





13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121 • www.midwestlabs.com

Lab #	2506688	Report of Analysis		Report Number: 16-092-4067																																																																																																																																																	
Account: 28674	MIKE WOLFE C AND C PEAT COMPANY 1650 CR 470 OKAHUMPKA FL 34762		 Robert Ferris Account Manager 402-829-9871																																																																																																																																																		
Date Sampled:	2016-03-16																																																																																																																																																				
Date Received:	2016-03-17		NUTRIENT ANALYSIS																																																																																																																																																		
Sample ID:	COMPOST																																																																																																																																																				
Total content, lbs per ton (as rec'd)																																																																																																																																																					
<table border="1"> <thead> <tr> <th></th> <th></th> <th>Analysis (as rec'd)</th> <th>Analysis (dry weight)</th> <th></th> </tr> </thead> <tbody> <tr> <td colspan="5">NUTRIENTS</td> </tr> <tr> <td colspan="5">Nitrogen</td> </tr> <tr> <td>Total Nitrogen</td> <td>%</td> <td>0.37</td> <td>1.08</td> <td>7.4</td> </tr> <tr> <td>Organic Nitrogen</td> <td>%</td> <td>0.27</td> <td>0.79</td> <td>5.4</td> </tr> <tr> <td>Ammonium Nitrogen</td> <td>%</td> <td>0.100</td> <td>0.293</td> <td>2.0</td> </tr> <tr> <td>Nitrate Nitrogen</td> <td>%</td> <td>< 0.01</td> <td>----</td> <td>----</td> </tr> <tr> <td colspan="5">Major and Secondary Nutrients</td> </tr> <tr> <td>Phosphorus</td> <td>%</td> <td>0.13</td> <td>0.38</td> <td>2.6</td> </tr> <tr> <td>Phosphorus as P2O5</td> <td>%</td> <td>0.30</td> <td>0.88</td> <td>6.0</td> </tr> <tr> <td>Potassium</td> <td>%</td> <td>0.21</td> <td>0.62</td> <td>4.2</td> </tr> <tr> <td>Potassium as K2O</td> <td>%</td> <td>0.25</td> <td>0.73</td> <td>5.0</td> </tr> <tr> <td>Sulfur</td> <td>%</td> <td>0.09</td> <td>0.26</td> <td>1.8</td> </tr> <tr> <td>Calcium</td> <td>%</td> <td>0.55</td> <td>1.61</td> <td>11.0</td> </tr> <tr> <td>Magnesium</td> <td>%</td> <td>0.07</td> <td>0.21</td> <td>1.4</td> </tr> <tr> <td>Sodium</td> <td>%</td> <td>0.040</td> <td>0.117</td> <td>0.8</td> </tr> <tr> <td colspan="5">Micronutrients</td> </tr> <tr> <td>Iron</td> <td>ppm</td> <td>1050</td> <td>3078</td> <td>2.1</td> </tr> <tr> <td>Manganese</td> <td>ppm</td> <td>29.7</td> <td>87</td> <td>----</td> </tr> <tr> <td>Boron</td> <td>ppm</td> <td>< 20</td> <td>----</td> <td>----</td> </tr> <tr> <td colspan="5">OTHER PROPERTIES</td> </tr> <tr> <td>Moisture</td> <td>%</td> <td>65.89</td> <td></td> <td></td> </tr> <tr> <td>Total Solids</td> <td>%</td> <td>34.11</td> <td></td> <td>682.2</td> </tr> <tr> <td>Organic Matter</td> <td>%</td> <td>25.00</td> <td>73.29</td> <td>500.0</td> </tr> <tr> <td>Ash</td> <td>%</td> <td>11.00</td> <td>32.25</td> <td>220.0</td> </tr> <tr> <td>Total Carbon</td> <td>%</td> <td>11.76</td> <td>34.48</td> <td></td> </tr> <tr> <td>Chloride</td> <td>%</td> <td>< 0.01</td> <td>----</td> <td></td> </tr> <tr> <td>pH</td> <td></td> <td>9.1</td> <td></td> <td></td> </tr> <tr> <td>Conductivity 1:5 (Soluble Salts)</td> <td>mS/cm</td> <td>4.74</td> <td></td> <td></td> </tr> </tbody> </table>							Analysis (as rec'd)	Analysis (dry weight)		NUTRIENTS					Nitrogen					Total Nitrogen	%	0.37	1.08	7.4	Organic Nitrogen	%	0.27	0.79	5.4	Ammonium Nitrogen	%	0.100	0.293	2.0	Nitrate Nitrogen	%	< 0.01	----	----	Major and Secondary Nutrients					Phosphorus	%	0.13	0.38	2.6	Phosphorus as P2O5	%	0.30	0.88	6.0	Potassium	%	0.21	0.62	4.2	Potassium as K2O	%	0.25	0.73	5.0	Sulfur	%	0.09	0.26	1.8	Calcium	%	0.55	1.61	11.0	Magnesium	%	0.07	0.21	1.4	Sodium	%	0.040	0.117	0.8	Micronutrients					Iron	ppm	1050	3078	2.1	Manganese	ppm	29.7	87	----	Boron	ppm	< 20	----	----	OTHER PROPERTIES					Moisture	%	65.89			Total Solids	%	34.11		682.2	Organic Matter	%	25.00	73.29	500.0	Ash	%	11.00	32.25	220.0	Total Carbon	%	11.76	34.48		Chloride	%	< 0.01	----		pH		9.1			Conductivity 1:5 (Soluble Salts)	mS/cm	4.74		
		Analysis (as rec'd)	Analysis (dry weight)																																																																																																																																																		
NUTRIENTS																																																																																																																																																					
Nitrogen																																																																																																																																																					
Total Nitrogen	%	0.37	1.08	7.4																																																																																																																																																	
Organic Nitrogen	%	0.27	0.79	5.4																																																																																																																																																	
Ammonium Nitrogen	%	0.100	0.293	2.0																																																																																																																																																	
Nitrate Nitrogen	%	< 0.01	----	----																																																																																																																																																	
Major and Secondary Nutrients																																																																																																																																																					
Phosphorus	%	0.13	0.38	2.6																																																																																																																																																	
Phosphorus as P2O5	%	0.30	0.88	6.0																																																																																																																																																	
Potassium	%	0.21	0.62	4.2																																																																																																																																																	
Potassium as K2O	%	0.25	0.73	5.0																																																																																																																																																	
Sulfur	%	0.09	0.26	1.8																																																																																																																																																	
Calcium	%	0.55	1.61	11.0																																																																																																																																																	
Magnesium	%	0.07	0.21	1.4																																																																																																																																																	
Sodium	%	0.040	0.117	0.8																																																																																																																																																	
Micronutrients																																																																																																																																																					
Iron	ppm	1050	3078	2.1																																																																																																																																																	
Manganese	ppm	29.7	87	----																																																																																																																																																	
Boron	ppm	< 20	----	----																																																																																																																																																	
OTHER PROPERTIES																																																																																																																																																					
Moisture	%	65.89																																																																																																																																																			
Total Solids	%	34.11		682.2																																																																																																																																																	
Organic Matter	%	25.00	73.29	500.0																																																																																																																																																	
Ash	%	11.00	32.25	220.0																																																																																																																																																	
Total Carbon	%	11.76	34.48																																																																																																																																																		
Chloride	%	< 0.01	----																																																																																																																																																		
pH		9.1																																																																																																																																																			
Conductivity 1:5 (Soluble Salts)	mS/cm	4.74																																																																																																																																																			

13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 • FAX (402) 334-9121 • www.midwestlabs.com

Lab #	2506688	Biological & Physical Properties			Report Number: 16-092-4067						
Account: 28674	MIKE WOLFE C AND C PEAT COMPANY 1650 CR 470 OKAHUMPKA FL 34762			 Robert Ferris Client Service Representative 402-829-9871							
Date Sampled:	2016-03-16			NUTRIENT ANALYSIS							
Date Received:	2016-03-17										
Sample ID:	COMPOST										
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;"></th> <th style="width: 15%;">Analysis (as rec'd)</th> <th style="width: 15%;">Analysis (dry weight)</th> <th style="width: 10%;">Units</th> <th style="width: 10%;">Detection Limit</th> <th style="width: 15%;">Method</th> </tr> </thead> </table>							Analysis (as rec'd)	Analysis (dry weight)	Units	Detection Limit	Method
	Analysis (as rec'd)	Analysis (dry weight)	Units	Detection Limit	Method						
Biological Properties											
Germination	80		%	1	TMECC 05.05A						
Germination Vigor	100		%	1	TMECC 05.05A						
CO ₂ OM Evolution	0.37		mgCO ₂ -C/gOM/day	0.01	TMECC 05.08B						
CO ₂ Solids Evolution	0.91		mgCO ₂ -C/gTS/day	0.01	TMECC 05.08B						
Fecal Coliform		< 0.2	mpn/g	0.2	EPA 1681						
Salmonella		< 0.01	mpn/4g	0.01	EPA 1682						
Stability Rating	Stable		N/A	N/A	TMECC 05.08B						
Physical Properties											
Bulk Density (Loose)	1028		lbs/cu yard	1	WT/VOL						
Bulk Density (Packed)	1685		lbs/cu yard	1	WT/VOL						
Film Plastics	n.d.		%	0.25	Microscopic						
Glass Fragments	n.d.		%	0.25	Microscopic						
Hard Plastics	n.d.		%	0.25	Microscopic						
Metal Fragment	n.d.		%	0.25	Microscopic						
Sharps	absent		---	---	Microscopic						
Max. Particle Length		1.5	inches	N/A	TMECC Sieve						
Sieve % Passing 3"		100	%	0.01	TMECC Sieve						
Sieve % Passing 2"		100	%	0.01	TMECC Sieve						
Sieve % Passing 1.5"		100	%	0.01	TMECC Sieve						
Sieve % Passing 1"		100	%	0.01	TMECC Sieve						
Sieve % Passing 3/4"		100	%	0.01	TMECC Sieve						
Sieve % Passing 5/8"		87	%	0.01	TMECC Sieve						
Sieve % Passing 3/8"		74	%	0.01	TMECC Sieve						
Sieve % Passing 1/4"		51	%	0.01	TMECC Sieve						

Compost Results Interpretations

Page 1

Report #:

16-092-4067

DATE RECEIVED:

2016-03-17

Organic Matter %		Greater than 20% indicates a desirable range for compost on a dry weight basis.
25.00	As Received	
73.29	Dry Weight	

Compost is a significant source of Organic Matter, which is an important supplier of carbon. Organic Matter improves soil and plant efficiency by improving soil physical properties, providing a source of energy to beneficial organisms, and enhancing the reservoir of soil nutrients.

C/N Ratio		20-30 indicates an ideal range for the initial compost process. 10-20 indicates an ideal range for a finished compost.
31.8:1		

All organic matter is made up of substantial amounts of carbon with lesser amounts of nitrogen. The balance of these two elements is called the Carbon/Nitrogen Ratio. For the best performance, the compost pile requires the correct proportion of carbon for energy and nitrogen for protein production. If the C:N ratio is too high (excess carbon) decomposition slows down. If the C:N ratio is too low (excess Nitrogen) the compost pile could be difficult to manage.

Moisture %		<35% = Indicates overly dry compost >55% = Indicates overly wet compost
65.89		

Moisture Percent is the measure of water present in the compost and expressed as a percentage of total weight. Moisture present affects handling and transport. Overly dry will be light and dusty while overly wet will be heavy and clumpy. A desirable moisture content of finished compost will range between 40 to 50%.

Compost Results Interpretations

Page 2

Report #:

16-092-4067

DATE RECEIVED:

2016-03-17

Conductivity or Soluble Salts measures the conductance of electrical current in a liquid compost slurry. Excessive soluble salt content in a compost can prevent or delay seed germination and proper root growth. Conductivity analysis is done on a 1:5 basis.

Conductivity 1:5	
4.7	
Conductivity Level	Interpretation
Greater than 10	Very High nutrient content. Use for Ag Applications
5 - 10	High nutrient content. Use for Ag Applications
3 - 5	Higher than desirable for salt sensitive plants, some loss of vigor
0.6 - 3	Desirable range for most plants
0.3 - 0.6	Ideal range for greenhouse growth media
0.0 - 0.3	Very Low: Indicates very low nutrient status: plants may show deficiencies.

Compost Results Interpretations

Page 3

Report #:

16-092-4067

DATE RECEIVED:

2016-03-17

pH Value

9.1

0 to 14 scale with 6 to 8 as normal pH levels for compost

A pH in the 6 to 8 pH range indicates a more mature compost

pH measures the acidity or alkalinity of the compost, and is a measurement of the hydrogen ion activity of a soil or compost on a logarithmic scale. The pH scale ranges from 0 to 14 and 7 indicates a neutral pH. Growing media with a higher pH or pH greater than 7 can benefit from a compost that has a more acidic pH or pH below 7. This type of application will possibly lower the soil pH making the soil more conducive to plants that thrive in a more acidic soil condition.

Nutrient Index (Ag Index)

>10

The Nutrient Index normally runs between 1 and 10.

The Nutrient Index is obtained by dividing the total nutrients (N,P,K) by the amount of salt (Sodium and Chloride). The higher the Nutrient Index the less chance of having a toxic buildup of Sodium (salt) in the soil.

AG INDEX CHART										
<i>salt injury possible</i>	<i>use on soils with excellent drainage characteristics, good water quality and low salts</i>				<i>you may use on soils with poor drainage, poor water quality, or high salts</i>					<i>for all soils</i>
1	2	3	4	5	6	7	8	9	10	> 10

Nutrients (N+P205+K20)

2.70

Average Nutrient Content Dry Weight

<2 = Low, >5 = High

0.5-0.5-0.5

Rating As Received

The most commonly used compost data is the amount of Nitrogen, Phosphate, and Potash (abbreviated as N,P,K) present and the information is similar to that found in common fertilizers. If a compost result has the rating 1-2-2 it means that the compost has 1% Nitrogen, 2% Phosphate and 2% Potash. Most compost tests will have a average nutrient level (N+P+K) of < 5%.

**C AND C PEAT COMPANY
MIKE WOLFE
1650 CR 470
OKAHUMPKA FL 34762**

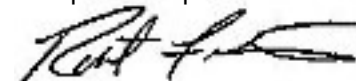
REPORT OF ANALYSIS

For: (28674) C AND C PEAT COMPANY
NUTRIENT ANALYSIS

Analysis	Level Found		Units	Reporting		Analyst-Date	Verified-Date
	As Received	Dry Weight		Limit	Method		
Sample ID: COMPOST	Lab Number: 2506688		Date Sampled: 2016-03-16 1515				
Cadmium (total)	n.d.	n.d.	mg/kg	0.50	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Chromium (total)	2.23	6.54	mg/kg	1.00	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Mercury (total)	n.d.	n.d.	mg/kg	0.05	EPA 7471 *	ccm2-2016/03/22	bab2-2016/03/24
Lead (total)	n.d.	n.d.	mg/kg	5.0	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Molybdenum (total)	n.d.	n.d.	mg/kg	1.0	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Nickel (total)	1.3	3.8	mg/kg	1.0	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Selenium (total)	n.d.	n.d.	mg/kg	10.0	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Zinc (total)	36.7	107.6	mg/kg	2.0	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Copper (total)	19.8	58.0	mg/kg	1	EPA 6010 *	ras7-2016/03/20	bab2-2016/03/24
Arsenic (total)	n.d.	n.d.	mg/kg	0.5	EPA 6020	akj2-2016/03/22	bab2-2016/03/24

n.d. = not detected , ppm = parts per million, ppm = mg/kg

For questions please contact:



Rob Ferris
Account Manager
raf4@midwestlabs.com (402)829-9871

The result(s) issued on this report only reflect the analysis of the sample(s) submitted.

Our reports and letters are for the exclusive and confidential use of our clients and may not be reproduced in whole or in part, nor may any reference be made to the work, the results, or the company in any advertising, news release, or other public announcements without obtaining our prior written authorization.



US COMPOSTING COUNCIL



2506688-688
 Samples: Page: 1 1/1
 Lara L. Mikels
 2016 03 17 12:40

OFFICIAL Seal of Testing Assurance
Compost Sample Chain of Custody Form

STA Laboratory: Midwest Laboratories, Inc. Tel: 402-334-7770
 Address: 13611 B. Street FAX: 402-334-9121
 Email: jking@midwestlabs.com
 City, State Zip code: Omaha, NE 68144

Client/Reporting Company: C&C Peat Company, Inc. Tel: 352-323-8213
 Contact Name: Michael Wolfe FAX: 352-365-0367
 Billing Address: 1650 County Road 470 Email: m.wolfe@ccpeat.com
 City, State Zip code: Okahumpka, FL 34762

Send Results to:
 City, State Zip code:

Name or Source of Sample(s): Monthly Compost Sample
 Name of Person(s), Sample Collector(s): Michael Wolfe

LABORATORY USE ONLY Storage Locations
 Freezer _____ Cold Room _____ Storage Shelf _____

Sample Condition: _____
 Temperature: _____ Malodor: _____ Moisture: _____

Sample Type: POINT COMPOSITE STRATIFIED INTERVAL
 P.O. Number: _____

USCC Member: YES NO

SELECTION OF ANALYSIS. Refer to <http://www.tnccc.org/cap/methods.html> for details.
 STA Suite, State DOT Tests (Indicate State); A, B, C - Specify other tests in fields A through C, (e.g., tests required for regulated samples, etc.). NOTE! STA analytical results via the STA Compost Technical Data Sheet and this Chain of Custody form are submitted to STA program management.

A _____ B _____ C _____

Client Sample ID and Special Instructions	1. List Feedstocks 2. Check all that apply 3. List % by volume. (Optional)		Collection Date/Time	Sample Matrix	Composting Operation Type	Shipping Temperature	Indicate Compost Analysis Requirements (*Identify state)			LAB USE ONLY Job Number & Sample Status	
	Green waste	Carcass					STA Suite	State DOT	Identify State		A
Compost	<input checked="" type="checkbox"/> Manure	<input type="checkbox"/> Fish Waste	Date: 3/16/16 Time: 3:15 PM Initials: MMW	Compost <input checked="" type="radio"/> Feedstock <input type="radio"/> Mulch <input type="radio"/>	Windrow <input checked="" type="radio"/> Static pile <input type="radio"/> In-Vessel <input type="radio"/>	Ambient <input type="radio"/> Wet Ice <input checked="" type="radio"/> Dry Ice <input type="radio"/>	STA Suite	State DOT	Identify State	A B C	2506688

INFORM THE STA LABORATORY AND SPECIFY THE REQUIRED LABORATORY TESTS WHEN SUBMITTING REGULATED COMPOST SAMPLES (please use spaces A, B and C provided above).

PLEASE PROVIDE SPECIFIC FEEDSTOCK AND OPERATIONAL DETAIL IN THE SPACE PROVIDED.
 YOUR VOLUNTEERED INFORMATION PROVIDES USCC STANDARDS AND PRACTICES COMMITTEE WITH CRUTIAL DATA NEEDED TO BETTER UNDERSTAND THE COMPOSTING PROCESS AND COMPOST END USES.

Releasing Signature 1	Date 3/16/16	Time 3:30 PM	Receiving Signature 1	Date 3/17/16	Time 12:30
Releasing Signature 2	Date	Time	Receiving Signature 2	Date	Time
Releasing Signature 3	Date	Time	Receiving Signature 3	Date	Time
Releasing Signature 4	Date	Time	Receiving Signature 4	Date	Time

12.05