

## Report Transmission Cover Page

|                                                                                    |                                                                    |                                                                                                                                                               |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bill To: The Black Dirt Company<br>Box 3130<br>Spruce Grove, AB, Canada<br>T7X 3A5 | Project ID:<br>Project Name:<br>Project Location:<br>LSD:<br>P.O.: | Lot ID: <b>1724057</b><br>Control Number:<br>Date Received: Apr 9, 2024<br>Date Reported: Apr 23, 2024<br>Report Number: 2995706<br>Report Type: Final Report |
| Attn: Accounts Payable                                                             | Proj. Acct. code:                                                  |                                                                                                                                                               |
| Sampled By:<br>Company:                                                            |                                                                    |                                                                                                                                                               |

| Contact          | Company                | Address                                                                                                               |
|------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Accounts Payable | The Black Dirt Company | Box 3130<br>Spruce Grove, AB T7X 3A5<br>Phone: (780) 962-8220 Fax: (780) 962-8215<br>Email: info@blackdirtcompany.com |

| Delivery      | Format | Deliverables  |
|---------------|--------|---------------|
| Email - Merge | PDF    | COC / Invoice |

|                |                        |                                                                                          |
|----------------|------------------------|------------------------------------------------------------------------------------------|
| Jaclyn McGowan | The Black Dirt Company | Edmonton, AB<br>Phone: (000) 000-0000 Fax:<br>Email: jaclyn.mcgowan@blackdirtcompany.com |
|----------------|------------------------|------------------------------------------------------------------------------------------|

| Delivery      | Format                      | Deliverables      |
|---------------|-----------------------------|-------------------|
| Email         | PDF                         | COC / Test Report |
| Email         | Standard Crosstab With Tabs | Test Report       |
| Email - Merge | PDF                         | COA               |

|               |                        |                                                                                             |
|---------------|------------------------|---------------------------------------------------------------------------------------------|
| Ryan Townsend | The Black Dirt Company | Spruce Grove, AB<br>Phone: (780) 962-8220 Fax:<br>Email: ryan.townsend@blackdirtcompany.com |
|---------------|------------------------|---------------------------------------------------------------------------------------------|

| Delivery | Format                      | Deliverables      |
|----------|-----------------------------|-------------------|
| Email    | PDF                         | COC / Test Report |
| Email    | Standard Crosstab With Tabs | Test Report       |

### Notes To Clients:

- Apr 11, 2024 - weed seed analysis was performed by a subcontract laboratory. See attached 1 page reports 1184382-01, 1184383-01, 1184384-01, & 1184385-01
- Apr 22, 2024 - Sample 1724057-5; 9270485: Caution - Note for Clubroot analysis on identified samples: Although results are below the method detection limits (1000 spores/g), DNA amplification was measured, suggesting low concentrations of pathogen spores may be present. Caution should be taken.

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## Analytical Report

|                                                                                                                                         |                                                                                         |                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bill To: The Black Dirt Company<br>Box 3130<br>Spruce Grove, AB, Canada<br>T7X 3A5<br>Attn: Accounts Payable<br>Sampled By:<br>Company: | Project ID:<br>Project Name:<br>Project Location:<br>LSD:<br>P.O.:<br>Proj. Acct. code: | Lot ID: <b>1724057</b><br>Control Number:<br>Date Received: Apr 9, 2024<br>Date Reported: Apr 23, 2024<br>Report Number: 2995706<br>Report Type: Final Report |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                           |                       |
|---------------------------|-----------------------|
| <b>Reference Number</b>   | 1724057-5             |
| <b>Sample Date</b>        | Apr 09, 2024          |
| <b>Sample Time</b>        | NA                    |
| <b>Sample Location</b>    |                       |
| <b>Sample Description</b> | RR265 / GARDEN<br>MIX |
| <b>Matrix</b>             | Soil                  |


| Analyte                                  | Units                   | Results     | Results | Results | Nominal Detection Limit |
|------------------------------------------|-------------------------|-------------|---------|---------|-------------------------|
| <b>Classification</b>                    |                         |             |         |         |                         |
| Organic Matter                           | Calculated Value        | %           | 8.45    |         | 0.04                    |
| Carbon                                   | Total Organic           | %           | 4.23    |         | 0.04                    |
| <b>Metals Strong Acid Digestion</b>      |                         |             |         |         |                         |
| Antimony                                 | Strong Acid Extractable | mg/kg       | 0.2     |         | 0.2                     |
| Arsenic                                  | Strong Acid Extractable | mg/kg       | 5.7     |         | 0.2                     |
| Barium                                   | Strong Acid Extractable | mg/kg       | 134     |         | 1                       |
| Beryllium                                | Strong Acid Extractable | mg/kg       | 0.3     |         | 0.1                     |
| Cadmium                                  | Strong Acid Extractable | mg/kg       | 0.19    |         | 0.01                    |
| Chromium                                 | Strong Acid Extractable | mg/kg       | 8.6     |         | 0.5                     |
| Cobalt                                   | Strong Acid Extractable | mg/kg       | 6.6     |         | 0.1                     |
| Copper                                   | Strong Acid Extractable | mg/kg       | 12      |         | 1                       |
| Lead                                     | Strong Acid Extractable | mg/kg       | 7.3     |         | 0.1                     |
| Mercury                                  | Strong Acid Extractable | mg/kg       | <0.05   |         | 0.05                    |
| Molybdenum                               | Strong Acid Extractable | mg/kg       | <1.0    |         | 1.0                     |
| Nickel                                   | Strong Acid Extractable | mg/kg       | 15.0    |         | 0.5                     |
| Selenium                                 | Strong Acid Extractable | mg/kg       | 0.4     |         | 0.3                     |
| Silver                                   | Strong Acid Extractable | mg/kg       | <0.1    |         | 0.1                     |
| Thallium                                 | Strong Acid Extractable | mg/kg       | 0.11    |         | 0.05                    |
| Tin                                      | Strong Acid Extractable | mg/kg       | <1.0    |         | 1.0                     |
| Uranium                                  | Strong Acid Extractable | mg/kg       | 1.0     |         | 0.5                     |
| Vanadium                                 | Strong Acid Extractable | mg/kg       | 14.7    |         | 0.1                     |
| Zinc                                     | Strong Acid Extractable | mg/kg       | 60      |         | 1                       |
| <b>Physical and Aggregate Properties</b> |                         |             |         |         |                         |
| Texture                                  |                         |             | Loam    |         |                         |
| Sand                                     | 50 µm - 2 mm            | % by weight | 43      |         | 0.1                     |
| Silt                                     | 2 µm - 50 µm            | % by weight | 41      |         | 0.1                     |
| Clay                                     | <2 µm                   | % by weight | 16      |         | 0.1                     |
| <b>Salinity</b>                          |                         |             |         |         |                         |
| Electrical Conductivity                  | Saturated Paste         | dS/m        | 3.81    |         | 0.01                    |
| SAR                                      | Saturated Paste         |             | 1.2     |         |                         |
| % Saturation                             |                         | %           | 70      |         |                         |
| Calcium                                  | Saturated Paste         | mg/kg       | 371     |         |                         |
| Magnesium                                | Saturated Paste         | mg/kg       | 66      |         |                         |
| Sodium                                   | Saturated Paste         | mg/kg       | 81      |         |                         |
| Potassium                                | Saturated Paste         | mg/kg       | 120     |         |                         |
| Chloride                                 | Saturated Paste         | mg/L        | 367     |         | 3                       |
| Chloride                                 | Saturated Paste         | mg/kg       | 258     |         |                         |
| Sulfate (SO4)                            | Saturated Paste         | mg/kg       | 682     |         |                         |

## Analytical Report

|                                                                                    |                                                                    |                                                                                                                                                               |
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| Attn: Accounts Payable                                                             | Proj. Acct. code:                                                  |                                                                                                                                                               |
| Sampled By:<br>Company:                                                            |                                                                    |                                                                                                                                                               |

|                           |                       |
|---------------------------|-----------------------|
| <b>Reference Number</b>   | 1724057-5             |
| <b>Sample Date</b>        | Apr 09, 2024          |
| <b>Sample Time</b>        | NA                    |
| <b>Sample Location</b>    |                       |
| <b>Sample Description</b> | RR265 / GARDEN<br>MIX |
| <b>Matrix</b>             | Soil                  |

| Analyte                         |                        | Units         | Results            | Results | Results | Nominal Detection Limit |
|---------------------------------|------------------------|---------------|--------------------|---------|---------|-------------------------|
| <b>Salinity - Continued</b>     |                        |               |                    |         |         |                         |
| Boron                           | Saturated Paste        | mg/L          | <0.5               |         |         | 0.05                    |
| TGR                             | Saturated Paste        | T/ac          | <0.1               |         |         |                         |
| <b>Soil Acidity</b>             |                        |               |                    |         |         |                         |
| pH                              | 1:2 Soil:Water         | pH            | 7.6                |         |         |                         |
| pH                              | 1:2 Soil:CaCl2 sol.    | pH            | 7.4                |         |         |                         |
| Electrical Conductivity         | 1:2 Soil:Water         | dS/m at 25 °C | 1.20               |         |         | 0.01                    |
| CCE                             | as CaCO3               | %             | 1.93               |         |         | 0.2                     |
| <b>Water Soluble Parameters</b> |                        |               |                    |         |         |                         |
| Chromium (VI)                   | Dry Weight             | mg/kg         | <0.05              |         |         | 0.05                    |
| <b>Clubroot Analysis</b>        |                        |               |                    |         |         |                         |
| Plasmodiophora brassicae        | Clubroot Pathogen      | spores/g      | <1000              |         |         | 1000                    |
| Plasmodiophora brassicae        | Detected/ Not Detected | spores/g      | Caution - See Note |         |         | 1000                    |
| <b>Subcontracted Analysis</b>   |                        |               |                    |         |         |                         |
| Subcontractor Report Id         | Biovision              |               | 1184385-01         |         |         |                         |

Approved by:   
Mike Yohemas, BSc  
General Manager

Data have been validated by Analytical Quality Control and Element's Integrated Data Validation System (IDVS).

Generation and distribution of the report, and approval by the digitized signature above, are performed through a secure and controlled automatic process.

## Methodology and Notes

|                                                                                    |                                                                    |                             |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------|-----------------------------|
| Bill To: The Black Dirt Company<br>Box 3130<br>Spruce Grove, AB, Canada<br>T7X 3A5 | Project ID:<br>Project Name:<br>Project Location:<br>LSD:<br>P.O.: | Lot ID: <b>1724057</b>      |
| Attn: Accounts Payable                                                             | Proj. Acct. code:                                                  | Control Number:             |
| Sampled By:                                                                        |                                                                    | Date Received: Apr 9, 2024  |
| Company:                                                                           |                                                                    | Date Reported: Apr 23, 2024 |
|                                                                                    |                                                                    | Report Number: 2995706      |
|                                                                                    |                                                                    | Report Type: Final Report   |

## Method of Analysis

| Method Name                                             | Reference                 | Method                                                                                                                      | Date Analysis Started | Location                      |
|---------------------------------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------|
| 1:5 Water Soluble Extraction                            | APHA                      | * Colorimetric Method, 3500-Cr B                                                                                            | Apr 9, 2024           | Element Edmonton - Roper Road |
| 1:5 Water Soluble Extraction                            | McKeague                  | * Soluble Salts in Extracts of 1:5 Soil:Water Mixtures, 3.23                                                                | Apr 9, 2024           | Element Edmonton - Roper Road |
| Calcium Carbonate in Soil (Dual pH)                     | Comm. Soil Sci. Pl. Anal. | * Improvement to Two Routine Methods for CaCO <sub>3</sub> in Soil, Vol 28, 1997                                            | Apr 10, 2024          | Element Edmonton - Roper Road |
| Clubroot                                                | Plant Path                | * Wallenhammer et al 2012. In-Field distribution of Plasmodiophora brassicae measured using real-time PCR., Plant Pathology | Apr 22, 2024          | Element Calgary               |
| Metals ICP (Hot Block) in soil                          | EPA                       | * Sample Preparation Procedure for Spectrochemical Determination of Total Recoverable Elements, October 1999, 200.2         | Apr 10, 2024          | Element Edmonton - Roper Road |
| Metals ICP (Hot Block) in soil                          | US EPA                    | * Determination of Trace Elements in Waters and Wastes by ICP-MS, 200.8                                                     | Apr 10, 2024          | Element Edmonton - Roper Road |
| Particle Size Analysis - GS                             | Carter                    | * Hydrometer Method, 55.3                                                                                                   | Apr 9, 2024           | Element Edmonton - Roper Road |
| pH and Conductivity in general soil 1:2                 | McKeague                  | * 1:2 Soil:Water Ratio, 4.12                                                                                                | Apr 9, 2024           | Element Edmonton - Roper Road |
| pH and Conductivity in general soil 1:2                 | Soil & Environ. Anal.     | * Particle Size Analysis, Direct Method, Chapter 7                                                                          | Apr 9, 2024           | Element Edmonton - Roper Road |
| pH by CaCl <sub>2</sub> (1:2 ratio) in soil             | McKeague                  | * pH in 0.01M Calcium Chloride, 3.11                                                                                        | Apr 9, 2024           | Element Edmonton - Roper Road |
| Saturated Paste in General Soil                         | APHA                      | * Automated Ferricyanide Method, 4500-Cl-E                                                                                  | Apr 9, 2024           | Element Edmonton - Roper Road |
| Saturated Paste in General Soil                         | Carter                    | * Electrical Conductivity and Soluble Ions, Chapter 15                                                                      | Apr 9, 2024           | Element Edmonton - Roper Road |
| Sublet to Biovision                                     | Ext. Lab                  | See attached test report,                                                                                                   | Apr 10, 2024          | SGS Biovision                 |
| Total Carbon, Nitrogen in Soil by Leco Combustion (VAN) | SSSA Book Series 5        | * Total Carbon, Organic Carbon, and Organic Matter, Ch 34                                                                   | Apr 17, 2024          | Element Vancouver             |

\* Reference Method Modified

## References

|                       |                                                              |
|-----------------------|--------------------------------------------------------------|
| APHA                  | Standard Methods for the Examination of Water and Wastewater |
| Carter                | Soil Sampling and Methods of Analysis.                       |
| Comm. Soil Sci. Pl.   | Communications in Soil Science and Plant Analysis            |
| EPA                   | Environmental Protection Agency Test Methods - US            |
| Ext. Lab              | External Laboratory                                          |
| McKeague              | Manual on Soil Sampling and Methods of Analysis              |
| Plant Path            | Plant Pathology                                              |
| Soil & Environ. Anal. | Soil and Environmental Analysis: Physical Methods            |
| SSSA Book Series 5    | Methods of Soil Analysis, Part 3                             |
| US EPA                | US Environmental Protection Agency Test Methods              |

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**Methodology and Notes**

|                                 |                   |                             |
|---------------------------------|-------------------|-----------------------------|
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| Box 3130                        | Project Name:     | Control Number:             |
| Spruce Grove, AB, Canada        | Project Location: | Date Received: Apr 9, 2024  |
| T7X 3A5                         | LSD:              | Date Reported: Apr 23, 2024 |
| Attn: Accounts Payable          | P.O.:             | Report Number: 2995706      |
| Sampled By:                     | Proj. Acct. code: | Report Type: Final Report   |
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**Comments:**

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- Apr 22, 2024 - Sample 1724057-5; 9270485: Caution - Note for Clubroot analysis on identified samples: Although results are below the method detection limits (1000 spores/g), DNA amplification was measured, suggesting low concentrations of pathogen spores may be present. Caution should be taken.

Please direct any inquiries regarding this report to our Client Services group.

Results relate only to samples as submitted.

The test report shall not be reproduced except in full, without the written approval of the laboratory.

**Submitted By:**  
 Element (Edm)  
 7217 Roper Road NW  
 Edmonton, AB CA T6B 3J4  
 P 780.438.5522

**Tested By:** SGS Canada Inc.  
 Unit 310, 280 Portage Close  
 Sherwood Park, Alberta T8H 2R6  
 P 1 (780) 436-8822  
 \*\* CFIA Acc #1172

Professional Member



**Sample of:** Soil  
**Designated:** POC148494  
**Sample ID:** 1724057-5, 265 Garder Mix

## REPORT OF ANALYSIS

|                                  |                      |      |        |            |
|----------------------------------|----------------------|------|--------|------------|
| <b>*Soil Seed Analysis - 50g</b> | Completed: 4/11/2024 | Soil | Method | <b>OTH</b> |
|----------------------------------|----------------------|------|--------|------------|

- Lamb's-quarters 13
- Goosefoot 3
- Stinkweed 2
- Wild Buckwheat 1
- Canola 1
- Canada Thistle 1
- Kochia 2
- Stinkweed 2
- Rubus spp. 1

1. Method(s) used for promoting germination of dormant seed

\*Advisory test -- Method not CFIA M&P prescribed

\*\*Accredited by CFIA to conduct tests in accordance with the laboratory's scope of accreditation and the Canadian Methods and Procedures for Testing Seed

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