

Report Number  
F17307-6002  
Account Number  
61518



a&lgreatlakes  
LABORATORIES  
Scientists who don't mind getting dirty.™

3505 Conestoga Dr.  
Fort Wayne, IN 46808  
260.483.4759  
algreatlakes.com

To: MORGAN COMPOSTING  
4353 US HIGHWAY 10  
SEARS, MI 49679-8706

Attn: JOEL CLIFTON

Lab Number: 95603  
Sample ID: LAYER ASH BLEND  
Manure Type: POULTRY, SOLID W/O LITTER (10)

Date Sampled: 10/30/2017  
Date Received: 11/3/2017  
Date Reported: 11/15/2017 Page: 1 of 2

## MANURE ANALYSIS

| Analysis                     | Unit | Analysis Result<br>(As Received) | Pounds Per<br>Ton                        | First Year Availability <sup>®</sup><br>Pounds Per Ton |
|------------------------------|------|----------------------------------|--|--|
| Moisture                     | %    | 37.14                            | 743                                      |  |
| Solids                       | %    | 62.86                            | 1257                                     |  |
| Ash @ 550 C                  | %    | 39.07                            | 781.5                                    |  |
| Organic Matter (LOI @ 550 C) | %    | 23.79                            | 475.7                                    |  |
| Organic Carbon (LOI @ 550 C) | %    | 13.80                            | 276.0                                    |  |
| Carbon:Nitrogen Ratio (C:N)  | -    | 7.8:1                            |  |  |
| Nitrogen, Total (TKN)        | %    | 1.767                            | 35.3                                     | 24.6 *   |
| Phosphorus (P)               | %    | 0.886                            | 40.6 (as P <sub>2</sub> O <sub>5</sub> ) | 40.6 * (as P <sub>2</sub> O <sub>5</sub> )             |
| Potassium (K)                | %    | 1.757                            | 42.2 (as K <sub>2</sub> O)               | 42.2 * (as K <sub>2</sub> O)                           |
| Sulfur (S)                   | %    | 0.55                             | 11.0                                     | 6.1 #  |
| Magnesium (Mg)               | %    | 0.65                             | 13.0                                     | 7.2 #  |
| Calcium (Ca)                 | %    | 8.36                             | 167.2                                    | 92.0 #   |

<sup>®</sup> Estimate of first-year availability does not account for incorporation losses. Consult MWPS-18, "Livestock Waste Facilities Handbook" for additional information.

\* Source: MWPS-18, Livestock Waste Facilities Handbook, 1993 # Source: A3411, "Manure Nutrient Credit Worksheet", University of Wisconsin

Report Approved By:

Approval Date: 11/15/2017

David Henry - Agronomist / Technical Services - CCA

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|------------------------|------|----------------------------------|-------------------|--|
| Sodium (Na)            | %    | 0.22                             | 4.4               |  |
| Aluminum (Al)          | ppm  | 1359                             | 2.7               |  |
| Copper (Cu)            | ppm  | 61                               | 0.1               | 0.1 #  |
| Iron (Fe)              | ppm  | 3659                             | 7.3               | 4.8 #  |
| Manganese (Mn)         | ppm  | 724                              | 1.4               | 0.9 #  |
| Zinc (Zn)              | ppm  | 337                              | 0.7               | 0.4 #  |
| Silicon - acid soluble | ppm  | 424                              | 0.8               |  |

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