

SOUTHERN GOLF OVERSEEDING PROGRAMS

The agronomists at BioPro recommend this program to provide a unique source of phosphorous and other nutrients. Success is assured utilizing safe and environmentally friendly products while providing great results and peace of mind.

Application Recommendations

The following programs should be used as a guide. **Products and rates can be modified based on tissue and soil analysis, specific conditions or growth/color preferences.** All product quantities are on a per *acre* basis.

Greens

- 1) Reduce vigor of bermudagrass turf by restricting nitrogen fertilization, mechanical cultivation, and/or chemical gibberellin blocking.
- 2) Apply 10 gallons (108 lb.) of **BioPro® Enviro-Phos 7-21-0** per acre 1 to 5 days prior to seeding. It may be applied by fertigation through the irrigation system, or directly with a boom sprayer in 100 gallons of water per acre. Sprayed product should be rinsed off of leaves with light irrigation.
- 3) At or immediately prior to seeding time apply **H3O** at 2 gallons per acre with 3 to 5 gallons of water, and water into the soil shortly after application.
- 4) Apply seed in your normal manner.
- 5) Within 5 to 7 days after seed germination, apply a second application of **BioPro® Enviro-Phos 7-21-0** at 8 gallons (87 lb.) per acre in a similar manner as in step 2. Also apply **CytoGro** at 2 pints per acre mixed in the lowest volume of water possible to maximize foliar absorption.
- 6) Within 10 to 14 days after germination, apply a granular organic fertilizer at 8 to 16 pounds per 1,000 square feet (1 lb./m). Repeat every four to six weeks.
- 7) Apply **BioPro® Greens Plus 14-4-10** at 7 gallons per acre and **BioPro® Nutri Solve** at 1 gallon per acre in 100 gallons of water per acre 28 days after germination. Rinse lightly into the soil with irrigation. Repeat every 7 to 14 days as necessary for desired growth and color. Omit this treatment during the week that the dry granular is applied.
- 8) Apply **H3O** at 0.7 gallons per acre and **CytoGro** at 1 pint per acre every 30 days after initial application.

Fairway

- 1) Reduce vigor of bermudagrass turf by restricting nitrogen fertilization, mechanical cultivation, and/or chemical gibberellin blocking.
- 2) Apply 10 gallons (108 lb.) of **BioPro® Enviro-Phos 7-21-0** per acre 1 to 5 days prior to seeding. It may be applied by fertigation through the irrigation system, or directly with a boom sprayer in 100 gallons of water per acre. Sprayed product should be rinsed off of leaves with light irrigation.
- 3) Apply seed in your normal manner.
- 4) Within 5 to 7 days after seed germination, apply a second application of **BioPro® Enviro-Phos 7-21-0** at 8 gallons (87 lb.) per acre in a similar manner as in step 2.
- 5) Fourteen days after germination begin applying **FlexLine 7-0-7** at a rate to produce desired growth rate and color.

- 6) **H3O** and **CytoGro** may be applied at the same rates as on greens through a sprayer, or injected with non-phosphorus containing fertilizer at half rates.

Nutrient Monitoring Program

Monitoring nutrient levels in leaf tissue and soils is critical for designing the most efficient nutrient program. TerraBiotics recommends the use of a diagnostic service that provides NIRS (Near Infrared Reflectance Spectroscopy) tissue analysis, water analysis and soil analysis. With these diagnostic results, BioPro nutrient programs may be modified to correct imbalances and prevent future problems.

BioPro Products

CytoGro (Liquid Root Biostimulant) is the only EPA registered turf biostimulant on the market. The formulation employs an optimal combination of cytokinin and auxin to assure the greatest rooting. Gibberellic acid is removed so as to not promote excessive top growth.

Enviro P 7-21-0 (Liquid Nutrient Blend) is an exceptional source of phosphorus for turf. A patented production process complexes organic acids from leonardite with phosphorus. This produces a very stable fertilizer that retains phosphorus in the root zone substantially longer than conventional fertilizers. Phosphorus is particularly important in the establishment and development of new seedlings. Phosphorus from other sources is commonly tied up in the soil. Enviro P (7-21-0) is most effective when used in pre-plant applications, and as the continuing phosphorus source during establishment. Enviro P (7-21-0) gives new turf a substantial head start, creating a more vigorous, playable surface in a shorter period of time.

Greens Plus 14-4-10 (Liquid NPK Nutrient Blend) is a balanced nutrient blend with nitrogen, phosphorous, and potassium in the same ratio as they are generally found in plant tissue. Nitrogen is supplied as a polymethylene urea blend to provide uniform turf growth and color. This product contains 8.85% controlled release nitrogen, and organic acids from leonardite, which may enhance nutrient uptake.

H3O (Liquid Soil Moisture Management Product) employs a revolutionary new chemistry designed to reduce watering. It attracts and holds free water molecules from the air within the soil, and efficiently transfers them to the plant root.

Nutrisolve (Liquid Micronutrient Blend) is a complete blend of micronutrients chelated with a proprietary combination of citric, fulvic, and other organic acids. Chelates stabilize nutrients, and enhance their uptake and translocation within the plant. Micronutrient content: S 2.79%, Fe 2%, Mn 2%, Zn 0.75%, Cu 0.25%, B 0.08%