REPORT NUMBER

23-160-0117

COMPLETED DATE
Jun 15, 2023
RECEIVED DATE
Jun 9, 2023

// Midwest

\/ Laboratori

PAGE 6/7

TODAY'S DATE

IDENTIFICATION
FARMERS FOR LAKE COUNTRY
SOIL HEALTH

13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770

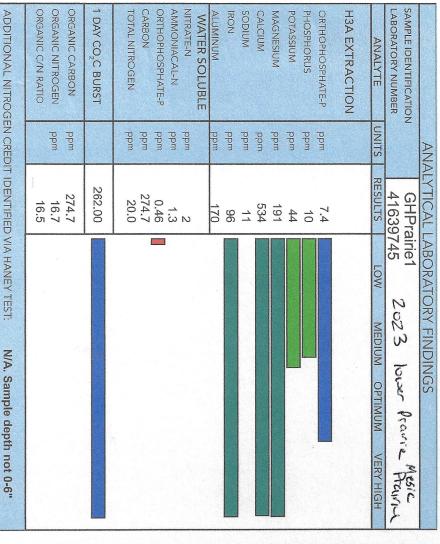
www.midwestlabs.com

2023

900 S worthington st. occonomowoc WI 53066

ERIK JOOST Erik Joost

## SOIL HEALTH ASSESSMENT



		The state of the s	
0			
		SOIL	
		SOIL HEALTH CALCULATION	A STATE OF THE PARTY OF THE PAR
		1 CALCU	
		LATION	
25			
<u>о</u>			The same of the sa

The **H3A Soil Extractant** was developed by Haney\*. This extract is designed to mimic organic acids produced by living plant root systems. These organic acids increase nutrient availability in the root zone.

The Water Soluble Extract provides a snapshot of nutrients that are immediately available to the plants.

The **CO<sub>2</sub> Burst** test is very good indicator of soil health. This test measures the amount of CO<sub>2</sub> naturally released from the soil due to the activity of the soil microbes through microbial respiration. This test is very dependent on the amount of carbon that is available to the soil microbes and the form that the carbon is in. As the available carbon increases in your soil the Microbial respiration will increase.

**Organic Carbon** is the available total water extractable organic carbon from your soil. This pool of carbon is roughly 80 times smaller than the Soil Organic Matter. The organic carbon pool reflects the energy/food source that is driving the soil microbes.

The **Organic Nitrogen** pool is replenished by fresh plant residues, manure, composts and dying soil microbes.

The **Organic C/N ratio** is a critical component of the nutrient cycle. A soil C/N ratio above 20 generally indicates that Nitrogen will be tied up and not available to plants. The ideal range for the Organic C/N ratio will be from 8:1 to 15:1.

The **Soil Health Calculation** uses the CO<sub>2</sub> Burst, Organic Carbon, Organic Nitrogen, and the C/N ratio to generate the soil health number. This calculation looks at the balance of soil carbon and nitrogen and their relationship to microbial activity. This number represents the overall health of your system. Soil values will range from 0 to 25. A soil with a value below 7 would be considered low. You want to see this number increase as you make changes and adjustments. Keeping track of this number will allow you to gauge the effects of your management practices over time.

\*Modifications to the New Soil Extractant H3A-1: A Multinutrient Extractant R.L. Haney (a); E.B. Haney (b); L.R. Hossner (c); J.G. Arnold (a)

NITROGEN RECOMMENDATIONS MAY INCLUDE ADDITIONAL NITROGEN CREDITS BASED ON PREVIOUS CROPS AND NITROGEN MINERALIZATION RATES.

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days.

DEPORT NUMBER

23-160-0117

COMPLETED DATE
Jun 15, 2023
RECEIVED DATE
Jun 9, 2023

59838



**3** 

TODAY'S DATE

13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770 www.midwestlabs.com

IDENTIFICATION

FARMERS FOR LAKE COUNTRY SOIL HEALTH

SOIL HEALTH ASSESSMENT

900 S worthington st. oconomowoc WI 53066

ERIK JOOST

## ORGANIC C/N RATIO ORGANIC NITROGEN ORGANIC CARBON ORTHOPHOSPHATE-P AMMONIACAL-N ZITRATE-Z RON SAMPLE IDENTIFICATION TOTAL NITROGEN CARBON SODIUM POTASSIUM ORTHOPHOSPHATE-P H3A EXTRACTION ALUMINUM CALCIUM MAGNESIUM PHOSPHORUS LABORATORY NUMBER DAY CO, C BURST WATER SOLUBLE ANALYTE SLIND ppm ppm ppm ppm ppm ppm ppm mdd ANALYTICAL LABORATORY FINDINGS RESULTS 220.00 0.5 0.16 220.3 16.7 220.3 41639746 GHprairie2 <del>1</del>8.1 12.2 559 12 253 83 45 LOW 2023 MEDIUM OPTIMUM ropper prairie Prairie VERY HIGH



The **H3A Soil Extractant** was developed by Haney\*. This extract is designed to mimic organic acids produced by living plant root systems. These organic acids increase nutrient availability in the root zone.

The **Water Soluble Extract** provides a snapshot of nutrients that are immediately available to the plants.

The CO<sub>2</sub> Burst test is very good indicator of soil health. This test measures the amount of CO<sub>2</sub> naturally released from the soil due to the activity of the soil microbes through microbial respiration. This test is very dependent on the amount of carbon that is available to the soil microbes and the form that the carbon is in. As the available carbon increases in your soil the Microbial respiration will increase.

**Organic Carbon** is the available total water extractable organic carbon from your soil. This pool of carbon is roughly 80 times smaller than the Soil Organic Matter. The organic carbon pool reflects the energy/food source that is driving the soil microbes.

The **Organic Nitrogen** pool is replenished by fresh plant residues, manure, composts, and dying soil microbes.

The **Organic C/N ratio** is a critical component of the nutrient cycle. A soil C/N ratio above 20 generally indicates that Nitrogen will be tied up and not available to plants. The ideal range for the Organic C/N ratio will be from 8:1 to 15:1.

The **Soil Health Calculation** uses the CO<sub>2</sub> Burst, Organic Carbon, Organic Nitrogen, and the C/N ratio to generate the soil health number. This calculation looks at the balance of soil carbon and nitrogen and their relationship to microbial activity. This number represents the overall health of your system. Soil values will range from 0 to 25. A soil with a value below 7 would be considered low. You want to see this number increase as you make changes and adjustments. Keeping track of this number will allow you to gauge the effects of your management practices over time.

\*Modifications to the New Soil Extractant H3A-1: A Multinutrient Extractant R.L. Haney (a); E.B. Haney (b); L.R. Hossner (c); J.G. Arnold (a)

**OUS CROPS AND NITROGEN MINERALIZATION RATES** 

NITROGEN RECOMMENDATIONS MAY INCLUDE ADDITIONAL NITROGEN CREDITS BASED ON PREVI-

The above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days.

ADDITIONAL NITROGEN CREDIT IDENTIFIED VIA HANEY TEST.

N/A. Sample depth not 0-6"

REPORT NUMBER

23-160-0117

Jun 9, 2023 Jun 15, 2023



TODAY'S DATE

DENTIFICATION www.midwestlabs.com 13611 B Street • Omaha, Nebraska 68144-3693 • (402) 334-7770

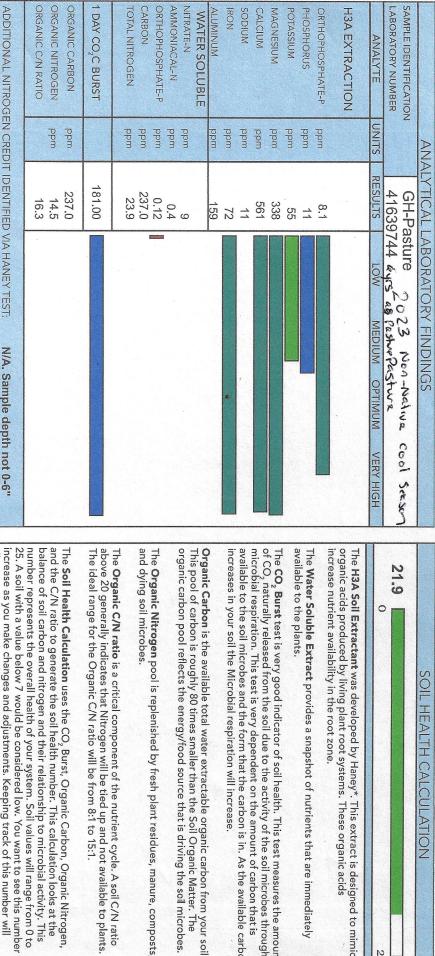
FARMERS FOR LAKE COUNTRY

SOIL HEALTH

900 S worthington st. oconomowoc WI 53066

**Erik Joost** ERIK JOOST

SOIL HEALTH ASSESSMENT





organic acids produced by living plant root systems. These organic acids increase nutrient availability in the root zone. The H3A Soil Extractant was developed by Haney\*. This extract is designed to mimic

available to the plants. The Water Soluble Extract provides a snapshot of nutrients that are immediately

The CO<sub>2</sub> Burst test is very good indicator of soil health. This test measures the amount of CO<sub>2</sub> naturally released from the soil due to the activity of the soil microbes through microbial respiration. This test is very dependent on the amount of carbon that is increases in your soil the Microbial respiration will increase. available to the soil microbes and the form that the carbon is in. As the available carbon

organic carbon pool reflects the energy/food source that is driving the soil microbes. **Organic Carbon** is the available total water extractable organic carbon from your soil. This pool of carbon is roughly 80 times smaller than the Soil Organic Matter. The

above 20 generally indicates that Nitrogen will be tied up and not available to plants. The ideal range for the Organic C/N ratio will be from 8:1 to 15:1. The Organic C/N ratio is a critical component of the nutrient cycle. A soil C/N ratio

allow you to gauge the effects of your management practices over time. number represents the overall health of your system. Soil values will range from 0 to 25. A soil with a value below 7 would be considered low. You want to see this number The **Soil Health Calculation** uses the CO<sub>2</sub> Burst, Organic Carbon, Organic Nitrogen, and the C/N ratio to generate the soil health number. This calculation looks at the balance of soil carbon and nitrogen and their relationship to microbial activity. This increase as you make changes and adjustments. Keeping track of this number will

\*Modifications to the New Soil Extractant H3A-1: A Multinutrient Extractant R.L. Haney (a); E.B. Haney (b); L.R. Hossner (c); J.G. Arnold (a)

OUS CROPS AND NITROGEN MINERALIZATION RATES.

NITROGEN RECOMMENDATIONS MAY INCLUDE ADDITIONAL NITROGEN CREDITS BASED ON PREVI-

Fhe above analytical results apply only to the sample(s) submitted. Samples are retained a maximum of 30 days.