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Recycled food waste fertilizers now on market

THE TREND toward eliminating the use of synthetics in our landscape is inexorable. Using organic and natural products is now an essential component of many green industry maintenance systems.

Biostimulants increase the biological activity of soils, reducing fertilizer and water inputs, and yielding greener, longer-lasting results, ultimately providing notable economic savings. Organic programs incorporating biostimulants allow professionals to maintain solid levels of plant growth and quality. These same organic programs help turf managers improve turf recovery processes through an enhanced, steady supply of vital nutrients.

Using organic products helps turf professionals stay ahead in other important areas, such as legislation and regulation. New environmental laws and nutrient control programs, such as phosphorus bans in Florida, and strict pesticide regulations in place in Canada, are signs of a more enforced sustainable movement that is sure to come either by popular demand or government action.

In general, an organic fertilizer product should work to improve the overall physical and biological health of the soil, decrease water and total fertilizer usage, increase plant growth, and decrease incidence of disease and insect damage and weed encroachment. Specifically, organic programs should ensure the delivery of desirable levels of key nutrients, primarily Nitrogen (N), Phosphorus (P) and Potassium (K).

With the increase in the variety of organic fertilizers available, it is important to understand the advantages and drawbacks of each product category before making a buying decision. Currently, widely used forms of organic fertilizer are derived from chicken waste, bio-solids, and animal blood or bone meal. An emerging category is fertilizer treatment made from recycled food waste.

Bio-solids are derived from treated sewage sludge generated or collected from wastewater treatment plants. They are an especially low-cost category and help municipalities reduce the costs of having to manage such an abundant form of waste, which is otherwise essentially useless. The low-cost of bio-solids make them a popular choice for large-scale applications. They are often used to reduce dependence on chemical products and can help condition the soil. These products may contain heavy metals and other components, which can potentially run-off into streams, lakes and other waterways.

Chicken waste products also have a popular following, as they are pervasive and inexpensive. Offering a steady supply of essential nutrients, chicken waste fertilizers generally yield effective results. One area of concern is that they also often contain high levels of phosphorous and use of this nutrient is sometimes restricted and in some cases, such as in Florida, the use of phosphorous has been banned entirely. Manure based products also tend to have a strong and offensive odor especially when wet.

Blood and bone meal products possess vital nutrients such as nitrogen, along with other helpful supplements, such as calcium and iron, which can help to improve rooting and manage disease suppression and stress tolerance. Again, users need to understand the regulations concerning phosphorous levels when considering products made from these materials.

Recycled food waste fertilizers are nutrient rich products that rapidly stimulate soil microbial activity. Due to an inherently high content of rich nutrients and minerals these organic products enhance the soil's own reservoir of nutrients. Significant levels of humic acid are produced during the food waste recycling process. A high level of protein in food waste offers a diverse supply of free amino acids.

According to the EPA "the use of recycled food waste (compost) has a myriad of environmental benefits, such as improving soil health and structure, increasing drought resistance, as well as reducing, and even eliminating, the need for supplemental water, fertilizers, and pesticides," while the New York State's Department of Environmental Conservation states that that benefits of composting organic matter also includes "an increase in beneficial soil organisms such as worms and centipedes, [and] suppression of certain plant diseases..."

Food waste is also normally diverted to landfills to decompose, which causes harmful methane gases to release into the atmosphere, making food waste recycling an excellent way to reduce the emission of greenhouse gases. One disadvantage of food waste is that because it is a relatively new concept, it is not as available as other forms of fertilizers.

Different brands, different ingredients, different results

All organic products are not created equal, but one thing to remember is that natural products will result in healthier grounds and soils. It may take some time before full benefits and results are evident and in some instances there may be a minor decrease in quality during the first year of transitioning from a synthetic to an organic program. Organic products slowly release nutrients into the soil, which helps to continually sustain the soil for an extended number of weeks. Organic fertilizer products help to divert low-valued waste from piling up in landfills, which helps to reduce fuel, transportation and labor costs. In fact, according to the EPA, "Landfills are the largest source of human-related methane emissions in the United States, accounting for approximately 34 percent of all methane emissions."

Synthetic products create, rather than reduce, carbon emissions. In fact, the production of 1 ton of synthetic fertilizer requires the burning of enough natural gas to release 4.6 tons of carbon dioxide into the atmosphere. Organic programs produce beautiful, naturally healthy turf, fields and landscapes more gradually, but offer many long-term benefits, and the ability to truly improve the overall quality and cost of growth. An understanding of what and how organic products work is essential in developing a program that will achieve landscape and turf management goals while reducing or even eliminating pesticide and synthetic fertilizer use, and providing environmental benefits. ■

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