	Alkyl + alkylaryl polyethoxyethanol	1 qt/100 gal	Yes
Surf-Ac® 910	Alkyl + alkylaryl polyethoxyethylene glycol (90%)	1 qt/100 gal	Yes
Surfacid®		2 gal/100 gal	Yes
Syfactant-fine + granular	Block polymer of carbonyldiamide polyoxyalklated glycol complex	16 lb/100 gal	Yes
Sylgard® 309	2-(3-Hydroxypropyl)-Heptamethyl-Trisiloxane, Ethoxylated Acetate/ Polysiloxane	1 qt/100 gal	Yes
Terminator®	Sodium tripolyphosphate (3.92%), glycol ethers (3.82%), alkyloxypoly (ethyleneoxy) ethanol (3.80%)	2 qt/100 gal	Yes
Therm X™ 70	Yucca extract	2 oz/100 gal	Yes
T-Mulz® A02		5 gal/100 gal	No
T-Mulz® COE		5 gal/100 gal	No
T-Mulz® FGO		5 gal/100 gal	Yes
T-Mulz® FGO		1 gal/100 gal	Yes
Latron® B 1956	Phthalic glycerol alkyd resin	4 oz/100 gal	Yes
Latron® CS-7		1 qt/100 gal	Yes
Turfwetter®		2 qt/100 gal	Yes
Tween® 80	Polyoxyethylene (20) sorbitan monooleate	1 pint/100 gal	Yes
Unifilm® 707	Alkylaryl polyoxethylene glycols + isopropanol	4 oz/100 gal	Yes
Urea		1 gal/100 gal	Yes
VK I® fogger carrier			No
Wetcit	Alcohol Ethoxylate	0.8% v/v	Yes
WFSI 2220 (First Choice)		2 qt/100 gal	Yes
X-77®	Alkyl polyoxyethylene, free fatty acid, glycerol + isopropanol	8 oz/100 gal	Yes
X-90®	Alkyl polyoxyethylene, glycols, free fatty acids, + isopropanol	2 oz/100 gal	No
Fertilizers			
Amino Elite™	3-0-0 chemical and organic + microbes	2 fl oz/gal	Yes
Biozyme®		25 gal/100 gal	Yes

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Effective Microbes®		1 pint/100 gal	Yes
Magnesium sulfate	Magnesium sulfate	5 lb/100 gal	Yes
Microbe Plus™ Calcium	1.5-0-0 chemical and organic + microbes	2 fl oz/gal	Yes
Microbe Plus™ High NS	8.1-0-0 chemical and organic + microbes	2 fl oz/gal	Yes
Microbe Plus™ NPK	5-1-3 chemical and organic + microbes	2 fl oz/gal	Yes
Microbe Plus™ Phoscal	0-5-0 chemical and organic + microbes	2 fl oz/gal	Yes
Nature's Source	10-4-3 oilseed extract + chemical fertilizer	1:4, 1:7 1:12	Yes
Nutra-Phos 24®	Calcium phosphorus	12 lb/100 gal	Yes
NutriFOG®	10-3-3 fertilizer and stabilizer, proprietary	1:4, 1:7 1:12	Yes
Nutri-Phite®	Phosphorous acid	6 qt/100 gal	Yes
On-Gard®	5-0-0	3% v/v	Yes
Potassium carbonate	0-0-25	2.5 lb/100 gal	Yes
Trisert® Foliar Fertilizer	13-3-4	Up to 10%	Yes
Urea	46-0-0	1 gal/100 gal	Yes
Verdanta OFE	3-0-0		Yes
Verdanta PL	2 2-0-6		Yes
ZnSO ₄	35.5% Zn	0.10%	Yes
Fungicides			
Acrobat®	Dimethomorph	20 oz/100 gal	Yes
Actinovate SP®	<i>Streptomyces lydicus</i> WYEC 108	24 oz/100 gal	Yes
AlietteWDG®	Fosetyl-Al	5 lb/100 gal	Yes
Bayleton®	Triadimefon	20 oz/100 gal	2 days before/after
Bravo 720®	Chlorothalonil	10 pint/100 gal	4 days before/after
Cambrio®	Pyraclostrobin	16 oz/100 gal	4 days before/after
Captan®	4000 Captan	20 oz/100 gal	4 days before/after
Copper Count-N®	Copper ammonium carbonate	3 qt/100 gal	2 days before/after
Dithane F-45®	Mancozeb	8 qt/100 gal	4 days before/after
Elevate® 50WDG	Fenhexamid		Yes
Flint®	Trifloxystrobin		2 days before/after
Folicur®	Tebuconazole	7.7 fl oz	4 days before/after
KleenGrow®	Didecyldimethyl ammonium chloride, isopropyl alcohol, ethanol (quaternary ammonium compound)	25.6 – 51 fl oz/100 gal	3 days before/after
Kocide® 3000-0	Copper hydroxide	16 lb/100 gal	Yes
Luna Privilege®	Fluopyram		Yes
Microthiol®	Sulfur 80%	2 oz/100 gal	2 days before/after

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Potassium bicarbonate	Potassium bicarbonate	2.5 – 5.0 lb/100 gal	Yes
Previcur®	Propamocarb	4 lb/100 gal	4 days before/after
Pristine®	Pyraclostrobin + boscalid		Same day, not mixed
Quadris®	Azoxystrobin	160 oz/100 gal	4 days before/after
Quintec®	Quinoxifen		Yes
Rally 40W®	Myclobutanil	1 pint/100 gal	Same day, not mixed
Regalia	Extract of <i>Reynoutria sachalinensis</i>	1% v/v	Yes
Ridomil® Gold	Mefenoxam		Yes
Ridomil® Gold Bravo	Mefenoxam + chlorothalonil	9 lb/100 gal	4 days before/after
Rizolex®	Tolclofos-methyl		Yes
Rovral®	Iprodione	2 lb/100 gal	Yes
Rubigan®	Fenarimol	12 oz/100 gal	Yes
Scala SC®	Pyrimethanil		Yes
Sonata	<i>Bacillus pumilus</i> strain QST 2808	4 qt/100 gal	Yes
Sulfur products (all)	Sulfur		2 days before 3 days after
Switch	Cyprodinil + fludioxonil		4 days before/after
Terrazole Etridiazole			Yes
Thiram	Thiram		4 days before/after
Topsin M	Thiophanate-methyl		Yes
Vivando	Metrafenone		Yes
Zero Tol®	27% hydrogen dioxide	1 gal/100 gal	1 day before 4 days after
Insecticides / Miticides			
Acephate	Acephate	1 qt/100 gal	Yes
Actara®	Thiamethoxam	8.5 oz/100 gal	Yes
AgriMek®	Abamectin	24 oz/100 gal	Yes, some clabber ¹
Ambush®	Permethrin, pyrethroid	42 oz/100 gal	Yes
Applaud® 70%WP	Buprofezin	20 oz/100 gal	Yes
Asana® XL	Esfenvalerate	30 oz/100 gal	Yes, some clabber ¹
Avid®	Abamectin	240 ml/400 L	Yes, but spray immediately
Baythroid®XL	Baythroid, pyrethroid	1.9 oz/100 gal	Yes
Danitol®2.4ES	Fenpropathrin, pyrethroid	38 oz/100 gal	Yes

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Delegate	Spinetoram	5 fl oz/30 gal	Yes
Deliver®WG	<i>Bacillus thuringiensis</i> spp. <i>kurstaki</i>		Yes
Diazinon® 4E	Diazinon	24 oz/100 gal	Yes
Diazinon® 4E	Diazinon	1 pint/100 gal	Yes
Dibrom® 8E	Naled (62%)	1 pint/100 gal	2 days before
Dimethoate®	Dimethoate	24 oz/100 gal	Yes
Dimilin®	Diflubenzuron	8 oz/100 gal	Yes
Dimilin® 5W, 2F	Diflubenzuron	26 oz/100 gal	Yes
Dipel®	<i>Bacillus thuringiensis</i> spp. <i>kurstaki</i>		Yes
Empower®	Garlic extract	25 gal/100 gal	Yes
Endeavor®	Pymetrozine	1.5 lb/100 gal	Yes
EverGreen® Crop Protection 60-6	Pyrethrin, piperonyl butoxide	53 oz/100 gal	Yes, mix BoteGHA ES first
Excirel®	Cyantraniliprole	16 fl oz/100 gal	Yes
Fyfanon® ULV	Malathion	79 oz/100 gal	Yes, some clabber ¹
Garlic Barrier	Garlic extract	11 gal/100 gal	Yes
Gnatrol® WDG	<i>Bacillus thuringiensis</i> , subsp. <i>israelensis</i> , strain AM 65-52	26 oz/100 gal	4 days after
Hot Pepper Wax	Capsicum oleoresin	3% volume/100 gal	Yes, but spray immediately
Javelin®	<i>Bacillus thuringiensis</i> spp. <i>kurstaki</i>		Yes
Karate®	Lambda-cyhalothrin, pyrethroid	20 oz/100 gal	Yes
Lannate®	Methomyl	24 oz/100 gal	Yes
Lorsban EC®	Chlorpyrifos	52 oz/100 gal	Yes, some clabber ¹
M-Pede®	Fatty acids	2 gal/100 gal	Yes, mix BoteGHA ES first
M-Pede®	Potassium salts of fatty acids	2% volume/100 gal	Yes, mix BoteGHA ES first
Malathion	Malathion	79 oz/100 gal	Yes, some clabber ¹
Marathon®	Imidacloprid	50-100 ml/100 gal	Yes
Merit®	Imidacloprid	50-100 ml/100 gal	Yes
Microthiol®	Sulfur 80%	2 oz/100 gal	2 days before/after
Movento®	Spirotetramat	2.4 oz/100 gal	Yes
Mustang®	Cypermethrin	14 oz/100 gal	Yes
Neemix 4.5®	Azadirachtin	2 qt/100 gal	Yes
Oberon®	Spiromesifen	4 oz/100 gal	Yes with 2-hour max tank life

¹Clabber is the development of a cottage cheese or sour milk consistency (thickening or curdling).

Brand Name	Active Ingredient	Maximum Tested Rate	Compatible
Omite®	Propargite	44 lb/100 gal	Yes
Orthene®	Acephate	2.5 lb/100 gal	Yes
Orthene®	Acephate	630 ml/400 L	Yes
Ovasyn®	Amitraz	64 oz/100 gal	Yes
PFR-97®	<i>Isaria fumosorosae Apopka Strain 97</i>	28 oz/100 gal	Yes
Provado® 1.6F	Imidacloprid	6 gal/100 gal	Yes
Pyganic EC 1.4	Pyrethrins	64 fl oz/100 gal	Yes
Pyronyl® Crop Spray	Pyrethrins, piperonyl butoxide	24 fl oz/100 gal	Yes
Safari®	Dinotefuran	8 oz/100 gal	Yes
Savey®	Hexythiazox	10 oz/100 gal	Yes
Sevin® 80S	Carbaryl	1qt/100gal	Yes
Success®	Spinosad	6 gal/100 gal	Yes
Tame®	Fenpropathrin, pyrethroid	24 oz/100 gal	Yes
Trigard®	Cyromazine	2 gal/100 gal	Yes
Vendex®	Fenbutatin oxide	16 oz/100 gal	Yes
Vendex®	Fenbutatin oxide	1 pint/100 gal	Yes
Vydate®	Oxamyl	2 qts/100 gal	Yes
Microbial Inoculants			
EM-1			Yes
Plant Growth Regulators			
A-Rest®	Ancymidol	2 oz/100 gal	Yes
B-Nine®	Daminozide	2 gal/100 gal	Yes
Bonzi®	Paclobutrazol	2.6 oz/100 gal	Yes
Cycocel®	Chlorocholine chloride	3 pint/100 gal	Yes
Gib Gro®	Gibberillic acid	24 oz/100 gal	Yes
Sumagic®	Uniconazole-P	50 gal/100 gal	Yes
Oils			
Type of oil	Recommendations		Compatible
Vegetable (plant derived) oils	Yes, up to 2% concentration (2 gal oil/100 gal spray mix).		Yes
Light (narrow range) petroleum, mineral, or paraffinic oils:	Yes, but may cause clabber; conduct jar test before mixing in spray tank. May increase risk of phytotoxicity to sensitive plants at rates over 1% (1 gal oil/100 gal spray mix); test on a small area before applying to entire crop. Do not mix with heavier oils such as Crop Oil Concentrate.		Yes
Fish Oils	Do not mix BoteGHA ES with fish oil.		No

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