

Accelerating Vegetation Regrowth in Utility Rights of Way



Restoring vegetation on utility rights of way after maintenance and construction work requires replenishing the nutrients in the top layer of dirt that has been disturbed by heavy equipment. The traditional solution has been to import new topsoil to serve as a growing medium, but this strategy has significant drawbacks including high costs. Newer alternatives offer a faster, more reliable and less expensive way to repopulate scarred sites with groundcover, grasses, and even wildflowers and low shrubs.

Topsoil Disadvantages

Topsoil theoretically has sufficient organic matter and microorganisms to promote plant establishment, sustainable growth and strong root structure, but it varies in quality from batch to batch and region to region. Any given shipment may not have the optimal pH, nutrient levels or other properties to effectively grow new grass or support other landscaping efforts. That can lead to delayed site restoration, customer complaints, the need for extra work such as fertilizing and re-seeding, and problems for utility management.

Topsoil is also time-consuming and labor-intensive to apply, and can be up to 70 percent more expensive than other options, even without factoring in labor costs. A single acre of land requiring four inches of topsoil will

need 36 truckloads of dirt, based on 15-cubic-yard dump trucks, and 10 to 30 hours to apply depending on the method and crew efficiency.

At a cost of \$300 to \$500 per 15-cubic-yard truckload for material alone, it's a significant investment that may or may not pay off, particularly on sites with highly depleted soils, steep terrain or other conditions that present special challenges for vegetation germination and growth.

Replacement Options

For years, compost has been the primary alternative to using topsoil for site revegetation. The shortcoming again is inconsistency. Although it can be rich in nutrients, the texture, quality and content of compost can vary based on the specific food and leaf waste, geographic location and composting technology used. Compost also typically

needs to be mixed with soil, sand, grit, bark chips, vermiculite, perlite or clay granules to produce the loam required for effective nutrient and water retention.

Another option involves replacing imported topsoil with commercial peat-based “biotic soil amendment” products manufactured from a mix of organic ingredients. This strategy offers both advantages and disadvantages.

On the one hand, while the peat composition itself can be variable, these products eliminate most of the consistency problems associated with both topsoil and compost. They can also be applied rapidly in a hydraulic spray from large hydroseeding trucks.

On the other, peat needs to be harvested from fragile wetlands that can take decades to recover from disturbance and that are already threatened by agricultural and urban development despite their importance for water quality, flood control and wildlife habitat. These and other environmental concerns, including the potential impact of carbon release from peat bogs on climate change, prompted the British government to ban the landscaping-related use of peat moss in stages from 2015 through 2030.

Newest Alternative

A newer and more sustainable choice for topsoil replacement is Profile Products’ ProGanics™ Biotic Soil Media™—another engineered product that completely avoids the use of peat while also offering a variety of performance and application benefits. These include the ability to produce twice the vegetation cover and three times the biomass (living organisms) of the best-performing biotic soil amendment product, accelerating the regrowth process and maximizing the likelihood of successfully restoring depleted and denuded sites.

ProGanics uses a combination of recycled and renewable bark and wood fibers along with a proprietary blend of biopolymers, biochar, seaweed extract, humic acid, fungi and other soil-building components.

It consistently provides a 6.0 pH, 90 percent organic matter, 800 percent water-holding capacity, and other properties ideal for creating a healthy growth environment with the high moisture retention required for fast germination and resistance to low rainfall levels. The bark and wood fibers are also phyto-sanitized to eliminate weed seeds and pathogens that inhibit growth.

Mixing quickly into a dark brown slurry that is hydraulically applied simultaneously with seed, it can cut application time by more than 50 percent while also reducing the 36-truckloads-per-acre topsoil requirement preciously cited to just two tankloads sprayed from a single 3,000-gallon-capacity hydroseeder equipped with the proper pump.* That in turn significantly reduces costs.

On one abandoned and completely denuded 2.7-acre site, for example, ProGanics cut application time from five days to one and slashed material costs 40 percent by eliminating some 100 truckloads of dirt. It also helped turn the site from brown to green in a matter of weeks.

Bottom Line

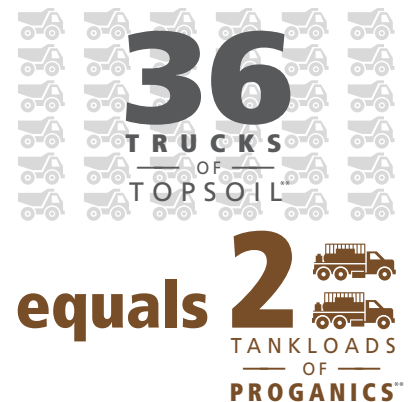
Machinery from bucket loaders to mowing equipment can take a heavy toll on the aesthetic appearance of utility rights of way. Turning a maintenance or construction site from brown to green requires improving growing conditions in the soil profile, satisfying neighbors as well as environmentalists who increasingly view utility corridors as an opportunity to offer habitat for threatened wildlife. Choosing the correct soil-enhancing solution can not only promote fast, healthy growth but also avoid extra work and associated costs, help maintain good customer relationships, and turn rights of way into assets for local communities.

* 5,000 pounds of ProGanics provides the same amount of organic and soil building components per acre as 36 loads of rich topsoil. *Separation layer will be required on highly deficient soils.*

** 2 hydroseeders with 3,000-gallon capacity tanks and a gear or positive displacement pump applying ProGanics at 3,500-5,000 lb/ac (3,900-5,600 kg/ha) is the equivalent of 36 trucks with a 15-cubic yard capacity dump covering 1 acre (0.4 ha) with 4 in (10 cm) of topsoil.



ProGanics™ Biotic Soil Media™ (BSM™)
Saves Time and Money



- Quick and easy loading
- Engineered to shoot smoothly for optimum performance
- Excellent option when soils are too wet or frozen to dig, transport and spread
- Applying ProMatrix™ EFM or Flexterra® HP-FGM™ over ProGanics provides near-perfect erosion control

See how it can add up for you with the ProGanics Savings and Cost Calculator at www.profilevs.com.



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