

SHAP Ground-Truthing Project

Choosing why and when to sample

DEFINING THE WHY- MAKE A SOIL HEALTH GOAL



Are you trying to:

"Benchmark" to identify and track trends?

Compare good and poor areas of the field?

Determine limitations and risks to soil productivity?

WHEN IS THE BEST TIME TO SAMPLE?



There is no right time to sample.

That said, there are a few seasonal considerations that can impact how you interpret soil health results, in particular soil biological activity.

Soil health samples and observations are most ideal in late spring. That is when soil moisture conditions are most likely to be suitable for in-field assessments. This is also when soil biology has had time to become active after winter. In the summer (like after wheat harvest) conditions are often hot and dry. This can slow down biological activity.

Whenever you take your sample, be sure to make note of the timing and conditions. Then try to take a future sample during comparable conditions. Avoid sampling after recent field activity (e.g., tillage or nutrient application) or if conditions are extremely dry or wet. Tilled soils need around 4-6 weeks after the last tillage pass to settle into a more representative physical condition. Broadcast fertilizer or manure may skew results of some tests.

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Choosing where to sample



CHOOSE A FIELD to support your soil health bench-marking goal

Some considerations: for goal-setting

NEW or newly improved fields are great for benchmarking and tracking impact of soil health management practices over time

AVERAGE fields make the results of the assessment broadly applicable to the rest of the farm operation

POOR fields that consistently under-perform can help identify issues

GOOD fields that consistently over-perform can provide a target to aim for when evaluating "poor", "average" or "new fields with similar soils."



CHOOSE A LOCATION Find a relatively small and uniform area based on:

PERFORMANCE

Inconsistent yields often from moisture fluctuations

Below average yields may have issues of compaction, erosion or low organic matter

Average yields broadly representative

High yields may represent best potential of similar soils in the field; can be compared against low- or average-yielding areas

TOPOGRAPHY (slope)

Lower water flows to / accumulates in these areas; often poorly drained unless tilled

Mid intermediate crop productivity

Upper generally drier areas; knolls and shoulder slopes likely eroded and at high risk tillage erosion

DATA good yield index maps, soil property maps, or reliable management zones to can help you select an area

COLLECT (Step 3 of Participation is as easy as 1-2-3-4)



15-20 core samples to a 6-inch depth with a soil prob from within a 3 m radius. Place into clean pail. REMOVE surface debris and extract cores. PLACE cores into a clean pail. Gently break and mix the cores. TRANSFER into 2 standard soil sample containers. Double bag. Boxes. Label. Store in cool place.