

New York State Department of Environmental Conservation
Division of Materials Management
Albany, New York 12233-7253

2019

REGISTERED OR PERMITTED FACILITY ANNUAL REPORT

COMPOSTING

(DO NOT USE THIS FORM FOR BIOSOLIDS COMPOSTING)

6 NYCRR Part 361-3.2

This annual report is for the year of operation from January 01, 2019 to December 31, 2019

Annual Report Form Due: No Later than March 1, 2020

This form may be used for all composting facilities under section 361-3.2 of the Part 360 series except for biosolids composting. Biosolids composting requires the submission of a different annual report form. Forms for all solid waste management facilities can be found at <http://www.dec.ny.gov/chemical/52706.html>. If you have any questions on this form, please e-mail organicrecycling@dec.ny.gov.

Failure to provide the required information requested is a violation of Environmental Conservation Law. Timely submission of a properly completed form to the Department's Regional Office that has jurisdiction over your facility and to the Department's Central Office is required to meet the Annual Report requirements of 6 NYCRR Part 360 series.

Attach additional sheets if space on the pages is insufficient or supplementary information is required or appropriate.

FACILITY NAME: _____

& 56P20001

SW FACILITY ACTIVITY NUMBER(S): (Ex. 02P20099) _____

COUNTY WHERE FACILITY IS LOCATED: _____

DEC USE ONLY

Region: 3 SWIMS: X

MATRIX: X

Date Reviewed: 3/16/20

Reviewed By: KE

Data Entered: X

**COMPOST FACILITY ANNUAL REPORT
SECTION 1 – FACILITY INFORMATION**

FACILITY INFORMATION			
FACILITY NAME:			
FACILITY LOCATION ADDRESS:	FACILITY CITY:	STATE:	ZIP CODE:
FACILITY TOWN:	FACILITY COUNTY:	FACILITY PHONE NUMBER:	
NYSDEC REGION #:			
FACILITY CONTACT:	CONTACT PHONE NUMBER:		
CONTACT EMAIL ADDRESS:			
OWNER INFORMATION			
OWNER NAME:	OWNER PHONE NUMBER:		
OWNER ADDRESS:	OWNER CITY:	STATE:	ZIP CODE:
OWNER CONTACT:	OWNER CONTACT EMAIL ADDRESS:		
OPERATOR INFORMATION			
OPERATOR NAME: <i>Same as owner</i>			
PREFERENCES			
<i>Preferred address to receive correspondence:</i> <i>Facility location address</i> <i>Owner address</i> <i>Other (provide):</i>			
<i>Preferred email address:</i> <i>Facility Contact</i> <i>Owner Contact</i> <i>Other (provide):</i>			
<i>Preferred individual to receive correspondence:</i> <i>Facility Contact</i> <i>Owner</i> <i>Owner Contact</i> <i>Other (provide):</i>			
<p>Did you operate in 2019? Yes; Complete this form.</p> <p align="center">No; Complete and submit Sections 1, 12 and 13. If you no longer plan to operate and wish to relinquish your permit/registration associated with this solid waste management activity, please notify the regional office of your intent. See attachment for Regional Office addresses and contacts.</p>			

SECTION 2 – QUANTITY OF MATERIAL RECEIVED

Please report quantities received from January 01, 2019 to December 31, 2019

	Inputs	Quantity	Unit	Source(s)
YARD WASTE	Leaves only			
	Grass Clippings			
	Mixture of Grass and Leaves			
	Brush (Small branches and limbs, <4 inch diameter)			
SSO	Source Separated Organics (Food scraps, soiled paper products, etc.)			
	Food Processing Waste (brewery grains, grape pomace, etc.)			
OTHER	Crop Residues (Corn stalks, etc.)			
	Manure (including bedding)			
	Sawdust/Shavings			
	Animal Carcasses (road-kill, animal mortalities)			
	Paper Mill Residuals			
	Digestate			
	Other: _____			
BULKING AGENT	Woodchips			
	Sawdust			
	Other: _____			

If **PERMITTED SSO** composting facility, continue to Section #5
SSO – Source Separated Organics

ALL OTHER COMPOSTING FACILITIES, continue to Section #9

SECTION 5 – PATHOGEN AND VECTOR ATTRACTION REDUCTION

For permitted SSO composting facilities only. Check one method for each:

Pathogen Reduction 361-3.7(a)

Windrow Composting

Aerated Static Pile Composting

In-vessel Composting

Other (specify): _____

Vector Attraction Reduction 361-3.7(b)

38 % Volatile Solids Reduction

SOUR

Aerobic Process 14 days, $\geq 40^{\circ}\text{C}$, $\geq 45^{\circ}\text{C}$ avg.

Attach operating and monitoring data to show compliance with methods chosen. Temperature data records should indicate when a pile was created, pile was moved, additional material was added and/or pile was turned.

SECTION 6 – FINISHED COMPOST ANALYSIS

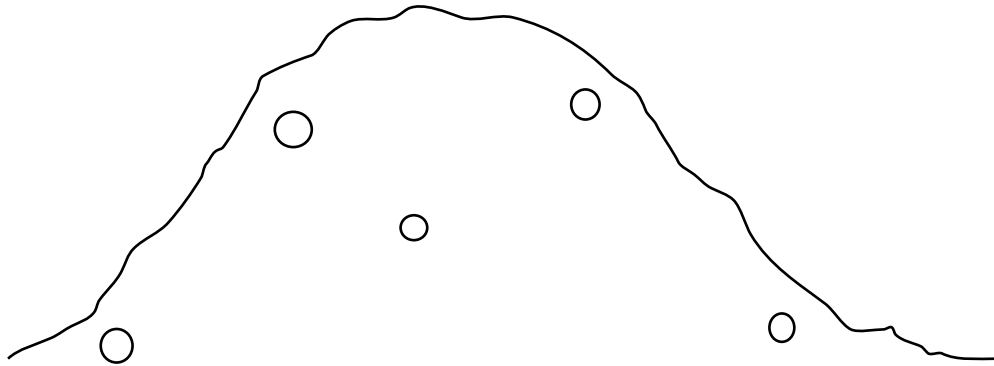
For permitted SSOW composting facilities only. Please attach sampling analyses and laboratory reports as required under Part 360 or your permit. Copies of original laboratory results must be attached. All results, except pH and Total Solids, must be on a dry weight basis. See 361-3.9 Table 6 for pollutant limits and Table 5 for annual product testing frequency 361-3.9 Table 5.

Summarize data in table below or attached document. Print additional pages as needed.

Analysis Date =====>					Max. Conc. (mg/kg)
Arsenic (mg/kg)					41
Cadmium (mg/kg)					10
Chromium (mg/kg)					1,000
Copper (mg/kg)					1,500
Lead (mg/kg)					300
Mercury (mg/kg)					10
Molybdenum (mg/kg)					40
Nickel (mg/kg)					200
Selenium (mg/kg)					100
Zinc (mg/kg)					2,500
TKN (mg/kg)					
Ammonia Nitrogen (mg/kg)					
Nitrate (mg/kg)					
Total Phosphorus (mg/kg)					
Total Potassium (mg/kg)					
pH (s.u.)					
Total Solids(%)					
Total Volatile Solids (%)					
Fecal Coliform (MPN/g)					<1,000 MPN/g
Salmonella (MPN/4g)					<3MPN/4g
Other_____					

SECTION 7 –SAMPLE MANAGEMENT PLAN

For permitted SSO composting facilities only. Describe the number, frequency and location of samples taken. Include a diagram showing all sampling locations.



SECTION 8 – ATTACHMENTS (IF REQUIRED)

Permitted SSO composting facilities, please attach:

- Temperature monitoring and detention time data.
- Sample analyses laboratory reports.
- Any additional reporting requirements.

Do you have a variance to the Part 360 permit requirements? Yes No

If yes, please describe:

SECTION 9 – UNAUTHORIZED WASTE

Has unauthorized solid waste been received at the composting facility during the reporting period?

Yes No

If yes, give information below for each incident (attach additional sheets if necessary):

SECTION 10 – PROBLEMS/COMPLAINTS

Describe any operational problems or neighbor complaints arising from the composting operation and include any methods used to remedy the situations. This should include odor complaints, marketing difficulties, major equipment failure, etc.

SECTION 11 – QUESTIONS

Please identify any questions or concerns that you would like the Department to answer or consider:

SECTION 12 – FOOD DONATION & FOOD SCRAPS RECYCLING LAW

If you are registered or permitted to compost food scraps please complete the following. For all other operations that are interested in processing food scraps, please contact your DEC regional office to determine what is required.

In 2019, New York State passed the Food Donation & Food Scraps Recycling law. Effective January 1, 2022, large generators of food scraps (defined as generating an annual average of two tons per week or more) must donate excess food and recycle all remaining food scraps if they are within 25 miles of an organics recycler (composting facility, anaerobic digester, etc.). Examples of large generators include: large restaurants, grocery stores, hotels, colleges, etc. For more information visit: <https://www.dec.ny.gov/chemical/114499.html>

Contact Information

Under this legislation, DEC is responsible for providing a list of organics recyclers (compost facilities, anaerobic digesters, etc.) to large generators so they can determine available food scraps recycling opportunities in their area.

You will be included in this listing if you hold a permit or registration for the composting of source separated organics or food scraps. This will educate both large generators and haulers of food scraps that you are an available composter in their area.

Please provide the following information to include in the listing.

Name of Business: _____

Business Phone Number: _____

Business Email: _____

Business Website: _____

I would like to opt out of DEC listing my facility as an available food scraps recycler for large generators as it relates to the Food Donation and Food Scraps Recycling law.

Assessing Your Food Scraps Recycling Capacity

DEC is responsible for assessing available food scraps recycling capacity across New York State. Information from your operation will help us do this. Please complete the following section to calculate the amount of excess food scraps your operation will have the capability to process in **2022**. Please stay consistent with units (wet tons or cubic yards).

A. Amount of foods scraps projected to be processed in **2020**: _____

B. Amount of foods scraps projected to be processed in **2022**: _____

* Note: You will not be required to process this quantity of material, these estimates will only be used to assist DEC in capacity planning across the state in preparation for the Food Donation and Food Scraps Recycling law effective January 1, 2022.

Questions?

DEC USE ONLY

Excess Capacity:

1500 cubic yards

SECTION 13 - CERTIFICATION

The Owner or Operator must sign, date and submit one completed form with an original signature to the appropriate Regional Office (See attachment for Regional Office addresses and Contacts.)

The Owner or Operator must also submit one copy by email, fax or mail to:

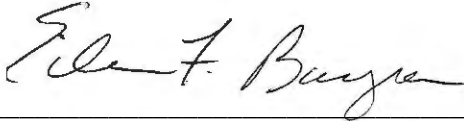
**NYS Department of Environmental Conservation
Bureau of Waste Reduction and Recycling – Annual Report
625 Broadway – 9th Floor
Albany, New York 12233-7253**

Phone: 518-402-8706

Fax 518-402-9024

Email address: organicrecycling@dec.ny.gov

I certify, under penalty of law, that the information that will be used to determine compliance with the requirements in Subpart 361-3 of 6 NYCRR Part 361 has been prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that false statement made herein are punishable pursuant to section 210.45 of the penal law.



Signature

Date

Name (Print)

Title (Print)

Email (Print)

Address

City

State and Zip

(____)____-____
Phone Number

ATTACHMENTS: NO YES (IF YES, LIST ATTACHMENTS)

- _____
- _____
- _____

New York State Department of Environmental Conservation
Division of Materials Management
Bureau of Waste Reduction and Recycling

MATERIAL MANAGEMENT PROGRAM CONTACTS

CENTRAL OFFICE

Bureau of Waste Reduction and Recycling
625 Broadway
Albany, NY 12233-7253
Phone: (518) 402-8706

For Submission of Organics Recycling Annual Reports only:

Fax: (518) 402-9024

Email: organicrecycling@dec.ny.gov

REGIONAL OFFICE ADDRESS & LEAD CONTACT PERSON

REGION 1 (Nassau, Suffolk)

Syed Rahman/David Gibb
SUNY @ Stony Brook
50 Circle Road
Stony Brook, NY 11790
Phone: (631) 444-0375
SWMFannualreportR1@dec.ny.gov

REGION 2 (Bronx, Kings, New York, Queens, Richmond)

Joseph O'Connell
47-40 21st Street
Long Island City, NY 11101-5407
Phone: (718) 482-4896
SWMFannualreportR2@dec.ny.gov

REGION 3 (Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster, Westchester)

James Lansing
21 South Putt Corners Road
New Paltz, NY 12561
Phone: (845) 256-3123
SWMFannualreportR3@dec.ny.gov

REGION 4 (Albany, Columbia, Delaware, Greene, Montgomery, Otsego, Rensselaer, Schenectady, Schoharie)

Victoria Schmitt
1130 North Westcott Road
Schenectady, NY 12306
Phone: (518) 357-2243
SWMFannualreportR4@dec.ny.gov

REGION 5 (Clinton, Essex, Franklin, Fulton, Hamilton, Saratoga, Warren, Washington)

Jessie Sangster
1115 State Route 86, PO Box 296
Ray Brook, NY 12977
Phone: (518) 897-1266
SWMFannualreportR5@dec.ny.gov

REGION 6 (Herkimer, Jefferson, Lewis, Oneida, St. Lawrence)

Gary McCullough
317 Washington Street
Watertown, NY 13601
Phone: (315) 785-2513
SWMFannualreportR6@dec.ny.gov

REGION 7 (Broome, Cayuga, Chenango, Cortland, Madison, Onondaga, Oswego, Tioga, Tompkins)

Thomas Annal
615 Erie Boulevard West
Syracuse, NY 13204
Phone: (315) 426-7419
SWMFannualreportR7@dec.ny.gov

REGION 8 (Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne, Yates)

Greg MacLean
6274 East Avon-Lima Road
Avon, NY 14414
Phone: (585) 226-5411
SWMFannualreportR8@dec.ny.gov

REGION 9 (Allegany, Cattaraugus, Chautauqua, Erie, Niagara, Wyoming)

Peter Grasso
270 Michigan Avenue
Buffalo, NY 14203
Phone: (716) 851-7220
SWMFannualreportR9@dec.ny.gov

December 2019

SOIL CONTROL LAB

42 HANGAR WAY
WATSONVILLE
CALIFORNIA
95076
USA

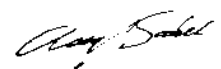
Account #: 9120795-1/1-9556
Group: Dec19D #24
Reporting Date: January 9, 2020

Community Compost Company
P.O. Box 1254
New Paltz, NY 12561
Attn: Molly Lindsay

Date Received: 27 Dec. 19
Sample Identification: #1 (Screened Pile)
Sample ID #: 9120795 - 1/1

Nutrients	Dry wt.	As Rcvd.	units	Stability Indicator:			
Total Nitrogen:	0.90	0.50	%	CO2 Evolution	Respirometry		
Ammonia (NH ₄ -N):	< 10	< 5.6	mg/kg	mg CO ₂ -C/g OM/day		4.7	
Nitrate (NO ₃ -N):	< 1.0	< 0.6	mg/kg	mg CO ₂ -C/g TS/day		1.2	
Org. Nitrogen (Org.-N):	0.90	0.50	%	<i>Stability Rating</i>		<i>moderately unstable</i>	
Phosphorus (as P ₂ O ₅):	0.47	0.26	%	Maturity Indicator: Cucumber Bioassay			
Phosphorus (P):	2100	1100	mg/kg	Compost:Vermiculite (v:v)		1:2	
Potassium (as K ₂ O):	0.32	0.18	%	Emergence (%)		100	
Potassium (K):	2600	1500	mg/kg	Seedling Vigor (%)		114	
Calcium (Ca):	1.5	0.84	%	<i>Description of Plants</i>		<i>healthy</i>	
Magnesium (Mg):	0.25	0.14	%	Pathogens	Results	Units	Rating
Sulfate (SO ₄ -S):	4.0	2.2	mg/kg	Fecal Coliform	33	MPN/g	<i>pass</i>
Boron (Total B):	7.0	3.9	mg/kg	Salmonella	< 3	MPN/4g	<i>pass</i>
Moisture:	0	44.2	%	Date Tested: 27 Dec. 19			
Sodium (Na):	0.051	0.029	%	Physical Contaminants**	% by weight		
Chloride (Cl):	0.012	0.0067	%	Total Plastic	< 0.1		
pH Value:	NA	8.28	unit	Film Plastic	< 0.1		
Bulk Density :	26	47	lb/cu ft	Glass	< 0.1		
Carbonates (CaCO ₃):	22	12	lb/ton	Metal	< 0.1		
Conductivity (EC5):	0.97	NA	mmhos/cm	Sharps	ND		
Organic Matter:	26.4	14.7	%	Total	< 0.5		
Organic Carbon:	12.0	6.8	%				
Ash:	73.6	41.1	%				
C/N Ratio	14	14	ratio				
AgIndex	> 10	> 10	ratio				
Metals	Dry wt.	EPA Limit	units	Size Distribution			
Aluminum (Al):	4400	-	mg/kg	MM	% by weight		
Arsenic (As):	2.2	41	mg/kg	> 50	0.0		
Cadmium (Cd):	< 1.0	39	mg/kg	25 to 50	0.0		
Chromium (Cr):	19	-	mg/kg	16 to 25	0.0		
Cobalt (Co)	3.3	-	mg/kg	9.5 to 16	0.0		
Copper (Cu):	16	1500	mg/kg	6.3 to 9.5	0.0		
Iron (Fe):	9200	-	mg/kg	4.0 to 6.3	0.5		
Lead (Pb):	9.9	300	mg/kg	2.0 to 4.0	4.9		
Manganese (Mn):	440	-	mg/kg	< 2.0	94.6		
Mercury (Hg):	< 1.0	17	mg/kg	***Greater than 4mm in size (Sharps greater than 2mm)			
Molybdenum (Mo):	0.92	75	mg/kg				
Nickel (Ni):	13	420	mg/kg				
Selenium (Se):	< 1.0	100	mg/kg				
Zinc (Zn):	86	2800	mg/kg				

Analyst: Assaf Sadeh



*Sample was received and handled in accordance with TMECC procedures.

Account No.:
 9120795 - 1/1 - 9556
 Group: Dec19D No. 24

Date Received
 Sample i.d.
 Sample I.d. No.

27 Dec. 19
 #1 (Screened Pile)
 1/1 9120795

INTERPRETATION:

Is Your Compost Stable?

Respiration Rate	Biodegradation Rate of Your Pile
4.7 mg CO ₂ -C/ g OM/day	+++++ < Stable > < Moderately Unstable> < Unstable > < High For Mulch

Is Your Compost Mature?

Ammonia/Nitrate N ratio	Ratio does not apply due to low concentrations of both Ammonia N and Nitrate N.
NA Ratio	VeryMature> < Mature > < Immature
Ammonia N ppm	+
<10 mg/kg dry wt.	VeryMature> < Mature > < Immature
Nitrate N ppm	+
< 1.0 mg/kg dry wt.	< Immature > < Mature > < Immature
pH value	+++++
8.28 units	< Immature > < Mature > < Immature
Cucumber Emergence	+++++
100.0 percent	< Immature > < Mature > < Immature

Is Your Compost Safe Regarding Health?

Fecal Coliform	+++++
< 1000 MPN/g dry wt.	< Safe > < High Fecal Coliform
Salmonella	+++++
Less than 3 /4g dry wt.	<Safe (none detected) > < High Salmonella Count(> 3 per 4 grams)
Metals US EPA 503	+++++
Pass dry wt.	<All Metals Pass > < One or more Metals Fail

Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P2O5+K2O)	+++++
1.7 Percent dry wt.	<Low > < Average > < High Nutrient Content
AgIndex (Nutrients / Sodium and Chloride Salts)	((N+P2O5+K2O) / (Na + Cl))
15 Ratio	+++++ Na & Cl > < Nutrient and Sodium and Chloride Provider > < Nutrient Provider
Plant Available Nitrogen (PAN)	Estimated release for first season
1 lbs/ton wet wt.	+++ Low Nitrogen Provider> < Average Nitrogen Provider > <High Nitrogen Provider
C/N Ratio	+++++
14 Ratio	< Nitrogen Release > < N-Neutral > < N-Demand> < High Nitrogen Demand
Soluble Available Nutrients & Salts (EC5 w/w dw)	+++++
0.97 mmhos/cm dry wt.	SloRelease> < Average Nutrient Release Rate > <High Available Nutrients
Lime Content (CaCO₃)	+++++
22 Lbs/ton dry wt.	< Low > < Average > < High Lime Content (as CaCO ₃)

What are the physical properties of your compost?

Percent Ash	+++++
73.6 Percent dry wt.	< High Organic Matter > < Average > < High Ash Content
Sieve Size % > 6.3 MM (0.25")	+
0.0 Percent dry wt.	All Uses > < Size May Restrict Uses for Potting mix and Golf Courses

Account No.:
9120795 - 1/1 - 9556
Group: Dec19D No. 24

Date Received 27 Dec. 19
Sample i.d. #1 (Screened Pile)
Sample I.d. No. 1/1 9120795

INTERPRETATION:

Page two of three

Is Your Compost Stable?

Respiration Rate

4.7 Moderate-selected use mg CO₂-C/g OM/day

The respiration rate is a measurement of the biodegradation rate of the organic matter in the sample (as received). The respiration rate is determined by measuring the rate at which CO₂ is released under optimized moisture and temperature conditions.

Is Your Compost Mature?

Ammonia:Nitrate N ratio

NA NA

(Ratio does not apply due to low concentrations of both Ammonia N and Nitrate N.)

Ammonia N ppm

<10 NA

Nitrate N ppm

< 1.0 immature

pH value

8.28 immature

Composting to stabilize carbon can occur at such a rapid rate that sometimes phytotoxins remain in the compost and must be neutralized before using in high concentrations or in high-end uses. This step is called curing. Typically ammonia is in excess with the break-down of organic materials resulting in an increase in pH. This combination results in a loss of volatile ammonia (it smells). Once this toxic ammonia has been reduced and the pH drops, the microbes convert the ammonia to nitrates. A low ammonia + high nitrate score is indicative of a mature compost, however there are many exceptions. For example, a compost with a low pH (<7) will retain ammonia, while a compost with high lime content can lose ammonia before the organic fraction becomes stable. Composts must first be stable before curing indicators apply.

Cucumber Bioassay

100.0 Percent

Cucumbers are chosen for this test because they are salt tolerant and very sensitive to ammonia and organic acid toxicity. Therefore, we can germinate seeds in high concentrations of compost to measure phytotoxic effects without soluble salts being the limiting factor. Values above 80% for both percent emergence and vigor are indicative of a well-cured compost. Exceptions include very high salts that affect the cucumbers, excessive concentrations of nitrates and other nutrients that will be in range when formulated to make a growing media.

Is Your Compost Safe Regarding Health?

Fecal Coliform

< 1000 / g dry wt.

Fecal coliforms can survive in both aerobic and anaerobic conditions and is common in all initial compost piles. Most human pathogens occur from fecal matter and all fecal matter is loaded in fecal coliforms. Therefore fecal coliforms are used as an indicator to determine if the chosen method for pathogen reduction (heat for compost) has met the requirements of sufficient temperature, time and mixing. If the fecal coliforms are reduced to below 1000 per gram dry wt. it is assumed all other pathogens are eliminated. Potential problems are that fecal coliform can regrow during the curing phase or during shipping. This is because the conditions are now more favorable for growth than during the composting process.

Salmonella Bacteria

Less than 3 / 4g dry wt. Salmonella is not only another indicator organism but also a toxic microbe. It has been used in the case of biosolids industry to determine adequate pathogen reduction.

Metals

Pass

The ten heavy metals listed in the EPA 503 regulations are chosen to determine if compost can be applied to ag land and handled without toxic effects. Most high concentrations of heavy metals are derived from woodwaste feedstock such as chrome-arsenic treated or lead painted demolition wood. Biosolids are rarely a problem.

Does Your Compost Provide Nutrients or Organic Matter?

Nutrients (N+P₂O₅+K₂O)

1.7 low nutrient content

This value is the sum of the primary nutrients Nitrogen, Phosphorus and Potassium. Reported units are consistent with those found on fertilizer formulations. A sum greater than 5 is indicative of a compost with high nutrient content, and best used to supply nutrients to a receiving soil. A sum below 2 indicates low nutrient content, and is best-used to improve soil structure via the addition of organic matter. Most compost falls between 2 and 5.

Account No.:
 9120795 - 1/1 - 9556
 Group: Dec19D No. 24

Date Received 27 Dec. 19
 Sample i.d. #1 (Screened Pile)
 Sample I.d. No. 1/1 9120795

INTERPRETATION:

AgIndex (Nutrients/Na+Cl)

15 High nutrient ratio

Composts with low AgIndex values have high concentrations of sodium and/or chloride compared to nutrients. Repeated use of a compost with a low AgIndex (< 2) may result in sodium and/or chloride acting as the limiting factor compared to nutrients, governing application rates. These composts may be used on well-draining soils and/or with salt-tolerant plants. Additional nutrients from another source may be needed if the application rate is limited by sodium or chloride. If the AgIndex is above 10, nutrients optimal for plant growth will be available without concern of sodium and/or chloride toxicity. Composts with an AgIndex of above 10 are good for increasing nutrient levels for all soils. Most composts score between 2 and 10. Concentrations of nutrients, sodium, and chloride in the receiving soil should be considered when determining compost application rates. The AgIndex is a product of feedstock quality. Feedstock from dairy manure, marine waste, industrial wastes, and halophytic plants are likely to produce a finished compost with a low AgIndex.

Plant Available Nitrogen (lbs/ton)

1 Low N Provider

Plant Available Nitrogen (PAN) is calculated by estimating the release rate of Nitrogen from the organic fraction of the compost. This estimate is based on the respiration rate, ammonia, and nitrate values. Despite the PAN value of the compost, additional sources of Nitrogen may be needed during the growing season to offset the Nitrogen demand of the microbes present in the compost. With ample nutrients these microbes can further breakdown organic matter in the compost and release bound Nitrogen. Nitrogen demand based on a high C/N ratio is not considered in the PAN calculation because additional Nitrogen should always be supplemented to the receiving soil when composts with a high C/N ratio are applied.

C/N Ratio

14 Indicates maturity

As a guiding principal, a C/N ratio below 14 indicates maturity and above 14 indicates immaturity, however, there are many exceptions. Large woodchips (>6.3mm), bark, and redwood are slow to breakdown and therefore can result in a relatively stable product while the C/N ratio value is high. Additionally, some composts with chicken manure and/or green grass feedstocks can start with a C/N ratio below 15 and are very unstable. A C/N ratio below 10 supplies Nitrogen, while a ratio above 20 can deplete Nitrogen from the soil. The rate at which Nitrogen will be released or used by the microbes is indicated by the respiration rate. If the respiration rate is too high the transfer of Nitrogen will not be controllable.

Soluble Nutrients & Salts (EC5 w/w dw - mmhos/cm)

0.97 Low salts

This value refers to all soluble ions including nutrients, sodium, chloride and some soluble organic compounds. The concentration of salts will change due to the release of salts from the organic matter as it degrades, volatilization of ammonia, decomposition of soluble organics, and conversion of molecular structure. High salts + high AgIndex is indicative of a compost high in readily available nutrients. The application rate of these composts should be limited by the optimum nutrient value based on soil analysis of the receiving soil. High Salts + low AgIndex is indicative of a compost low in nutrients with high concentrations of sodium and/or chloride. Limit the application rate according to the toxicity level of the sodium and/or chloride. Low salts indicates that the compost can be applied without risking salt toxicity, is likely a good source of organic matter, and that nutrients will release slowly over time.

Lime Content (lbs. per ton)

22 High lime content

Compost high in lime or carbonates are often those produced from chicken manure (layers) ash materials, and lime products. These are excellent products to use on a receiving soil where lime has been recommended by soil analysis to raise the pH. Composts with a high lime content should be closely considered for pH requirements when formulating potting mixes.

Physical Properties

Percent Ash

73.6 High ash content

Ash is the non-organic fraction of a compost. Most composts contain approximately 50% ash (dry weight basis). Compost can be high in ash content for many reasons including: excess mineralization (old compost), contamination with soil base material during turning, poor quality feedstock, and soil or mineral products added. Finding the source and reducing high ash content is often the fastest means to increasing nutrient quality of a compost.

Particle Size % > 6.3 MM (0.25")

0.0 Suitable for all uses

Large particles may restrict use for potting soils, golf course topdressings, seed-starter mixes, and where a fine size distribution is required. Composts with large particles can still be used as excellent additions to field soils, shrub mixes and mulches.

Appendix: Plant Available Nitrogen (PAN) calculations: $PAN = (X * (\text{organic N})) + ((\text{NH}_4\text{-N}) + (\text{NO}_3\text{-N}))$ X value = If RR < 2 then X = 0.1 If RR =2.1 to 5 then X = 0.2 If RR =5.1 to 10 then X = 0.3 If RR > 10 then X = 0.4 Note: If C/N ratio > 15 additional N should be applied. RR = Respiration rate	Estimated available nutrients for use when calculating application rates lbs/ton (As Rcvd.) Plant Available Nitrogen (PAN) 1.0 Ammonia (NH4-N) 0.01 Nitrate (NO3-N) 0.00 Available Phosphorus (P2O5*0.64) 3.2 Available Potassium (K2O) 3.6
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