

Sanitation: Standard Operating Procedures

Biofilm will inevitably build up in irrigation systems that can host several waterborne plant pathogens such as *Pythium*, *Phytophthora*, and chronic algae problems. Sanitation programs that control active and dormant spores on hard surfaces, tools, high-traffic areas, and most importantly, irrigation systems are absolutely vital to a clean, efficient, successful growing environment. This program can be used in organic and conventional greenhouses during pre-season and post-season treatments and is NOT meant for use over plants or over crops.

Floor/Ground Cleaning: GreenClean® PRO

For algae removal on ground cloth, gravel, floors, and walkways, apply this granular via a belly grinder or push spreader to distribute evenly over the target area. Fully activate granules by lightly wetting the area before or after spreading the product using 0.1-0.2 inches of water. The product will begin to bubble with an audible fizz when it's been activated. Allow GreenClean PRO to work for an hour before washing away dead algae. Spot treatments are also effective for high concentrations of biomass accumulation.

- **Algae:** 1-2 lbs. per 1,000 square feet
- **Nostoc Algae:** 4-10 lbs. per 1,000 square feet

Hard Surface Sanitation: SaniDate® 5.0

For greenhouse surfaces, floors, and tools, apply this chemistry to disinfect vulnerable or high-traffic areas. First, remove large or visible debris, weeds, trash, and soil by sweeping or vacuuming. For heavily soiled surfaces, we recommend GreenClean® Alkaline Cleaner to emulsify organic matter to improve the subsequent disinfection application. Apply SaniDate 5.0 via hydraulic sprayer, Dosacart®, or direct injection and allow ten minutes of contact with the surface, let it air dry, and do not rinse or wipe off with a towel.

- **Injectors:** All injectors have a 1:100 rate setting to properly pull product from its container.
- **Tank Sprayer:** Use 1.25 fl. oz. per gallon, or 2 quarts (64 fl. oz.) per 50 gallons of water. Make sure the tank is clean of any previously used chemistry. DO NOT mix SaniDate 5.0 with any pesticide or fertilizer concentrate.
- **Foamer:** Use 1.25 fl. oz. of SaniDate 5.0 and 4 fl. oz. of BioFoamer Foaming Agent per gallon of water.

Irrigation Water Tank Cleaning: SaniDate® 5.0 and GreenClean® PRO

Algae can grow on the sidewalls inside the tank and float on top of any standing water in the tank. Treat the tanks for algae growth when the system is not in use to prevent chemistry from contacting crops.

Empty Tanks: If the tank is empty, scrub or power wash the insides to remove as much buildup as possible. After, spray SaniDate 5.0 solution on all internal walls at a 1:100 rate. Allow the solution to sit for a few hours, then flush the solution and any remaining debris to prevent clogging.

Filled Tanks: If the tank has water in it with floating algae, apply GreenClean PRO at 10 tbsp per 1,000 gallons before the SaniDate 5.0 treatment. Drain half the water out and add SaniDate 5.0 at a 1:10,000-1:5,000 ratio then refill the tank. Allow SaniDate 5.0 solution to sit in the tank for at least four hours or overnight.

Irrigation Line Shock: GreenClean® Acid Cleaner and SaniDate® 5.0

This two-step process combines BioSafe Systems’ acid cleaner to break down mineral deposits in irrigation pipes and SaniDate 5.0 disinfectant to wipe out the living layer of biofilm. Before shocking lines, make sure no plants are at risk of contacting the flushed material, and remove all nozzles from any micro-irrigation lines. First, inject GreenClean Acid Cleaner into the lines directly from the container and make sure it has reached the furthest point of the system by testing the water with a pH strip. Let the acid cleaner sit in the system for 2-3 hours, then flush the system away from plants. Use another pH strip to ensure all the acid cleaner has been cleared out. Then inject SaniDate 5.0 the same way, ensure it reaches the furthest points, and let sit overnight for 12-24 hours, then flush out the system the same way.

- GreenClean Acid Cleaner is injected at a 1:100 rate, set for 2-3 hours.
- SaniDate 5.0 is injected at a 1:100 rate, set for at least four hours, overnight if possible.

Irrigation Pond Treatment: GreenClean® PRO

Use GreenClean PRO to treat algae and pathogens in irrigation ponds before they travel through irrigation systems. Rates for algae treatment vary between tens and hundreds of pounds based on the area that needs to be treated and the concentration of algae growth. Please contact your representative for a diagnostic conversation and treatment plan that will suit the needs of your pond.

PRODUCT PACKAGING				
SaniDate 5.0	GreenClean PRO	GreenClean Acid Cleaner	GreenClean Alkaline Cleaner	BioFoamer Foaming Agent
2.5 gallons	50 lb. bag	5 gallons	5 gallons	5 gallons
5 gallons		55 gallons	55 gallons	55 gallons
30 gallons				
55 gallons				

You are required to read and understand all EPA registered product labels before application.
Contact your local representative or BioSafe Systems’ headquarters for more information.