

USER FACT SHEET
FOR
EXCEPTIONAL QUALITY BIOSOLIDS
FROM
CITY OF LEBANON AUTHORITY (COLA)

PLEASE READ INSTRUCTIONS CAREFULLY

Biosolids are natural organic fertilizer / soil conditioner produced under carefully controlled conditions to ensure its high quality and consistent stabilization by heat treatment of the ingredients from wastewater treatment plant solids. Application and use of these Biosolids is authorized only for the purposes described below, and in accordance with these instructions.

AUTHORIZED USES

The natural fertilizer and soil conditioner may be used as a soil enhancement, to improve the physical structure, increase the organic matter content and water holding capacity of the soil and supply nutrients, for the following purposes:

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|------------------------------------|---|
| Turf Establishment and Maintenance | Flower and Vegetable Gardens |
| Container Plants | Tree and Shrub Planting and Maintenance |
| Agricultural crop Production | Top Soil Blending |

AGRICULTURAL USE:

The amount of biosolids to be applied to the fields should be based on soil testing results. These results will indicate the pH of the soil and the amount of liming material to adjust the soil pH to the desired level. Depending on the crop grown, supplemental fertilizer may be needed. The nitrogen in the biosolids is predominately in the form of organic nitrogen that will be released slowly. The use off starter fertilizer may be needed, depending on the crop. Based on the initial sampling data for the biosolids produced at City of Lebanon Authority Wastewater Treatment Plant, the Table below represents an estimate of nutrients available to a crop...

Primary Nutrients	Dried Sample %	lb/T in dried sample	lb/T available in Dried	Applying at a rate of 1 wet T/Acre will supply (lbs)	Nitrogen available the first year per wet Ton
Ammonia N	0.3	6	3	2.98	25.9 lbs
Organic N (insoluble nitrogen)	5.76	115.2	23.0	22.92	
Phosphorus(1)	3.54	70.8	70.8	70.44	
Potassium	0.2	4	4	3.98	

1. Phosphate - P Source Coefficient is 0.10. Analysis Penn State – 3/8/2021
2. Ammonia Volatilization is 50% - not available to plants
3. Organic Nitrogen is not all available the first year – 20% is mineralized and available the first year. Following years are 10% and 5% of the remaining Organic Nitrogen

Note: The nutrient value of the biosolids will vary and the most recent results should be used to calculate application rates specific to the crop proposed.

TURF MANAGEMENT

The biosolids can be used for turf establishment and maintenance. Apply at a rate of 90 lbs per 1,000 square feet in late spring and early fall. These two applications will give approximately 1 lb N per 1,000 square feet.

QUALITY AND CONTENT

The biosolids provide a valuable source of macro nutrients, micro nutrients and organic matter. The previous table shows the macro nutrient value and the information below details the micronutrients and trace element levels typical of the biosolids produced by the CoLA. When applying biosolids, soil pH should always be monitored and adjusted for the specific use and plant requirements

OTHER INSTRUCTIONS:

1. Do not apply to ground that is saturated with water or covered with snow.
2. Store or land apply this product in such a way as to minimize potential runoff.
3. Storage in a protected area or covered in piles is recommended.
4. All material should be stored away from play areas for children or areas where pets may be present.
5. Further processing of this product may require additional permits from PADEP.

Micronutrients	Dried Sample,%
% Calcium	2.59
% Iron	0.58
% Zinc	0.07
% Copper	0.03

Other Parameters	
pH	6.0 S.U.
moisture content (approx)	99.49% solids

Trace Elements	EPA & DEP Accepted Concentration (mg/kg)	CoLA Biosolids Concentration (mg/kg)
Arsenic	41	<1.61
Cadmium	39	0.82
Copper	1500	304.1
Lead	300	16.5
Mercury	17	0.90
Molybdenum	18	8.4
Nickel	420	15.5
Selenium	100	5.7
Zinc	2800	708
PCBs	4	N.D. (<0.01)

FOR FURTHER INFORMATION CONTACT:

CORA A. SHENK, COMPLIANCE MANAGER
 CITY OF LEBANON AUTHORITY
 2311 RIDGEVIEW ROAD
 LEBANON, PA 17042
 717-272-2841
 WWTP@LEBANONAUTHORITY.ORG