

Preparing your georeferenced data for a Quick Look or Free Account

FILE TYPE: The Portal will not accept pdf or txt files of soil test lab results. Data must be in a spreadsheet-style format such as Excel (.xlsx) or Comma Separated Value (csv.). Unfortunately, the Portal will disconnect from the server if an inappropriate file type is submitted.

COORDINATE SYSTEM: Please use WGS 1984 or a geographic coordinate system that displays coordinates in latitude and longitude, for example:

X_long	Y_lat
-95.156	42.858

SAMPLE ID: it is a good idea to have a column labeled Sample ID so you can identify SHAPE results for each location. Using this specific label will help ensure that the data is correctly associated.

TREATMENT: Sometimes farmers perform experiments in their fields to test different management practices meaning that it may not be uniform across all sample areas. The Portal ignores all Treatment data unless it relates to Manure, Tillage, or Cover Crops. If you plan to donate data with differences in these treatments, please use the categories below. If you wish to preserve your original treatment categories, simply name that column heading anything other than TREATMENT.

- Cover Crop / No Cover Crop
- Manure / No Manure
- Conventional till / Strip or Vertical till / No till

BENCHMARK DATA TYPES: Although the Portal uses heuristic criteria to search for the data it pulls from your upload, there are always exceptions that can confuse the code. If you have followed the specifications described above and your data is still crashing the Portal, you may wish to match your column headings to the Portal default column headings to see if that solves the issue.

Soil Health Value Column Headings:

SoilOM Organic_C Organic_N Organic_CN CO2C_Burst SH_Calc MAC% SOC

Standard Soil Fertility Column Headings:

SoilOM SoilP1 SoilP2 SoilK SoilS SoilpH Buffer_Index SOC

QUICK LOOK

Anyone can use the Quick Look feature, with or without uploading soil test data. From the Welcome Page of the Portal, Click on either the Quick Look Tab in the top menu bar or on the Quick Look Button at the bottom of the Welcome Page.

Soil Health Interpretation Portal

Welcome Background Information Maps **Quick Look** Sign Up Sign In

This free portal is designed for Iowa farmers, agronomists and landowners to track, interpret and employ key soil health metrics for improved crop management. The tool is funded by the Iowa Soybean Association with support from an Iowa NRCS Conservation and Innovation Grant.

An account enables exploration of two different datasets of Iowa soil test results to explore the impact of tillage, manure and cover crops on soil health by Iowa physiographic subregion. One dataset contains select soil health metrics from the Haney protocol and the other contains select metrics from standard soil tests plus a site-specific soil health measure derived from organic matter, weather and soil.

The background data comes from research programs conducted by Iowa Soybean Association and Iowa Corn Growers. Farmers, agronomists and landowners who set up a free, private account will have full access to their own information and both exploratory interfaces since account data is integrated into the anonymized soil health background database.

For users with only standard soil test data, there is a "Quick Look" feature, also available for soil health test results, to obtain a one-time report and one-time access to the data exploration interface. Data may be donated, or users may exit the portal without it being saved.

Click the "Background Information" button below to learn more.

Background Information **Quick Look** Sign Up Sign In

This will open a Standard Data Quick Look Disclaimer box and beneath it a second menu bar. Read the Disclaimer and click the "Dismiss" button. This will enable you to select the type of soil test data you wish to upload from the second menu bar – standard soil test data, aka soil fertility test data, or soil health test data, which as you can see from the column headings on the previous page, are different than standard fertility soil test measures.

Standard Data Quick Look Disclaimer

Georeferenced information (i.e., X, Y or Long, Lat data columns) for each sample's lab result is required to provide a relative soil health measurement (see "the SHAPE score" under background information). Non-georeferenced data cannot be donated to the anonymous benchmark database.

Dismiss

Welcome Background Information Maps **Quick Look** Sign Up Sign In

Standard Data **Soil Health Data**

Standard Soil Test Comparison

Upload Soil Data

Upload Standard Soil Test Data

Browse... No file sele

Now you may browse to your file of lab results for the Portal to temporarily upload. The Portal will notify you when the data is uploaded and partially show the file name.

Upload Soil Data

Upload Standard Soil Test Data

Browse... No file sele

Upload Soil Data

Upload Standard Soil Test Data

Browse... west_80_soi

Upload complete

Spatially referenced data will automatically identify the associated Physiographic Subregion and will summarize and present data for that subset of the background including the count of fields in the dataset.

Field Parameters

When you upload data that has X/Y coordinates, your subregion will be automatically selected. If no geographic data is provided, we'll default to showing all of Iowa, but you can change this option as you see fit.

Soil Physiographic Subregion

Audubon Rolling Plains

Field Location Count: 44

Non-spatially referenced data or no data upload will default to "All Iowa". All Iowa or any other individual subregion may be added to the selection of data to be visualized on the map and in the summarizations. Click on the box listing the subregion currently selected and add to it or delete from it.

Soil Physiographic Subregion

Audubon Rolling Plains

All Iowa

Algona Till Plain

Altamont Till Plain

Bemis Till Plain

Corydon Rolling Plains

Field Location Count: 530

Soil Physiographic Subregion

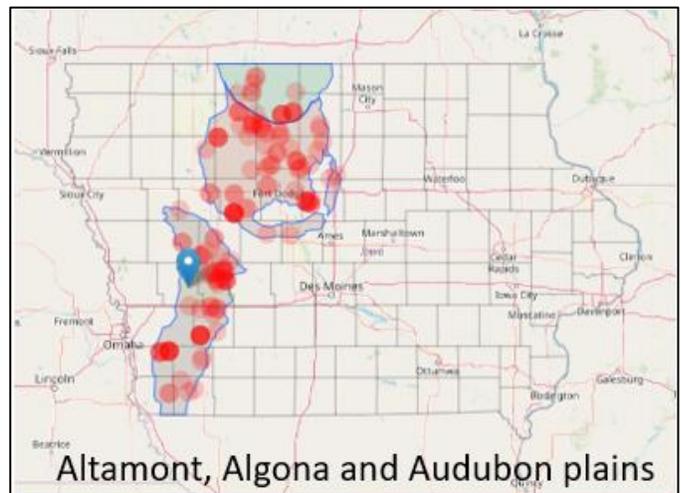
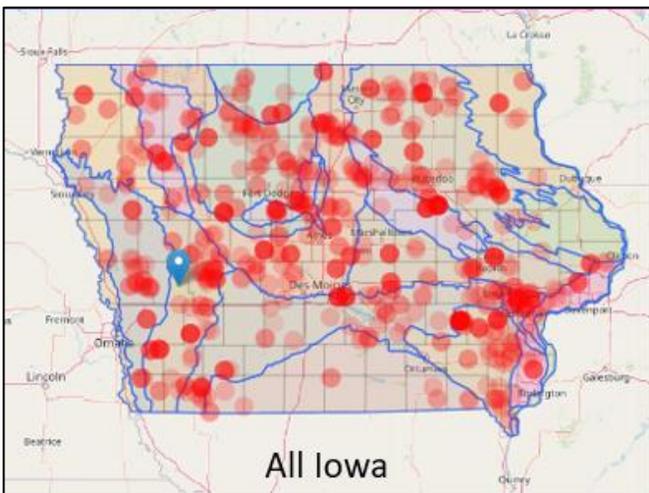
Altamont Till Plain

Algona Till Plain

Audubon Rolling Plains

Field Location Count: 116

Below the **Field Parameters** are **Comparison Choices** related to three management categories that can affect soil health, Manure Status, Tillage Type and Use of Cover Crops. The Portal defaults to showing all the available options, but viewers may deselect categories to observe changes in results. **The Comparison Map** below the **Comparison Choices** also reflects field locations with the selected management categories within the subregions chosen.



The Standard Benchmark database includes a large dataset from 2011 where farmers were asked to soil sample in both a good area and a poor area of their field so results could be compared. We have no cover crop information for these fields, so to exclude them from your query results, simply uncheck “Cover Crop Status Unknown”

Field Location Count: 44

Comparison Choices

When comparing your results with results from our Standard Health Database, you can select and de-select a variety of Manure, Till, and Cover Crop options below.

Select Options

- Manured Fields
- Non-Manured Fields
- Manure Status Unknown

Select Options

- No Till Fields
- Vertical/Strip Tilled
- Conventional Tilled
- Tillage Status Unknown

Select Options

- Fields with Cover Crops
- Fields with No Cover Crops
- Cover Crop Status Unknown

Field Location Count: 4

Comparison Choices

When comparing your results with results from our Standard Health Database, you can select and de-select a variety of Manure, Till, and Cover Crop options below.

Select Options

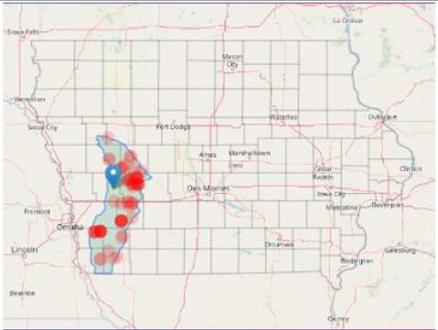
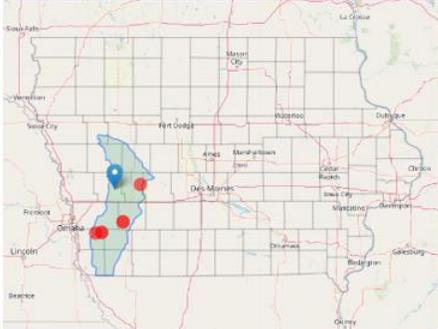
- Manured Fields
- Non-Manured Fields
- Manure Status Unknown

Select Options

- No Till Fields
- Vertical/Strip Tilled
- Conventional Tilled
- Tillage Status Unknown

Select Options

- Fields with Cover Crops
- Fields with No Cover Crops
- Cover Crop Status Unknown

Below the Comparison Map any uploaded test results will appear. If geographic coordinates and Organic Matter values were present in the data, The SOC and SHAPE scores will appear.

Your Soil Health Test Results

When you upload your Soil Health Test Data, your results will display below.

ID	Organic C	Organic N	Organic CN	CO2C_Burst	MAC%	SH_Calc	SOC	SHAPE SOC
1	247.37	17.83	13.87	71.03	28.72	13.83	2.62	0.56%
2	91.49	9.28	9.86	211.14	230.78	17.84	2.73	0.61%
3	106.82	9.47	11.28	91.35	85.52	12.22	2.38	0.47%
4	190.02	13.69	13.88	60.45	31.81	11.21	2.09	0.34%
5	141.19	11.75	12.02	44.49	31.51	8.45	2.03	0.32%
6	152.22	12.17	12.51	57.73	37.93	10.03	2.27	0.42%
7	130.72	12.60	10.37	61.31	46.90	10.01	2.33	0.44%
8	168.68	16.53	10.20	39.80	23.59	9.01	2.27	0.42%

Below the data that was read in to the Portal will appear Averages for the benchmark background and averages by subregion(s).

Averages for Benchmark Background							
Organic C	Organic N	Organic CN	CO2C_Burst	MAC%	SH_Calc	SOC	SHAPE SOC
210.45	16.34	12.81	77.02	36.74	11.39	2.1	0.40%

Subregion SOC Scores		
Subregion	SOC	SHAPE SOC
Audubon Rolling Plains	1.88	0.32%
Bemis Till Plain	1.88	0.59%
Glacial Lake Wright	2.78	0.55%
Grundy Center Rolling Plains	2.1	0.41%
Illinoian Till Plain	2.41	0.46%
Iowa-Cedar River Lowland	2.49	0.71%
Iowan Erosion Surface	2.7	0.57%
Orange City Plains	2.81	0.62%
Paleozoic Plateau	1.73	0.33%
Tama Rolling Plains	2.2	0.50%

At the bottom of the Quick Look page is a button enabling those who uploaded georeferenced data the opportunity to generate a report. A progress bar will appear when the generate report button is clicked.

Report Generation

Your Standard Soil Data contains X/Y coordinates. If you would like to generate an SOC report, click the button below:

[Generate SOC Report](#)

Rendering SHAPE Report, please wait... This may take up to 1 minute...

soc_report.pdf

Sample reports are available to view under the Background Information Tab in the second menu bar from the Tab labeled "Sample Reports".