

Large Scale Application

For large scale applications, it is recommended that the property owner complete a soil test to determine the current soil nutrient status and fertility, and additional nutrient needs (e.g., phosphorus, potassium). The **maximum** crop application rates (wet tons) based on PAN loadings, per 327 IAC 6.1-4-10 are listed below. It is the applicator's responsibility to determine that actual application rates do not exceed Federal 503 or IAC agronomic application regulations for the particular site.



Corn: 200 pounds of nitrogen per acre. For this crop, Biosoil should be tilled into the field at up to 56 tons per acre.

Soybeans, Hay (pasture), Cereal Grain: 100 pounds of nitrogen per acre. For these crops, Biosoil should be tilled into the field at up to 28 tons per acre.

Idle Fields: 50 pounds of nitrogen per acre. No more than 14 tons per acre should be tilled into fields that are set aside as idle.

Per 327 IAC 6.1-4-10, the maximum annual loading rate (ALR) for Decatur Biosoil is limited by arsenic at 29.5 dry tons (134 wet tons) per acres.

If Biosoil contains more than 2 mg/kg dry weight cadmium, the soil pH must be at least 6.5 when applied to land for food crops per 327 IAC 6.1-5-4(a)(2)(E). If Biosoil contains more than 40 mg/kg dry weight molybdenum, Biosoil shall not be applied to pasture per 327 IAC 6.1-5-4(a)(2)(F).

Who We Are

About Us

All Decatur Biosoil is produced at the Decatur Wastewater Treatment Plant, 1309 N. Monmouth Rd., Decatur, Indiana 46733 and is carefully regulated by us, with USEPA and IDEM oversight, to assure a consistently high level of quality control.

We use an Autothermal Thermophilic Aerobic Digestion (ATAD) process to produce our Biosoil. The ATAD process aerates waste activated sludge from the treatment plant process in high temperature reactors to provide a stabilized, disinfected biosolids product. This product, Biosoil, is provided to the public as a soil supplement material in accordance with the City's IDEM marketing and distribution permit.

By providing this material for beneficial use, we are freeing valuable landfill space, controlling escalating transportation costs, and helping to preserve our land and energy resources.

Contact Us With Questions

Anne Butcher
Wastewater Superintendent
Phone: 260-724-4218
Email: AButcher@decaturin.org
<http://www.decturin.org/Services/Wastewater/26>



DECATUR WWTP BIOSOIL USER INFORMATION

*A recycled material for a
greener earth*



Biosoil Use Directions

Decatur Biosoil is a recycled biosolids product and meets the U.S. Environmental Protection Agency (USEPA) and Indiana Department of Environmental Management (IDEM) “exceptional quality” biosolids standards.

As with all fertilizer products, care should be taken in application practices. Please carefully read the enclosed information before using this product. The application of Decatur Biosoil is prohibited except in accordance with the instructions presented herein.

Environmental Stewardship and Safety

Avoid application of Biosoil on steep slopes, areas prone to flooding, and adjacent to wetlands, streams, and ponds. Biosoil should not be stockpiled in a quantity greater than what will be used in a 24-hour period. Care should be given to protect surface water, potable water supplies, and subsurface drainage systems from stockpiled Biosoil runoff.

Wash hands after use and store any unused product in an enclosed, cool, dry area away from pets and children.

General Application Information

Biosoil is a soil supplement that is intended to be applied lightly to shrubs, flower beds, and garden crop rows. Heavier applications should be tilled into the soil. For best results, Biosoil should be applied uniformly to the site and incorporated into the top six inches of soil within 24 hours of application.

Decatur Biosoil contains nitrogen in a slow release form and organic matter that will improve the workability and water retention capacity of soil.

Nutrient and Lime Value

The nutrient value and agricultural gypsum or lime substitute value will vary and regular analysis will be provided. Recommended application rates presented in this User Information handout are based on the approximate physical and nutritive content of the Biosoil as of July 2017.

Recommended Application Rates

The recommended application rates presented herein are general guidelines based on general crop nitrogen (N) needs, an average Plant Available Nitrogen (PAN) amount of 16.1 lb N per dry ton of Biosoil, and an average 22 percent dry solids in the Biosoil.

Shrubs and Trees

Shrubs and trees need 2 to 4 pounds of nitrogen per 1,000 square feet, applied around the trunk out to the drip line. Incorporate 1 to 2 pounds of Biosoil per square foot into the soil around shrubs and trees annually.



Vegetables and Flowers

Biosoil can be incorporated into the top 6 inches of soil each year prior to planting flowers and vegetables to provide approximately 0.5 pounds of nitrogen per 1,000 square feet. For this application, Biosoil should be applied at up to 280 pounds per 1,000 square feet.

A nitrogen side dressing of 0.33 pounds of nitrogen per 100 foot row is typically recommended for vegetable gardens. For this application, work into the soil approximately 190 pounds of biosoil along each 100 foot row at the appropriate time. For more information reference the Purdue University Cooperative Extension Service Bulletin *Home Gardener's Guide*, publication HO-32-W.

Example: How Much Biosoil Do I Need?

I am planting a 30 foot by 50 foot garden and want to incorporate Biosoil into the soil prior to planting. How much Biosoil do I need?

$$\begin{aligned} 30 \text{ ft} \times 50 \text{ ft} &= 1,500 \text{ sq. ft.} \\ (280 \text{ lb Biosoil}/1,000 \text{ sq. ft.}) \times 1,500 \text{ sq. ft. of garden} \\ &= 420 \text{ lb Biosoil} \end{aligned}$$

A 30 foot by 50 foot garden is 1,500 square feet, so I need to evenly incorporate 420 pounds of Biosoil into my garden plot.