

Earthcare With SumaGrow



APPLICATION RATES

The following application guidelines are offered as a tool for anyone making application recommendations. Many factors are considered when making application recommendations including:

- Soil nutrient levels
- Soil type
- Percentage of organic matter
- Crop to be grown
- Stage of plant growth
- Cropping history
- Environmental conditions

The application timing and rates may be changed to fit a particular situation that is impacted by one or more of the above mentioned factors.

In organic operations, it is recommended that all application rates be increased 100 percent of traditional applications for conventionally grown crops (conventional rate of 1 gal/acre will increase to 2 gal/acre). This increase is recommended because the build-up of residual soil nutrients in organic fields is typically less than that found in conventionally fertilized fields. Additionally, organic fertilizer products tend to have a slow release of nutrients compared to that of chemical fertilizers. Number and frequency of applications may also have to be increased for the same reasons.

We do recommend consulting a current soil report when making application decisions. Additionally, as a general rule, we recommend a 20% to 50% reduction of the normal N-P-K rate.

HYDROPONICS:

INITIAL APPLICATION:

Apply 1-2 gal/acre (3-6 oz. per 1,000 sq. ft.)

RATE PER PLANT:

Divide the number of plants stocked per 1,000 sq. ft. into rate per 1,000 sq. ft.

200 plants per 1,000 sq. ft.

3 oz. per 1,000 sq. ft.

$3/200 = 0.015$ oz. or 1/2 ml per plant

SUBSEQUENT APPLICATIONS:

Apply 10 oz. per acre or 1/4 oz. per 1,000 sq. ft. once a week during growing season.

NOTICE - FOR OPTIMAL RESULTS

The standard application rate is 1 gal/acre diluted at a ratio of 1:32 to 1:20 (4-6 oz./gal.)

If already using N-P-K products: It is recommended that N-P-K application rates be reduced up to 50 percent when using products containing SumaGrow®

If Soil Organic Matter (OM) is low (i.e. <1.5 or heavy sand, increase the initial application rate by .5 gallon for all applications.

Avoid extreme temperatures. Store at 40°F – 80°F.

If foliar application of SumaGrow® is recommended, we recommend diluting at a ratio of 1:118 to 1:64 (1–2 oz./gal.)

The entire spray tank and system should be rinsed and flushed thoroughly before and after the application of SumaGrow®.

Do not apply through a piston pump.

CO-APPLICATION

Products containing SumaGrow® can be co-applied with your irrigation water through a metered irrigation system.

Product can also be co-applied with some liquid fertilizers and herbicides. A jar compatibility test is always recommended before application is made.

DO NOT CO-APPLY SumaGrow® with fungicides or fumigants.

AGITATION

The product should be gently agitated prior to application. In smaller containers, simply shake the container prior to loading into sprayer.

With bulk carrels and totes, agitate prior to transferring to sprayer (can use air wand or paddle agitator).

Note: Loosen caps on containers upon receipt of product and leave cap loose while storing out of direct sunlight until product is applied.

CEREALS AND GRASSES

CEREALS

Apply 0.5 gal/acre at 2-3 leaf stage.

Apply .5 gal/acre 3–4 weeks after initial application.

RICE

Sprouted seeds

Apply 1 gal/acre at 2-3 leaf stage.

Apply .5 gal/acre at flag leaf/boot leaf/pre-flowering stage for optimal performance or organic cultivation

Transplants

Apply 1 gal/acre after transplant.

Apply .5 gal/acre at flag leaf/boot leaf/pre-flowering stage for optimal performance or organic production.

SUGARCANE*:

New Sets:

1. Apply 1 gallon per acre on sets at planting
2. Apply 0.5 gallon per acre 3-4 weeks after 1st application

Ratoon:

1. Apply 1 gallon per acre at emergence
2. Apply 0.5 gallon per acre 3-4 weeks after 1st application

LAWN AND TURF

TURF FARMS:

Apply 0.5 gal/acre at spring green-up.

Apply 0.5 gal/acre up to two more times during the growing season as needed.

ATHLETIC FIELDS:

Apply 6 oz. per 1000 sq./ft. at spring green-up.

Apply 4 oz. per 1000 sq./ft. two more times during the growing season.

GOLF COURSES:

Apply 2 gal/acre (or 6 oz. per 1,000 sq./ft.) for first application. This application should be as close to spring green-up as possible for greens and fairways.

Fairways: Apply 4 oz. per 1,000 sq./ft. every other month on fairways during the growing season as needed.

Greens: Apply 4 oz. per 1,000 sq./ft. monthly during the growing season as needed.

HOME LAWN:

Apply 4 oz. per 1,000 sq. ft. spring green-up or first treatment.

Apply 4 oz. per 1,000 sq. ft. every 4–6 weeks during growing season as needed.

Dilutions rates are generally recommended at 1:20 or 1:32 (4-6 oz./gallon). SumaGrow™ products can be diluted further with more frequent applications such as bi-monthly or weekly.

VEGETABLES AND MELONS

LEAFY OR STEM VEGETABLES:

Transplants – Dip roots using 6 oz. SumaGrow® per gallon of water. Use remaining product to water the transplants.

Apply 0.5 gal/acre after planting/sowing

Apply 0.5 gal/acre 3–4 weeks later.

FRUIT-BEARING VEGETABLES:

Transplants – Dip roots using 6 oz. SumaGrow[®] per gallon of water. Use the remaining product to water the transplants.

Apply 0.5 gal/acre after planting/sowing

Apply 0.5 gal/acre 3–4 weeks later.

Root, Bulb or Tuberous Vegetables:

Apply 0.5 gal/acre at emergence.

Apply 0.5 gal/acre 3–4 weeks later.

ONIONS*

Apply 0.5 gal/acre directly over the row at emergence.

Apply 0.5 gal/acre 3–4 weeks later.

BASIL

Apply 0.5 gal/acre at emergence

Apply 0.5 gal/acre 3–4 weeks later as needed

HOME VEGETABLE GARDEN:

To transplant: Dip roots in 6 oz SumaGrow[®] per gallon of water. Apply every 2-3 weeks to soil around plants using 3 oz. per gallon of water.

Seeded Crops: Apply at emergence using 6 oz. SumaGrow[®] per gallon of water per 1,000 sq. ft. Apply every 2-3 weeks as needed using 3 oz. per gallon of water.

FRUIT AND NUTS

TROPICAL, SUBTROPICAL, AND CITRUS FRUITS:

YOUNG PLANTS

During the first two years, mix 0.5-1 gallon/acre of SumaGrow[®] at a 1:20 or 1:32 dilution ratio and apply at planting or spring green-up.

MATURE PLANTS

First application 0.5 gal/acre immediately after harvest in tropical locations, or at spring green-up in temporal locations.

Apply .5 gal/acre each year split into 2-3 applications:

Following initial application, a second application should be made 1-2 weeks before blooming, while the final application should be made 1-2 weeks after the fruit has set.

PINEAPPLE*

Apply 0.5 gal/acre at planting

Apply 0.5 gal/acre 3 weeks later

BANANA*:

Apply 0.5 gal/acre at the beginning of the growing season

Apply 0.5 gal/acre 3-4 weeks after the initial application with an optimal 3rd application mid-growing season.

GRAPES:

Apply 1.5 gal/acre each year in 3 split applications (early growth, pre-flowering, post- fruit set).

BERRIES:

Apply 0.5 gal/acre at early bud break

Apply 0.5 gal/acre at 3-4 weeks after 1st application

STRAWBERRIES*:

Apply 0.5 gal/acre at planting

Apply 0.5 gal/acre at 3-4 weeks after 1st application

POME FRUITS AND STONE FRUITS:

Apply 1 gallon/acre at planting.

After establishment: Apply 1.5 gal/acre each year in 3 split applications (0.5 gal/acre at bud break, .5 gal/acre before bloom set, .5 gal/acre after fruit set)

OILSEED CROPS

SOYBEANS:

Apply 0.5 gal/acre at emergence.

An additional application of .5 gal/acre 3-4 weeks after initial application is optimal.

PEANUTS:

Apply 1 gal/acre at emergence.

Apply .5 gal/acre at “pegging”.

OTHER TEMPORARY OILSEED CROPS:

Apply .5 gal/acre at emergence.

Apply .5 gal/acre 3–4 weeks after initial application.

DILUTION FOR TREE ROOT DIP AND PLANTING:

Remove the tree from its container. A root dip in SumaGrow® before planting using a mixture of 14 oz. SumaGrow per gallon of water is recommended.

Apply 1 gallon/acre at 15 days after planting followed an optimal 2nd application mid-growing season.

OIL PALM*, COCONUTS, OTHER OLEAGINOUS FRUITS:

NURSERY STAGE:

Mix 14 oz. of SumaGrow® in 1 gallon of water apply in a dip solution to transplants.

1-3 YEARS OF GROWTH:

Apply 1.5 gal/acre in split applications of .5 gallon at 4 month intervals every year.

MATURE PLANTS (3+):

Apply 1 gal/acre during vegetative growth phase.

Time applications with onset of foliage and bud formation.

ROOT/TUBER CROPS

ROOT/TUBER CROPS:

Apply 0.5 gal/acre at emergence.

Apply .5 gal/acre 3-4 weeks after initial application.

LEGUMINOUS CROPS

LEGUMINOUS CROPS:

Apply 0.5 gal/acre at emergence.

Apply .5 gal/acre 3-4 weeks after emergence.

SPICE CROPS

COFFEE*:

Apply 1.5 gal/acre per year across the growing season.

Apply 0.5 gal/acre before blooming (1-2 weeks), 0.5 gallon/acre at berry set + 0.5 gallon/acre mid- growing season.

TEA*:

Apply 1.5 gal/acre per year split across the growing season

BLACK PEPPER:

Apply 0.5 gallon per acre at emergence.

Apply .5 gallon prior to flowering.

OTHER CROPS

TOBACCO:

Apply 1 gal/acre after transplanting

Apply .5 gal/acre 3-4 weeks after transplanting.

TEMPORARY/PERMANENT GRASS CROPS (PASTURE & HAY):

ESTABLISHMENT:

Apply 0.5 gal/acre at seeding/sprigging.

Apply 0.5 gal/acre 4 weeks after initial application.

MAINTENANCE (PASTURES):

Apply 0.5 gal/acre at green-up.

Apply 0.5 gal/acre mid-growing season as needed.

HAY FIELDS:

Apply 0.5 gal/acre at green-up.

Apply 0.5 gal/acre after every second cutting of hay as needed.

TEMPORARY FIBER CROPS:

Apply 0.5 gal/acre at emergence.

Apply .5 gal/acre 3-4 weeks after initial application.

TEMPORARY FLOWER CROPS (INDOOR/OUTDOOR POTTED PLANTS):

Apply 1 cup of SumaGrow[®] mixture (6 oz/ per gallon of water) once per month.

PERMANENT FLOWER CROPS:

DILUTION FOR ROOT DIP AND PLANTING:

Add 6oz to 1 gallon of water to dip roots before planting/transplanting.

add any remaining solution around plants.

FOR ESTABLISHED PLANTS:

Mix 8 oz. in 2 gallons of water and apply to 1,000 sq./ft. First applications should be made at the beginning of the growing season.

Apply a 2nd application before flowering using the same application procedure as the 1st.

OTHER PERMANENT CROPS (PINE/CHRISTMAS TREES):

Mix 14 oz. of SumaGrow[®] per gallon of water – the diluted solution can then be used for seedling root dips.

The leftover solution can be added at the time of planting.

Mix 6 oz. of SumaGrow[®] per gallon of water and apply per 1,000 square feet.

NURSERY CROPS:

If injection is possible, apply 32 oz. per acre or 3/4 oz. per 1,000 sq. ft. every 3 weeks.

Or apply as a “Sprench”, a heavy spray to ground surface and foliage at approximately 32 oz. per acre or 3/4 oz. per 1,000 sq. ft.

If plants have reached optimum size in the pots and are showing moisture stress (wilting, drooping, leaf graying, yellowing, & abscission of lower foliage), the appropriate formulation can be reapplied at the initial rate to help reduce moisture stress.

Nutrients can be reduced while using SumaGrow[®] Inside products. The nutritional recommendations are the individual Grower's responsibility, not that of Bio Soil Enhancers, Inc.