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SUSTAINABLE BIOTECH FOR AGRIBUSINESS

Product Application Rates

Recommendations for Crops & Cultivation Practices

1. Organic Applications
2. Cotton
3. Field Corn, Sweet Corn, Milo
4. Soybeans
5. Summer Grasses (Grazing)
6. Summer Grasses (Hay)
7. Wheat, Oats, Rye, etc.
8. Okra, Pepper, Eggplant
9. Tomato
10. Beans: Lima, Green, Kidney, etc.
11. Leafy Greens
12. Cucumbers, Pumpkins, Squash, Watermelon, etc.
13. Irish Potato and Sugar Beet
14. Grapes, Blueberries, Blackberries, etc.
15. Strawberries
16. Peanuts
17. Rice
18. Trees and Shrubs
19. Seed Treatment, Seedlings and Transplants
20. Cassava Plants
21. Mango Trees
22. Durian Trees
23. Rambutans
24. Longan
25. Dragon Fruit
26. Rubber Trees
27. Pomegranate

NOTICE – FOR OPTIMAL RESULTS

- The standard application rate is 1 gallon per acre in sufficient water to apply the desired rate.
- **If already using N-P-K products:** It is recommended that N-P-K applications rates be reduced by 50% when using Agrhizome products.
- If Soil Organic Matter (OM) is low (i.e. heavy sand or heavy clay soils) increase the initial application rate by 0.5 gallon for all applications.
- Avoid extreme temperatures. Store at 40°F-80°F.
- Always properly calibrate your sprayer prior to application to assure recommended application rate per acre is achieved.
- Apply in late afternoon or at sundown to ensure optimal absorption.
- For second application: Foliar application is suggested.

Co-Application

- Agrhizome can be co-applied with your irrigation water through a metered irrigation system.
- Product can also be co-applied with liquid Nitrogen and with herbicides.
- **DO NOT CO-APPLY** Agrhizome 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 barrels and totes, agitate prior to transferring to sprayer (can use air wand or paddle agitator).

NOTE: Loosen caps on containers upon receipt of product so that microbes can receive oxygen. Leave caps loose until product is applied.

METRIC CONVERSION RECOMMENDATION

For conversion application from U.S. Gallons to Metric Liters, please use the following equivalents:

0.5 Gallons = 2 Liters

1.0 Gallons = 4 Liters

10 Liters Per Hectare

1. Organic Applications

In organic operations, it is recommended that all application rates be increased 100% of traditional applications for conventionally grown crops. (Conventional rate of 1 gallon per acre will increase to 2 gallons per acre for organic crop).

This increase is recommended because the build-up of soil nutrients in organic fields is typically significantly 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.

2. Cotton

Step 1: Apply 0.5 gallon (2 Liters) per acre at "Planting," preferably "In Row".

Step 2: Apply 0.5 gallon per acre at "Pin Head" square.

3. Field Corn, Sweet Corn, Milo

Step 1: Apply 1 gallon per acre at planting.

Step 2: Apply 0.5 gallon per acre approximately 4 weeks after planting.

Step 3: Can make optional third application just prior to silking (7-10 days prior). This application would be best made aerially.

4. Soybeans

Step 1: Apply 0.5 gallon per acre at planting.

Step 2: Apply 0.5 gallon per acre approximately 4 weeks after initial application.

5. Summer Grasses (Grazing)

Step 1: Apply 0.5 gallon per acre around Spring green-up.

Step 2: Apply 0.5 gallon per acre 4 to 6 weeks later.

6. Summer Grasses (Hay)

Step 1: Apply 0.5 gallon around Spring green-up.

Step 2: Apply 0.5 gallon after each cutting.

7. Wheat, Oats, Rye, etc.

Step 1: Apply 0.5 gallon at planting.

Step 2: Apply 0.5 gallon at flag leaf emergence.

8. Okra, Pepper, Eggplant

Step 1: Apply 0.5 gallon per acre at planting.

Step 2: Apply 0.5 gallon per acre 3 to 4 weeks after initial application.

9. Tomato

Step 1: Apply 0.5 gallon per acre at planting.

If transplanting, dip roots in solution equivalent to 6 oz. Agrhizome per gallon of water prior to transplanting.

Step 2: Apply 1 qt. per acre every 7 to 10 days through peak harvest.

10. Beans: Lima, Green, Kidney, etc.

Step 1: Apply 0.5 gallon per acre at planting.

Step 2: Apply 0.5 gallon per acre 3 to 4 weeks after initial application.

11. Leafy Greens

Step 1: Apply 0.5 gallon per acre at planting.

Step 2: Apply 0.5 gallon per acre 3 weeks after emergence.

12. Cucumbers, Pumpkins, Squash, Watermelon, etc.

Step 1: Apply 0.5 gallon per acre at planting.

Step 2: Apply 0.5 gallon 3 to 4 weeks after initial application

13. Irish Potato and Sugar Beet

Step 1: Apply 0.5 gallon per acre at planting.

Step 2: Apply 0.5 gallon per acre 3 to 4 weeks after initial application.

14. Grapes, Blueberries, Blackberries, etc.

Step 1: Apply 0.5 gallon per acre at early bud break.

Step 2: Apply 1 qt. per acre at "Bloom Stage".

Step 3: Apply 1 qt. per acre at "early Fruit Set".

15. Strawberries

Step 1: Apply 1 gallon per acre at planting.

Step 2: Apply 1 qt. per acre at 4 leaf stage.

Step 3: Apply 1 qt. per acre at first bloom and every 7 days through peak harvest.

16. Peanuts

Step 1: Apply 1 gallon per acre at planting.

Step 2: Apply 0.5 gallon per acre at "Pegging".

Step 3: Apply 0.5 gallon per acre at "Bloom Set".

Step 4: Apply 0.5 gallon per acre at "Nut Set".

17. Rice

Step 1: Treat 80 to 100 lb. **sprouted seed** with 0.5 gal. Tall Harvest, SumaGrow Inside™ product mixed in solution.

Step 2: Apply 1 gallon per acre 30 days after broadcast/drilling.

Step 3: Apply 0.5 gallon per acre at Flag leaf/Boot leaf/pre-flowering stage.

NOTE: Please refer to Item #19. Seed Treatment, Seedlings and Transplants.

18. Trees and Shrubs

Step 1: Mix equivalent of 3 oz. per gallon and spray from trunk to drip line.

Step 2: This application should be made in Spring at bud stage, Summer, and Fall.

19. Seed Treatment, Seedlings and Transplants

SPROUTED SEEDS

At Planting (Drill or Broadcast): Treat seed prior to planting @ 0.5 gallon / 100 lbs. seed

At 30 Days: Apply 1 gallon / acre

At Flag Leaf/Boot Leaf/Pre-Flower Stage: Apply ½ gallon / acre

SEEDLINGS → TRANSPLANT (25 day old seedlings)

At Transplant: Root dip seedlings in equivalent of 1 gallon /acre
(Dilution solution equivalent to 6 oz. Agrhizome per gallon of water)

At 30 days: Apply 0.5 gallons / acre

At Flag Leaf/Boot Leaf/Pre-Flower Stage: Apply 0.5 gallons / acre

SINGLE TREATMENT PER SEASON:

Sprout seed in 1 gallon / 40-80 lbs. seed

Step 1: Pre-soak seeds in 1 gallon product (6 oz. per gallon of water).

Step 2: Soak for 24-36 hours, drain, place seed in wet cloth sack

Step 3: Over the next 24 hours, turn cloth sack occasionally keeping moist. Keep sack in shady, warm area.

Step 4: Seed can be broadcast/drilled after 24 hours.

20. Cassava Plants

Two gallons per acre

Step 1: Apply 0.5 gallon per acre at planting

Step 2: Apply 0.5 gallon per acre 15 days after planting

Step 3: Apply 0.5 gallon per acre 30 days after initial planting

Step 4: Apply 0.5 gallon per acre before flowering.

21. Mango Trees

Step 1: Apply 0.5 quart per tree in the planting hole

Step 2: Apply 1 gallon per tree each year in split applications at stages (example: at beginning of rain season, pruning, flowering, fruit)

22. Durian Trees

Usual density is 100-150 trees per hectare

Step 1: Apply 1 quart per tree each year for first 3 years

Step 2: Apply 1 gallon per tree during fourth year in 3 to 4 split applications

Step 3: Apply 0.5 to 1 gallon per tree during fruit-bearing years.

23. Rambutans

Step 1: Apply 0.5 quart per tree at planting

Step 2: Apply 1 gallon per acre before flowering and after initiation of fruit

24. Longan

Application times suggested are one month before harvest, before flowering, at fruit development stage, and right after harvest.

Step 1: Apply 0.5 quart per tree in two split applications per year for trees less than 3 years old

Step 2: Apply 1 gallon per tree in four split applications per year for trees greater than 3 years old

25. Dragon fruit

Step 1: Apply 1 quart per plant at time of planting

Step 2: Apply 1 quart in two split applications (one month after planting and at six months)

26. Rubber Trees

Step 1: Apply 2 gallons per acre while planting

Step 2: Apply 1 gallon per year until ready for tapping

Step 3: Apply 1 gallon after each tapping

Application method: Apply uniformly in circular bands of 30cm width all around the plant (where the roots are active) leaving 7cm from the base followed by slight forking into the top 5-8cm of soil. In the second year, apply in circular bands of 45cm width leaving 15cm around plant base. Continue applications in steadily increasing widths until the distance from tree is equivalent to twice the canopy.

27. Pomegranate

Step 1: Apply 2 gallons per acre or per 100 trees (or 3 ounces diluted in 2 gallons of water per 1,000 sq ft)

Step 2: Repeat application every 10 days for one month

Agrhizome can be co-applied with your irrigation water through a metered irrigation system. Agrhizome can also be co-applied with liquid Nitrogen and with herbicides.

CAUTION: When co-applying with herbicides, apply mixture within 24 hours of mixing.

DO NOT CO-APPLY Agrhizome with fungicides, or fumigants.