

Application Rates

MANAGE AGRICULTURE APPLICATIONS		
CROPS	METHOD OF APPLICATION	APPLICATION RATE (US / METRIC)
Berries and Small Fruits: Blackberries, Blueberries, Currants, Elderberries, Gooseberries, Huckleberries, Loganberries, Raspberries, Strawberries, Grapes	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Bulb Vegetables: Garlic, Leeks, Onions, Shallots, Ornamental Bulbs	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per hectare every two to four weeks through growing season
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
Cereal Grains: Buckwheat, Corn (grain, seed, sweet corn, silage, popcorn, high oil), Rye, Wheat, Sorghum, Millet, Oats, Alfalfa	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Banded	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Citrus Fruits: Citrus Hybrids, Grapefruit, Kumquat, Limes, Oranges, Pummelos	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha monthly through drip or microjet
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
	Transplant Drench	Dissolve 8 oz in 50 gals of water / 240 g in 200 L of water and soak root ball prior to backfilling hole. Utilize 1 quart (32 oz) of finished product to 5 gals of plant material / 1 L of finished product to 20 L plant material
Conifer Tree Seedlings, Conifer Trees	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
	Transplant Drench	Dissolve 8 oz in 50 gals of water / 240 g in 200 L of water and soak root ball prior to backfilling hole. Utilize 1 quart (32 oz) of finished product to 5 gals of plant material / 1 L of finished product to 20 L plant material

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Cucurbit Vegetables: Cucumbers, Melons, Musk Melons, Gourds, Pumpkins, Squash	Pre-Plant Application	For application when preparing seed bed – Inject 10 oz – 20 oz of product per acre / 700 g – 1,400 g of product per hectare through drip or with pre-plant herbicide
	At-Plant Application	Apply 10 oz of product per acre / 700 g per hectare with transplant water
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha through drip
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Banded	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Fruiting Vegetables: Eggplant, Sweet and Hot Peppers, Tomatillos, Tomatoes	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	At-Plant Application	Apply 10 oz of product per acre / 700 g per hectare with transplant water
	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
Herbs, Spices, and Mints:	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
Hydroponic Crops:	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Substrate Mix	Mix 8 oz per cubic yard / 300 g per cubic meter of substrate
Leafy and Brassica (Cole) Leafy Vegetables: Arugula, Celery, Chervil, Endive, Fennel, Lettuce (head and leaf), Parsley, Radicchio, Rhubarb, Spinach, Swiss Chard, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Kohlrabi, Mustard Greens Asparagus:	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Banded	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
Legume Vegetables (Succulent or Dried): Beans (soybean, snap, dry), Lentils, Peas	Pre-Plant Application	16 oz. - 32 oz. in 35 to 50 gals of water per acre / 1.2 L – 2.3 L in 325 to 475 L of water per ha to allow soil saturation
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Banded	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Oilseed Crops: Cotton, Canola, Safflower, Sunflower	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Banded	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Peanuts:	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Banded	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha

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Pome Fruits: Pears, Quince, Apples	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
	Transplant Drench	Dissolve 8 oz in 50 gals of water / 240 g in 200 L of water and soak root ball prior to backfilling hole. Utilize 1 quart (32 oz) of finished product to 5 gals of plant material / 1 L of finished product to 20 L plant material
Root and Tuber Vegetables: Beets, Sugar Beets, Carrots, Celeriac, Chicory, Horseradish, Parsnip, Radish, Salsify, Turnips Potatoes, Sweet Potatoes, Yams, Jerusalem Artichoke, Cassava, Ginger	Pre-Plant Application	10 oz – 20 oz in 35 to 50 gals of water per acre / 700 g – 1,400 g in 132 L to 200 L of water per hectare to allow soil saturation
	In-Furrow	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Banded	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	18 months	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Shadehouse and Outdoor Nursery Crops: Deciduous trees (Maple, Oak, ect.), Ornamentals, Grapes, Citrus, Pine	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
	Transplant Drench	Dissolve 8 oz in 50 gals of water / 240 g in 200 L of water and soak root ball prior to backfilling hole. Utilize 1 quart (32 oz) of finished product to 5 gals of plant material / 1 L of finished product to 20 L plant material
	Stone Fruits: Apricots, Cherries, Nectarines, Peaches, Plums, Prunes	Cuttings and Bare Root
Fertigation		Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Tank Spray Mix		Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
Greenhouse and Nursery		Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
Transplant Drench		Dissolve 8 oz in 50 gals of water / 240 g in 200 L of water and soak root ball prior to backfilling hole. Utilize 1 quart (32 oz) of finished product to 5 gals of plant material / 1 L of finished product to 20 L plant material
Tree Nuts: Almonds, Beech Nuts, Brazil Nuts, Butternuts, Cashews, Chestnuts, Filberts, Hickory Nuts, Macadamia Nuts, Pecans, Pistachios, Walnuts	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
	Transplant Drench	Dissolve 8 oz in 50 gals of water / 240 g in 200 L of water and soak root ball prior to backfilling hole. Utilize 1 quart (32 oz) of finished product to 5 gals of plant material / 1 L of finished product to 20 L plant material
Tropical Fruits: Avocado, Mango, Papaya, Pineapple, Bananas, Plantains	Cuttings and Bare Root	10 oz – 20 oz in 50 gals of water / 300 g – 600 g in 200 L of water for dipping
	Fertigation	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Tank Spray Mix	Apply 4 oz – 20 oz of product per acre / 280 g – 1,400 g of product per ha
	Greenhouse and Nursery	Pre-mix 8 oz to 10 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 240 g to 300 g in 20 to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m and apply through drip or spray monthly
	Transplant Drench	Dissolve 8 oz in 50 gals of water / 240 g in 200 L of water and soak root ball prior to backfilling hole. Utilize 1 quart (32 oz) of finished product to 5 gals of plant material / 1 L of finished product to 20 L plant material

Amendment Application:	Method of Application:
Improves poor soil conditions, preparing the soil for plant development; Apply where soils have traditional pH issues, where soils have low CEC, where soils lack organic matter; where soils have lack of percolation, where soils have lack of water holding capacity	<ul style="list-style-type: none"> • Tank Mix – Mechanically Applied • Fertigation • Substrate Mix
At Planting Application:	Method of Application:
Populates the beneficial microbes in the rhizosphere where the root is first exposed to its growth environment. The environment where the critical plant – microbe symbiotic relationship is established; triggering germination; promotes faster and stronger rooting	<ul style="list-style-type: none"> • Cutting and Bare Root • In Furrow • Banded • Transplant Drench • Greenhouse and Nursery Application
Foundation Application:	Method of Application:
Apply at critical growth stages, supporting microbial growth patterns and populations allowing the beneficial microbial functions to continue to colonize the roots, improving root architecture, and rejuvenating soil structure	<ul style="list-style-type: none"> • Tank Mix – Mechanically Applied • Fertigation • Greenhouse and Nursery Application
Maintenance Applications:	Method of Application:
A continuation of supporting early stage applications; improve soil conditions, mineralize and hold nutrients, reinforcing the plant - microbial symbiotic relationship all the way through harvest	<ul style="list-style-type: none"> • Tank Mix – Mechanically Applied • Fertigation • Greenhouse and Nursery Application



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