

**Compacted Soils** 



New Business Development



Whole Cycle



## 2018 SPRING NEWSLETTER

The calendar has turned to spring and at some point the weather will follow. The cold has persisted and late season snow and precipitation has pushed off the usual spring clean up and project activities. The seasonality of The Green Industry is always a challenge and the spring of 2018 is no exception. In this edition we will discuss what's new with Agresource from a staffing and service offering perspective as well as diving into the issue of compacted soils and how to remedy it.

Check us out on Twitter (@Agresource\_Inc) and Facebook for daily updates on what we and the industry as a whole are up to. Discover more about Agresource anytime at <u>www.agresourceinc.com</u> AGRESPORT at <u>www.agresport.com</u> and now Whole Cycle at <u>www.wholecyclemgmt.com</u>

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## **Dealing with Compacted Soils**

Soil compaction is often a cause of poor plant performance and is a significant problem in not only urban landscapes but agricultural soils subject to repeated tillage. In compacted soils, particles are packed close together with little spacing and as a result the soil has reduced air filled pore space and high bulk density. In a balanced soil there is a ratio of 50% mineral, 25% air filled pore space and 25% water filled pore space. With out this balance, plant roots have difficulty penetrating the soil and obtaining oxygen. Soil compaction results in not only in poor root development but also is responsible for poor water infiltration. Rain falling on compacted

soils will run off the surface and carry away soil particles and nutrients resulting in the potential pollution of surrounding water resources.



Restoration of soils subject to compaction may require a variety of approaches including deep tillage or fracturing the compacted layers, addition of sand particles to adjust the texture and the amendment of the soil with composts. The specific approach that is used to alleviate or correct soil compaction will depend upon the site conditions and the final end use that is planned.

For example, Dr. Nina Bassuk with the Urban Horticulture Institute at Cornell University has proposed a simple "Scoop and Dump" method for urban soils that consists of physically fracturing compacted soils and incorporating compost with the use of a backhoe (Sax, M.S., Bassuk, N., Van Es, H., Rakow, D., Long-Term Remediation of Compacted Urban Soils by Physical Fracturing and Incorporation of Compost, Urban Forestry and Urban Greening (2017), <u>http://dx.doi.org/10.1016/j.ufug.2017.03.023</u>). The addition of compost resulted in reduced soil bulk density, increased soil carbon and improved aggregate stability in addition to increased soil water holding capacity.

The increase in soil aggregation and resulting increase in the soil pore space as a result of compost amendments has been reported in other studies and is a significant factor in improving soil health of degraded soils. Compost amendments provide organic matter that results in enhanced soil microbial activity. As a result of that microbial activity small particles clump together into larger units and aggregates are formed. Aggregation leads to larger pores which in turn facilitate movement of air and water through the soil.



Using compost to add organic matter in many cases may not be enough to address compaction issues. In particular, lawns and sports fields that are subject to significant compaction from foot traffic most often require a thorough examination of soil texture. In many cases soil testing may reveal that there is an inadequate amount of sand and excessive concentrations of fine silt and clay. In these cases

addition of a coarse sand may be required. The addition of sand to soil blends will result in a drop in soil organic matter content and thus amendment of compost is often required to bring the soil organic matter content up to the desired levels. Care should be taken when purchasing sand and compost to insure that the particular product meets the specifications. Not all composts are the same and some sources can include large amounts of very fine particles that will behave like clay and reduce water infiltration.

Agresource can provide engineered soil mixes, composts, and compost amended soils that are appropriate for a variety of end uses.

## New Business Development & Product Specialist

Agresource is proud to introduce the newest member of our team. Dana Spaulding (New Business Development and Product Specialist) comes to Agresource with 20 plus years of Green Industry experience ranging from Landscape Construction, Habitat Restoration and Nursery Sales.

Dana has managed Federal, State and Municipal projects that involved specialty soil mixes for Wetland Creation, Bioretention swales and planting



mixes for Native and Ornamental tree and shrub plantings on both the East and West Coasts. Dana transitioned to Nursery Sales in 2015 servicing Landscape Contractors, Building and Grounds Departments, and Retail Garden Centers both on the road and in house.

Joining Agresource in the spring of 2018, Dana handles product sales of compost, soil, sand and mulch for Western MA, ME, NH, and VT, as well as sales for the Whole Cycle Organic Waste Recycling collection and processing service.

Dana can be reached directly at <u>978-992-2795</u> or <u>dspaulding@agresourceinc.com</u>

Dana holds a B.S. in Environmental Science from The University of Massachusetts Amherst.

## Whole Cycle Management

Since 1984, Agresource Inc. has been a leader in finding beneficial uses for



organic residuals including: municipal biosolids, leaf and yard waste, food processing residuals and food scraps. We consider these wastes as valuable resources that are used in a variety of products from compost to engineered soil blends. Compost and engineered soils are used in large scale construction, residential landscape, sports fields and golf course applications. In the fall of 2016 Agresource opened its sports turf and golf course materials division AGREsport. AGREsport manufactures and distributes topdressing sand, bunker sand, divot mixes, root zone mixes and custom

soil blends throughout the North East.

In addition to compost, soils and sands Agresource is proud to roll out Whole Cycle. Whole Cycle is the newest division of Agresource made possible by the acquisition of an industry partner who specializes in organic waste collection and recycling. A culmination of over 30 years of experience, Whole Cycle can provide management strategies for green waste and food waste. The goal of Whole Cycle is to complete the cycle by collecting, hauling, processing, manufacturing and distributing finished material back to the original generator of the waste. The finished product, in the form of compost or compost amended soil, can be used back on the property where it was collected creating a sustainable approach to waste/grounds management.

Whole Cycle can provide services to its recycling partners in customized ways to meet your needs;



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providing products and recycling services. The Whole Cycle Swap program utilizes roll off containers (10, 15, 20, 30 cubic yds) to deliver finished material and pick up green waste (leaves, grass, brush). A roll off container filled with an ordered product will be delivered to your site, once unloaded the empty container is available to be filled with green waste. When the container is full, place another order for the material that is needed. The material is unloaded, leaving the empty container and collecting the container filled with green waste to be hauled and processed at one of our facilities. The material you are receiving back will contain recycled/ processed materials, completing the whole cycle. Reduce your carbon footprint (and haul charge) by using one truck instead of two to deliver product and remove waste.

Get involved and reduce food waste going to landfill by utilizing Whole Cycle for food waste removal. Clean 48 or 64 gallon food waste toters will be placed at your facility, filled by your staff and removed on a weekly basis by our fleet of collection trucks. Food scraps can go directly into our compost production or sent to anaerobic digestion where it will be turned into clean energy. You can complete the cycle by using compost or compost amended soils at your site.

Whole Cycle will help you set up a program that meets your specific needs and spread the word to your customers, management and surrounding community about the sustainable approach that is being implemented on the property.

For questions and more details about the Whole Cycle approach reach out to Dave Harding (dharding@agresourceinc.com 978- 904-1203), Mike Carignan (mcarignan@agresourceinc.com 978-270-9132), Kevin Crawford (kcrawford@agresourceinc.com 978-992-7706) or Dana Spaulding (dspaulding@agresourceinc.com 978-992-2795). We are excited about the opportunity to work together and all be a part of...Whole Cycle.