

SUMMARY OF SOIL HEALTH CHANGES PER HANEY SOIL TEST

JUNE 2020-2025 – PHIL & ROBIN SMITH FARM

Soil samples were not GPS located but were taken around the first two weeks of June of each year and collected in a similar pattern to get the best representative sample from each field. There were 16 cores taken at 6" deep for each field/sample. Field size ranges from 25-60 acres with most in the 35-40 acre range.

A total of 300 samples were taken every year over the 800 farmed acres (approximately 2.6 acres per sample).

YEAR	TEST DATES	ORGANIC MATTER	RESPIRATION	WEOC	MAC%	C:N	SHC
2020	6/10/20	3.81%	91.2	129	69.0%	10.64:1	11.94
2021	6/1/21	4.38%	140.8	192	64.5%	11.32:1	16.51
2022	5/20/22	4.06%	116.5	207	59.6%	11.37:1	15.32
2023	6/13/23	4.61%	198.6	256	75.4%	13.45:1	21.72
2024	6/14/24	4.78%	267.7	270	95.8%	12.00:1	25.07
2025	6/10/25	4.73%	191.9	199	94.7%	13.19:1	19.86
GOALS		>5%	>150 G >200 E	>150-200	50%-80%	8:1-15:1	F>7, G>14, E>20

What does this reflect?

OM - % Organic Matter

Quantity of organic carbon and the "size of the house" that the microbes live in.

RESP - Soil Biological Respiration

Microbial activity and the number of microbes

WEOC - Water Extractable Organic Carbon

Quality of organic carbon microbes see as food/energy – "the refrigerator"

MAC% - Microbially Active Carbon

Ability of soil biology to process food & balance fertility – variety and volume of carbon consumed

C:N - Organic Carbon in ratio to Organic Nitrogen

Ability for soil to cycle nutrients

SHC - Soil Health Calculation

Data from Phil Smith, layout support from Holly Hatlewick, Renville SWCD

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