Mosaic BIOSCIENCES

BioPath®

Application Rates

BIOPATH 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	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
	Cuttings and Bare Root	32 oz - 64 oz in 50 gals of water/ 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha every two to four weeks through growing season
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
Bulb Vegetables: Garlic, Leeks, Onions, Shallots, Ornamental Bulbs	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
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well – inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L to 30 L of warm water and agitate well – inject @ 1:100 dilution per 2,000 sq. m. and apply through drip or spray
Cereal Grains: Buckwheat, Corn (grain, seed, sweet corn, silage, popcorn, high oil), Rye, Wheat, Sorghum, Millet, Oats, Alfalfa	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 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Banded	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
Citrus Fruits: Citrus Hybrids, Grapefruit, Kumquat, Limes, Oranges, Pummelos	Cuttings and Bare Root	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha monthly through drip or microjet
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	Mix 24 oz to 32 oz in 50 gals of water / 750 mL to 1,000 mL 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	In-Furrow	Apply 16 oz - 32 oz / 1.2 L – 2.3 L in sufficient amount of water to inoculate 1 ac/ha
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	Mix 24 oz to 32 oz in 50 gals of water / 750 mL to 1,000 mL 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 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha through drip or with pre-plant herbicide
	At-Plant Application	Apply 32 oz of product per acre / 2.3 of product per ha with transplant water
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha through drip
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre foliarly / 1.2 L – 2.3 L of product per ha
	In-Furrow	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Banded	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
Fruiting Vegetables: Eggplant, Sweet and Hot Peppers, Tomatillos, Tomatoes	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
	At-Plant Application	Apply 32 oz of product per acre with transplant water
	Cuttings and Bare Root	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Substrate Mix	Mix 16 oz – 32 oz per cubic yard / 750 mL to 1,500 mL 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	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 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Banded	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Banded	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
Oilseed Crops: Cotton, Canola, Safflower, Sunflower	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 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Banded	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
Peanuts:	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 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha with rhizobia inoculant
	Banded	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha

CROPS	METHOD OF APPLICATION	APPLICATION RATE (US / METRIC)
Pome Fruits: Pears, Quince, Apples	Cuttings and Bare Root	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	Mix 24 oz to 32 oz in 50 gals of water / 750 mL to 1,000 mL 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	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 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Banded	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	18 months	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
Shadehouse and Outdoor Nursery Crops: Deciduous trees (Maple, Oak, ect.), Ornamentals, Grapes, Citrus, Pine	Cuttings and Bare Root	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	Mix 24 oz to 32 oz in 50 gals of water / 750 mL to 1,000 mL 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	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	Mix 24 oz to 32 oz in 50 gals of water / 750 mL to 1,000 mL 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	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	Mix 24 oz to 32 oz in 50 gals of water / 750 mL to 1,000 mL 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	32 oz - 64 oz in 50 gals of water / 1 L – 2 L in 200 L of water for dipping
	Fertigation	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Tank Spray Mix	Apply 16 oz – 32 oz of product per acre / 1.2 L – 2.3 L of product per ha
	Greenhouse and Nursery	Pre-mix 24 oz to 32 oz in 5 to 8 gals of warm water and agitate well - inject @ 1:100 dilution per 20,000 sq. ft. / 750 mL to 1,000 mL in 20 L 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	Mix 24 oz to 32 oz in 50 gals of water / 750 mL to 1,000 mL 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	· 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; supports faster and stronger rooting	· 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	· 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	· Tank Mix – Mechanically Applied · Fertigation · Greenhouse and Nursery Application

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