



# SHAP Ground-Truthing Project

## Context and Details

### CONTEXT

OMAFRA released the Soil Health Assessment and Plan (SHAP) Tool for use. SHAP is a mobile- or web-app based tool, created to assess field practices and is paired with lab analysis of soil health indicators.

With your help, the Soils At Guelph SHAP Ground-Truthing Project will help to populate the SHAP database with more agricultural soils from across Ontario. This is critically important to building scoring functions to compare individual samples to other soils. We aim to refine scoring functions based on texture.

The Project uses a smaller number of SHAP questions to complete the tool, but all the soil Best Management Practices are covered.

### WHAT'S INCLUDED?

#### SHAP analysis:

- organic matter (OM)
- aggregate stability
- active carbon (POXc)
- respiration (96-hr carbon mineralization CO<sub>2</sub>)
- potentially mineralizable nitrogen (PMN)

Soil Texture analysis: (% sand, silt, clay)

#### Standard Fertility Analysis\*:

(pH, CEC, P, K, Ca, Mg)(\*not for fertility recommendations)  
& Carbon (inorganic, organic and total) and total nitrogen

### WHAT'S INVOLVED?

1. Complete SHAP Management Tool
2. Complete SHAP IN FIELD Tool
3. Take Soil Sample (follow guidelines)
4. Send to lab

This has a \$200+ value

You will be part of building a soil health tool for #OntAg backed by real Ontario data! This is a first-come-first-serve offer with limited number of samples in 2023 to 2025.

### RESULTS REPORT

Agriculture & Food Laboratory will email the lab results "SHAPPROJECT" **directly to the email provided on the lab submission form.**

Note that soil health testing is intensive and **results will not be available quickly.**

Lab results will be shared with Soils At Guelph as part of our efforts to build the soil database with Ontario data. Aggregated results from across the province will be available in early 2025 by Soils At Guelph team.

### THANK YOU

You are contributing to our common understanding of soil health in Ontario!

### WHAT HAPPENS TO THE DATA?

This is an abbreviated SHAP Tool as part of a project run by Soils At Guelph with the goal of building the SHAP database with Ontario soil samples. No personal information (e.g. landowner names, addresses) is being collected. Any production information (e.g. questions on cropping rotations, tillage methods) is being collected in accordance with the requirements of the Freedom of Information and Protection of Privacy Act for the purposes of this project. The information obtained will be anonymized, and may be made available to collaborating organizations, such as University, EFAO, Greenbelt Foundation, OSCIA, OSN, OMAFRA, and AAFC, and only for specific soil-related research. By participating in this project, you acknowledge that Soils At Guelph is collecting the data for this purpose and provide your consent.

V.2024.Sept

**GETTING STARTED:** email [Soils@uoguelph.ca](mailto:Soils@uoguelph.ca)

Tell us your name, # of fields, and your county

For the full SHAP tool, please search Field Crop News [www.fieldcropnews.com](http://www.fieldcropnews.com)

Register with [soils@uoguelph.ca](mailto:soils@uoguelph.ca).

Send us your name, # of fields you'd like to sample, and your county.

## Steps

**Before going to the field:** Set your soil health goal, choose sample location, complete Step 1.

- 1 Input data into the SHAP – Soil Management Tool by using the link sent to your email.** This will collect information on the management history of each field being sampled.

Once complete, you will be emailed:

- a unique sample ID
- link to the SHAP-In field Tool

**When taking the Sample**

- 2 Connect to the SHAP-In field Data collection form using the second link sent to your email.**

Enter your sample ID Number, date of sample, site location details, **including a GPS point of the location of your sample.**

- 3 Collect a soil sample** from a point in the field by drawing 15-20 soil cores from a 3 m radius. A soil probe is good for this. A shovel can also be used by slicing a V then remove a sliver from one side - always trying to get 6" deep. Remove surface debris from each core/sliver. Place cores into a clean pail. Mix cores to break apart without completely pulverizing them. Transfer 500 ml (2 cups) of the soil into a clean bag, then into a labeled container. Label with your unique sample ID. Store in cool place.

**Complete Submission form and send/deliver to lab.**

- 4 Ship/deliver your samples with the AFL submission form.** The form will be automatically sent to your email after you've completed the above steps. Be sure to include the following on your form:

- Your unique sample ID
- The quote # sent to you after you completed step 2
- Indicate you'd like a "Soils at Guelph SHAP Ground-Truthing Project Test"

Ship by regular post: (avoid shipping on Thurs or Friday)

Agriculture and Food Laboratory, Univ Guelph, 95 Stone Rd W, Guelph, ON N1G 2Z4.

Or dropoff Monday to Friday 8am to 5pm or Saturday, 9:30am to 1:30pm