

# The Maryland Natural Dyes Initiative

## Requests for Proposal (RFP) – Responses to Bidders Questions

### Questions submitted by RFP Bidders:

**1a.) How much indigo seeds are being supplied?**

**Answer:** For the Indigo seed, 2.2 pounds (covering for 1.5 acres) of seed will be supplied.

**1b.) Where are the indigo seeds being sourced from?**

**Answer:** The Indigo seeds (both Korean Indigo and Tropical Indigo) are being sourced from the Naju Natural Dyeing Museum (located in Naju, South Korea).

**1c.) What is the germination rate of the indigo seed (is it tested)?**

**Answer:** The germination rate for the Indigo seed will be on the seed container. More specifically, the germination rate for the Korean Indigo seed is 98.0% (in 68°F), under optimum temperatures above 50°F and warm, moist soil conditions.

**1d.) What is the indigo application rate in seedlings per acre?**

**Answer:** The application rate for the Indigo seed is 7,500 – 15,000 seedlings, per ¼ - ½ acre.

**2.) Is there a water source accessible at 731 Ashburton, or does the site rely on natural or trucked-in water?**

**Answer:** At the Ashburton site, water will be the farmers responsibility to coordinate appropriate scheduling of water delivery from an off-site source. The expenses for the irrigation system and equipment (including water) can be covered by the Maryland Natural Dyes Initiative, as indicated in the RFP's Pre-Production Budget. Note: it is the farmers responsibility to submit appropriate documentation (such as purchase receipts or vendor invoices) for the disbursement of funds to cover expenses and to properly maintain the irrigation equipment.

**3.) Has a soil test been performed for 731 Ashburton, and are those results available?**

**Answer:** A soil test for the Ashburton site has been completed and the results are available to RFP Bidders. Please see the attached Soil Analysis Report (*Attachment 1*) and Environmental Sample Analysis Report (*Attachment 2*).

- 4.) **What is the expected application rate for the Marigolds and Black-Eyed Susan's in seedlings per acre?**

**Answer:** For the Marigolds, the expected application rate is 25% of one (1) acre (*Tentative*). For the Black-Eyed Susan's, the expected application rate is 12.5% of one (1) acre (*Tentative*). Also, refer to the seed-packet of the specific varieties you source, but in general Marigolds and Black-Eyed Susan transplants should be planted 1 to 2 transplants per square foot.

- 5.) **There are many cultivars of both Rudbeckia and Marigolds, does the project call for common varieties, or trials of multiple varieties?**

**Answer:** Since there are many cultivars of Black-Eyed Susan's (*Rudbeckia*) and Marigolds, the Initiative does not restrict the farmer to use a certain cultivar or variety. The Initiative would like to encourage the farmer to incorporate trials of multiple varieties that the farmer seems fit to expand the success of the project.

- 6.) **If there is room in the Pre-production budget to include outsourcing the growing of starts to a place like Sharps is that allowed/ possible?**

**Answer:** The Initiative does not allow the Pre-Production Budget to include outsourcing the growing of starts at locations other than the farmer's growing site, with one exception: if there is excess greenhouse or high tunnel space at an existing regional farm site that the grower could lease and manage, that might be an acceptable approach. Being a pilot project, the goal is to work with producers to get feedback on the processes through each stage of growing.

- 7.) **Should the possibility of a "temporary greenhouse" and/or "temporary drying shed" be allocated in the pre-production budget or is there the possibility of additional funds later if the project should call for these structures?**

**Answer:** The Pre-Production Budget does not allocate funds for a temporary greenhouse or a temporary drying shed. Constructing a high tunnel or greenhouse on the site is not allowed because an increase in impervious surfaces is not allowed at the Ashburn site.

**Additional comment:**

In addition to the species named in the RFP, the Initiative will allow the farmer to choose up to 10% of the project's plants, by land area, (that are known to produce dye) in consultation with the MARBIDCO review committee.



Account No. : 276

**Soil Analysis Report**

Invoice No. : 1108277  
 Date Received : 10/03/2018  
 Date Reported : 10/04/2018

**OVER THE COUNTER CUSTOMERS**

Lab Number : 482

Results For : MD COMMERCE  
 Location : INDIGO  
 Sample ID : 1

Extraction Method: Mehlich 3

**Sufficiency Levels**

| Analysis                                      | Value    | Deficient   | Low | Sufficient | High |
|---|----------|---|-----|------------|------|
| pH  | 7.7      | [Bar chart showing pH level in the Sufficient range]              |     |            |      |
| Buffer pH                                     | 7.0      | [Bar chart showing Buffer pH level in the Sufficient range]       |     |            |      |
| Soluble Salts 1:2, EC mmho/cm                 | 0.24     | [Bar chart showing Soluble Salts level in the Sufficient range]   |     |            |      |
| Nitrate-N, ppm N                              | 6.4      | [Bar chart showing Nitrate-N level in the Deficient range]        |     |            |      |
| Nitrate-N, Lbs N/A                            | 15.00    | [Bar chart showing Nitrate-N level in the Sufficient range]       |     |            |      |
| Depth   | 0 - 8 in | [Bar chart showing Depth level in the Sufficient range]           |     |            |      |
| Ammonium-N ppm                                | 7.7      | [Bar chart showing Ammonium-N level in the Sufficient range]      |     |            |      |
| Phosphorus, ppm P                             | 11       | [Bar chart showing Phosphorus level in the Deficient range]       |     |            |      |
| P Saturation                                  | 9        | [Bar chart showing P Saturation level in the Low range]           |     |            |      |
| Potassium, ppm K                              | 112      | [Bar chart showing Potassium level in the Sufficient range]       |     |            |      |
| Calcium, ppm Ca                               | 2400     | [Bar chart showing Calcium level in the Sufficient range]         |     |            |      |
| Magnesium, ppm Mg                             | 129      | [Bar chart showing Magnesium level in the Sufficient range]       |     |            |      |
| Sulfur, ppm S                                 | 22       | [Bar chart showing Sulfur level in the Sufficient range]          |     |            |      |
| Boron, ppm B                                  | 0.79     | [Bar chart showing Boron level in the Sufficient range]           |     |            |      |
| Zinc, ppm Zn                                  | 6.70     | [Bar chart showing Zinc level in the Sufficient range]            |     |            |      |
| Manganese, ppm Mn <small>pH sensitive</small> | 45.1     | [Bar chart showing Manganese level in the Sufficient range]       |     |            |      |
| Copper, ppm Cu                                | 2.46     | [Bar chart showing Copper level in the Sufficient range]          |     |            |      |
| Sodium, ppm Na                                | 12       | [Bar chart showing Sodium level in the Sufficient range]          |     |            |      |
| CEC Sum of Cations, me/100g                   | 13.6     | [Bar chart showing CEC level in the Sufficient range]             |     |            |      |
| H % Saturation                                | 1        | [Bar chart showing H % Saturation level in the Deficient range]   |     |            |      |
| K % Saturation                                | 2        | [Bar chart showing K % Saturation level in the Deficient range]   |     |            |      |
| Ca % Saturation                               | 88       | [Bar chart showing Ca % Saturation level in the Sufficient range] |     |            |      |
| Mg % Saturation                               | 8        | [Bar chart showing Mg % Saturation level in the Low range]        |     |            |      |
| Na % Saturation                               | 0        | [Bar chart showing Na % Saturation level in the Deficient range]  |     |            |      |
| Organic Matter, %                             | 4.1      | [Bar chart showing Organic Matter level in the Sufficient range]  |     |            |      |
| Aluminum, ppm Al                              | 425.0    | [Bar chart showing Aluminum level in the Sufficient range]        |     |            |      |
| Iron, ppm Fe                                  | 143.0    | [Bar chart showing Iron level in the Sufficient range]            |     |            |      |

**Recommendations**

In Actual Pounds of Plant Nutrients per Acre

|                                 |      |     |   |    |    |    |    |     |     |                     |
|---------------------------------|------|-----|---|----|----|----|----|-----|-----|---------------------|
| Crop : (AgroLab) Cool Grass T/A |      |     |   |    |    |    |    |     |     | Nitrogen Credit : 0 |
| Sub-Soils :                     |      |     |   |    |    |    |    |     |     | Yield Goal : 3      |
| N                               | P2O5 | K2O | S | Zn | Mg | Fe | Mn | Cu  | B   | Ag-Lime Tons/Acre   |
| 110                             | 40   | 40  | 0 | 0  | 0  | 0  | 0  | 0.0 | 0.0 | 0.00                |

Reviewed By : W.R. Rohrer - AgroLab, Inc.

10/5/2018

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Account No. : 276

**Soil Analysis Report**

Invoice No. : 1108277  
 Date Received : 10/03/2018  
 Date Reported : 10/04/2018

**OVER THE COUNTER CUSTOMERS**

Lab Number : 483

Results For : MD COMMERCE  
 Location : INDIGO  
 Sample ID : 2

Extraction Method: Mehlich 3

**Sufficiency Levels**

| Analysis                                      | Value    | Deficient                                   | Low | Sufficient | High |
|---|----------|---|-----|------------|------|
| pH  | 7.7      | [Bar chart showing pH level]                |     |            |      |
| Buffer pH                                     | 7.0      | [Bar chart showing Buffer pH level]         |     |            |      |
| Soluble Salts 1:2, EC mmho/cm                 | 0.26     | [Bar chart showing Soluble Salts level]     |     |            |      |
| Nitrate-N, ppm N                              | 15.6     | [Bar chart showing Nitrate-N level]         |     |            |      |
| Nitrate-N, Lbs N/A                            | 37.00    | [Bar chart showing Nitrate-N Lbs N/A level] |     |            |      |
| Depth   | 0 - 8 in | [Bar chart showing Depth level]             |     |            |      |
| Ammonium-N ppm                                | 9.0      | [Bar chart showing Ammonium-N level]        |     |            |      |
| Phosphorus, ppm P                             | 20       | [Bar chart showing Phosphorus level]        |     |            |      |
| P Saturation                                  | 13       | [Bar chart showing P Saturation level]      |     |            |      |
| Potassium, ppm K                              | 161      | [Bar chart showing Potassium level]         |     |            |      |
| Calcium, ppm Ca                               | 2500     | [Bar chart showing Calcium level]           |     |            |      |
| Magnesium, ppm Mg                             | 198      | [Bar chart showing Magnesium level]         |     |            |      |
| Sulfur, ppm S                                 | 21       | [Bar chart showing Sulfur level]            |     |            |      |
| Boron, ppm B                                  | 0.76     | [Bar chart showing Boron level]             |     |            |      |
| Zinc, ppm Zn                                  | 8.73     | [Bar chart showing Zinc level]              |     |            |      |
| Manganese, ppm Mn <small>pH sensitive</small> | 50.5     | [Bar chart showing Manganese level]         |     |            |      |
| Copper, ppm Cu                                | 4.07     | [Bar chart showing Copper level]            |     |            |      |
| Sodium, ppm Na                                | 13       | [Bar chart showing Sodium level]            |     |            |      |
| CEC Sum of Cations, me/100g                   | 14.9     | [Bar chart showing CEC level]               |     |            |      |
| H % Saturation                                | 2        | [Bar chart showing H % Saturation level]    |     |            |      |
| K % Saturation                                | 3        | [Bar chart showing K % Saturation level]    |     |            |      |
| Ca % Saturation                               | 84       | [Bar chart showing Ca % Saturation level]   |     |            |      |
| Mg % Saturation                               | 11       | [Bar chart showing Mg % Saturation level]   |     |            |      |
| Na % Saturation                               | 0        | [Bar chart showing Na % Saturation level]   |     |            |      |
| Organic Matter, %                             | 4.0      | [Bar chart showing Organic Matter level]    |     |            |      |
| Aluminum, ppm Al                              | 417.0    | [Bar chart showing Aluminum level]          |     |            |      |
| Iron, ppm Fe                                  | 133.0    | [Bar chart showing Iron level]              |     |            |      |

**Recommendations**

In Actual Pounds of Plant Nutrients per Acre

|                                 |      |     |   |    |    |    |    |     |     |                     |
|---------------------------------|------|-----|---|----|----|----|----|-----|-----|---------------------|
| Crop : (AgroLab) Cool Grass T/A |      |     |   |    |    |    |    |     |     | Nitrogen Credit : 0 |
| Sub-Soils :                     |      |     |   |    |    |    |    |     |     | Yield Goal : 3      |
| N                               | P2O5 | K2O | S | Zn | Mg | Fe | Mn | Cu  | B   | Ag-Lime Tons/Acre   |
| 90                              | 25   | 20  | 0 | 0  | 0  | 0  | 0  | 0.0 | 0.0 | 0.00                |

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Account No. : 276

## Environmental Sample Analysis Report

**OVER THE COUNTER CUSTOMERS**

Invoice No. : 1108261  
Date Received : 10/03/2018  
Date Reported : 10/04/2018

Lab No. : 1108

Results For : MD COMMERCE

Sample ID : INDIGO

Description : 1

|                      | Analysis<br>Dry Basis | EPA Method<br>Number | Detection<br>Limit |
|----------------------|-----------------------|----------------------|--------------------|
| Arsenic As, mg/kg    | 6.35                  | 3051A/6010C          | 0.01               |
| Cadmium Cd, mg/kg    | 0.24                  | 3051A/6010C          | 0.01               |
| Chromium Cr, mg/kg   | 27.78                 | 3051A/6010C          | 0.01               |
| Copper Cu, mg/kg     | 17.01                 | 3051A/6010C          | 0.01               |
| Molybdenum Mo, mg/kg | 0.65                  | 3051A/6010C          | 0.01               |
| Nickel Ni, mg/kg     | 11.14                 | 3051A/6010C          | 0.01               |
| Lead Pb, mg/kg       | 36.92                 | 3051A/6010C          | 0.01               |
| Selenium Se, mg/kg   | < 0.01                | 3051A/6010C          | 0.01               |
| Zinc Zn, mg/kg       | 45.39                 | 3051A/6010C          | 0.01               |
| Mercury Hg, mg/kg    | 0.047                 | 7471A                | 0.01               |

"<" - Not Detected / Below Detection Limit



Account No. : 276

## Environmental Sample Analysis Report

OVER THE COUNTER CUSTOMERS

Invoice No. : 1108261  
Date Received : 10/03/2018  
Date Reported : 10/04/2018

Lab No. : 1109

Results For : MD COMMERCE

Sample ID : INDIGO

Description : 2

|                      | Analysis<br>Dry Basis | EPA Method<br>Number | Detection<br>Limit |
|----------------------|-----------------------|----------------------|--------------------|
| Arsenic As, mg/kg    | 0.36                  | 3051A/6010C          | 0.01               |
| Cadmium Cd, mg/kg    | 0.45                  | 3051A/6010C          | 0.01               |
| Chromium Cr, mg/kg   | 47.40                 | 3051A/6010C          | 0.01               |
| Copper Cu, mg/kg     | 30.50                 | 3051A/6010C          | 0.01               |
| Molybdenum Mo, mg/kg | 0.16                  | 3051A/6010C          | 0.01               |
| Nickel Ni, mg/kg     | 29.10                 | 3051A/6010C          | 0.01               |
| Lead Pb, mg/kg       | 83.04                 | 3051A/6010C          | 0.01               |
| Selenium Se, mg/kg   | < 0.01                | 3051A/6010C          | 0.01               |
| Zinc Zn, mg/kg       | 116.56                | 3051A/6010C          | 0.01               |
| Mercury Hg, mg/kg    | 0.118                 | 7471A                | 0.01               |

"<" - Not Detected / Below Detection Limit