SUSTAINABILITY & GREEN INITIATIVES

Compost Topdressing: One Step toward Campus Sustainability

BY KEITH SCHULER

Topdressing—the application of any product on the top of any surface, such as sand on a street, salt on a parking lot, fertilizer on a lawn, and compost on a sports field—is unique as a maintenance practice because it closes the loop in the ecological cycle of sustainability.

Compost topdressing takes the product compost, once part of the waste stream, and applies it to the soil as an amendment. This process improves the soil structure while significantly reducing maintenance input costs associated with expensive fertilizer, continuous irrigation schedules, and soil compaction problems necessitating pesticide applications as well as large physical renovations. The campus soil is a natural asset that should be included and managed in order to reduce expenses and maximize profits.

How Topdressing Works

Though fertilizing is technically a topdressing, a distinction must be made between the main objectives of topdressing versus fertilizing. The main objective of fertilizing is to provide plant nutrients in order to produce growth, whereas the main objective of topdressing is to improve the soil's structure. Each of these practices can have an impact on the other in application. For example, compost has amendments to the soil structure as well as nutritional benefits that also feed the plant like a fertilizer. To better understand how compost topdressing is an asset, people should view it as an amendment practice to a soil structure.

Soil structure is comprised of four basic materials: sand, silt, clay, and organic matter (OM). From a topdressing amendment point of view, topdressing materials then are sand, silt, clay and OM (compost) or any blends of these materials. Sand topdressing is used in leveling surfaces, improving soil porosity, covering up the roots of warm season grasses, and supporting the grass blade stand. This application is performed on sports fields, golf greens, and warm season lawns. Silt and clay topdressings are often components to various blends in order to repair drainage issues or for specific purposes, such as the clay used on baseball diamonds and pitching mounds. Compost topdressing, on the other hand, is used for the management of OM in the soil in order to preserve soil health. This application is used in agriculture and horticulture, on crop fields, lawns, sports fields and golf courses.

The basic three components of sand, silt, and clay make up the twelve soil classifications, and each soil classification has varying characteristics with inherent limitations. The unique OM component and its inherent adhesive property can make any soil type healthy and productive. OM is better understood as the process of decomposition of biomass that ends in humus formation, the asset in all soil types.

continued...

ENVIRO Solutions®

ISSA AWARD WINNING PROGRAM

QUICK START ROUTINE MAINTENANCE PROGRAM

DOES YOUR CURRENT CONCRETE & TERRAZZO ROUTINE MAINTENANCE PROGRAM:

- Reduce your overall labor costs and improve sustainability
- Lower both damaging dust & efflorescence
- Improve air quality & lower the risk of slip & fall
- Continuously increase the sheen with regular auto scrubbing maintenance
- Reduce mop drag that contributes to employee fatigue
- Protect your investment (electronics, equipment, and merchandise)
- Never require topical coatings
- Quickly provide measurable results upon implementation

ONE PRODUCT, ONE PAD & YOUR EXISTING EQUIPMENT

Our QUICK-START Program will provide measurable results quickly in your facility and jump start your floor care maintenance into high gear with many positive results.

PRODUCT
ES37 Cleaner/Maintainer/Polisher
Sheen Building Additives

METHOD
Auto Scrubber
Use Your Existing Equipment

DILUTION
1:128 (1 oz. per gallon of cool water)
Low Cost Dilution

PAD
3000 grit CMP pad
100% Infused Diamonds
Throughout Entire Pad

TIP
We recommend installing our "Plug & Play" wall mounted dispenser for worker dilution convenience and best results.

Dispenser Code:
LSP12-ES37

Scan the QR code to watch our Concrete Maintenance Program Video

CHARLOTTE™ PRODUCTS LTD.

Interested in scheduling a demonstration? Email: demo@charlotteproducts.com
Looking for more information? Email: experts@charlotteproducts.com

Toll Free: 1.877.745.2880
Fax: (705) 745.1239

Email: info@charlotteproducts.com
Website: www.charlotteproducts.com

The OM percentage in a soil greatly improves the soil pH and cation exchange capacity (CEC); these elements are like the soil system's horsepower. Though the OM percentage in the soil structure analysis is small in comparison to the three other components, the benefits are significant.

When the appropriate percentage—5-10%--of OM is preserved in a soil, the soil is healthy and strong in terms of energy, yet it is quite fragile when exposed to extreme weather conditions and human impacts such as sporting activities. The OM level in the soil is the microbial habitat and sustenance, serving as the soil's protective buffer against stress caused by activities and routine horticultural practices. For example, the best mowing practice has established the one-third cut rule, but when common circumstances lead to that rule being broken, the OM buffer in the soil can provide food energy to the grass plant via the microbe. Mowing always causes stress on the grass plant that must be recovered from; mowing also reduces the photosynthesis leaf surface, the leaf 's energy production chamber. Therefore, the management of OM is like an asset balancing out normal activities.

Reducing Costs And Maximizing Soil Assets

While compost topdressing is not a cure-all, it is a valuable tool for preserving and increasing the OM level in a soil. It would be an enormous task, however, to increase OM levels by compost topdressing alone, taking nearly twenty tons of good compost just to raise the level by 1% on a one-acre field. Compost topdressing implementation should be a routine maintenance toward sustainability; studies have found that light monthly compost applications had far better results than fewer heavier applications. New root growth is the best way to increase soil OM, and compost is a great medium for germinating seed. New grass roots are also excellent compacted soil aerators, serving as nature's way to produce and maintain OM in the soil. Every spring and fall, many plants go to seed, dropping their leaves to serve as topdressing amendments. Routine over-seeding, combined with compost topdressing, can build the soil asset.

Ultimately, compost topdressing will greatly reduce input costs and maximize the soil assets. The only things increased by poor OM management are costly problems due to increasing bulk soil density. Most importantly, compost topdressing can become the key that closes the cycle of sustainability.

ABOUT THE AUTHOR: Keith Schuler is the Ecolawn Sales Manager. He has a BS degree in Leisure & Environmental Resource Administration from Aurora University and owned and operated a Sustainable Landscaping Company for 13 years (1998-2011). He can be reached at keith@ecolawnapplicator.com.

SportsArt

INSPIRED PERFORMANCE. UNPRECEDENTED SUSTAINABILITY.

G690 Verde Treadmill

SERVE TODAY'S GREEN-MINDED STUDENTS.

SportsArt and ECO-POWR™ offer something no other brand can—the ability to capture human exertion and turn it into usable electricity. Now, your fitness center can align campus sustainability goals with student lifestyle and fitness expectations. Student-run environmental initiatives could even help offset the cost, making it easier and more affordable to bring innovative, reliable ECO-POWR™ equipment to your campus.

Discover how SportsArt can work for your university at **gosportsart.com/university.**