Lesson 2.4: Extracting Values Based on Points

Data Source: dataset2.zip

Part 1: Extracting yield value from interpolated yield map

- Open previously save project (from Lesson 2.3) in ArcGIS Pro
- Make sure the layers Field20_Soil_2008.shp (vector data) and soybean10 (raster data) are listed in the Contents tab.
- 3. Search **Extract Multi Values to Points** in the search bar. A tab like the one to the right should open, set parameters as following:

Input point features: *Field20_Soil_2008* Input rasters: *soybean10*



- 4. Once done, right click on the layer *Field20_Soil_2008* and choose **Open Attribute Table.**
- 5. In the opened attribute table, a new column **soybean10**, containing soybean yield of 2010, is added.

| | III Field20_Soil_2008 × | | | | | | | | | | | | | | | | | | |
|----|---|-------|------------|-----------|----|-----|--------|-----|-------|--------|-------|--------|--------|-------|--------|--------|------|------------|-----------|
| Fi | Field: 🛱 Add 🛱 Calculate Selection: 🔓 Select By Attributes 🥺 Zoom To 📲 Switch 🗐 Clear 👮 Delete 🗐 Copy | | | | | | | | | | | | | | | | | | |
| | FID | Shape | Longitude | Latitude | ID | рН | Ind_pH | ом | P_ppm | Al_ppm | K_ppm | Ca_ppm | Mg_ppm | Sat_K | Sat_Ca | Sat_Mg | CEC | P_Al_ratio | Soybean10 |
| 1 | 0 | Point | -72.624796 | 45.698294 | 1 | 6.3 | 70 | 3.1 | 367 | 626 | 207 | 3290 | 222 | 1.9 | 57.7 | 6.5 | 12.7 | 26.2 | 7.3059 |
| 2 | 1 | Point | -72.624525 | 45.700735 | 2 | 6.6 | 70 | 2.4 | 247 | 564 | 111 | 3100 | 189 | 1.1 | 58.2 | 5.9 | 11.9 | 19.5 | 8.04529 |
| 3 | 2 | Point | -72.624792 | 45.702488 | 3 | 6.4 | 70 | 3 | 216 | 554 | 201 | 3030 | 347 | 1.8 | 54.1 | 10.3 | 12.5 | 17.4 | 6.93593 |
| 4 | 3 | Point | -72.625583 | 45.701304 | 4 | 6.3 | 70 | 2.4 | 170 | 570 | 164 | 3140 | 342 | 1.5 | 55.2 | 10 | 12.7 | 13.3 | 7.60064 |
| 5 | 4 | Point | -72.625721 | 45.699246 | 5 | 6.1 | 69 | 3.2 | 296 | 698 | 273 | 3200 | 255 | 2.3 | 53.1 | 7.1 | 13.4 | 19 | 7.62444 |
| 6 | 5 | Point | -72.626631 | 45.699325 | 6 | 7 | 74 | 3.5 | 247 | 631 | 229 | 4180 | 197 | 2.2 | 79.9 | 6.3 | 11.7 | 17.5 | 5.90634 |
| 7 | 6 | Point | -72.626513 | 45.702077 | 7 | 6.5 | 70 | 3 | 179 | 570 | 254 | 3880 | 318 | 2 | 60.3 | 8.2 | 14.4 | 14 | 5.84022 |
| 8 | 7 | Point | -72.627608 | 45.701286 | 8 | 6.6 | 70 | 2.7 | 227 | 595 | 181 | 3710 | 350 | 1.4 | 57.6 | 9.1 | 14.4 | 17 | 7.46326 |
| 9 | 8 | Point | -72.627178 | 45.700182 | 9 | 6.3 | 69 | 3.3 | 204 | 747 | 212 | 2960 | 258 | 1.9 | 51.5 | 7.5 | 12.9 | 12.2 | 7.37097 |

Part 2: Exporting attribute table to EXCEL file.

1. Export this table to EXCEL by clicking on **Table** in the tabs at the top. Select **Export Table**

| ſ | Project Map | Insert / | Analysis View | Edit Image | ery Share | Help | Table | Feature Layer | Labeling | Data | | |
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| | Copy Path | 🔆 Flash | 🔃 Sort 🗸 | Attributes | Clear 📃 Delete | 📆 Su | immarize | Related Data 🛩 | T Extent | | | |
| I | Clipboard | Row | Field | Se | election | 5 | Tools | Relationship | Filter | Export | Output | Appearance I |

2. Save as *Yield_Soil_Table.txt* (Text File). Make sure to type **.txt** at the end of the name. Choose a file on you computer to save the table to that you can access later.

| | Output Table | | | | | |
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| Field20_Soil_2008 🔹 🦆 | Favorites | > | | | | |
| Output Table | Name Yield_Soil.txt Table | s and Attribute Tables (All Typ 🔹 | | | | |
| Field_Soil_table.txt | | Save Cancel | | | | |

3. Launch EXCEL. Select **Open.** Select the **Yield_Soil_table.txt** file that you saved before.

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| | -72.624796 45.698293 1 6.300 | 70 3.1000 | 367 62 | 6 207 | 3290 | 222 1.9000(57.700 | 0 6.500000 12.6 | 5999 ^(26,199999) | 7.3059 | | |
| | -72.624525 45.700735 2 6.600 | 70 2.4000 | 247 564 | 4 111 | 3100 | 189 1.1000(58.200 | 0 5.900000 11.9 | 000(19.500000 | 8.04529 | | |
| | -72.624792 45.702488 3 6.400 | 70 3.0000 | 216 554 | 4 201 | 3030 | 347 1.8000(54.100 | 0 10.30000 12.5 | 5000(17.399999 | 6.93593 | | |
| | -72.625583 45.701304 4 6.300 | 70 2.4000 | 170 57 | 0 164 | 3140 | 342 1.5000(55.200 | 00 10.00000 12.6 | 5999 13.300000 | 7.60064 | | |
| | -72.625721 45.699246 5 6.100 | 69 3.2000 | 296 69 | 8 273 | 3200 | 255 2.3000(53.100 | 0 7.100000 13.4 | 1000(19.000000 | 7.62444 | | |
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| | -72.626513 45.702077 7 6.500 | 70 3.0000 | 179 57 | 0 254 | 3880 | 318 2.0000(60.299 | 98.19999914.4 | 4000(14.000000 | 5.84022 | | |
| | -72.627608 45.701286 8 6.600 | 70 2.7000 | 227 59 | 5 181 | 3710 | 350 1.4000(57.600 | 0 9.100000 14.4 | 1000(17.000000 | 7.46326 | | |
| | -72.627178 45.70018: 9 6.300 | 69 3.3000 | 204 74 | 7 212 | 2960 | 258 1.9000(51.500 | 0 7.500000 12.9 | 000(12.199999 | 7.37097 | | |
| | -72.627584 45.698638 10 6.600 | 70 3.6000 | 470 91 | 5 281 | 3480 | 222 2.3000(56.000 | 00 5.900000 13.9 | 000(22.899999 | 6.70744 | | |
| | -72.629332 45.69890(11 7.200 | 75 3.2000 | 258 95 | 5 612 | 3970 | 788 5.6000(70.900 | 0 23.50000 12.5 | 5000(12.100000 | 5.47354 | | |
| | -72.628634 45.69979; 12 6.100 | 69 3.6000 | 388 89 | 6 124 | 2810 | 145 1.1000 49.000 | 00 4.200000 12.8 | 3000(19.399999 | 6.40631 | | |
| | -72.628555 45.700392 13 5.900 | 68 3.7000 | 327 833 | 2 123 | 2580 | 177 1.1000(43.299 | 95.00000013.3 | 3000(17.600000 | 7.07227 | | |
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| | -72.629198 45.70203! 15 6.200 | 68 2.3000 | 245 103 | 0 282 | 4550 | 874 1.6000(50.500 | 00 16.19999 20.1 | 1000(10.600000 | 6.27793 | | |
| | -72.628302 45.70194 16 6.300 | 69 3.0000 | 245 679 | 9 233 | 3250 | 363 1.9000(52.100 | 0 9.699999 13.9 | 000(16.100000 | 6.86099 | | |

4. Now that you have the above table opened in Excel, make a scatterplot using the *Soybean 10* column and a sensor measured column, like OM (organic matter).



5. Save your graph.