



# AgSource Laboratories

A Subsidiary of Cooperative Resources International

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## Soil Analysis

Submitted By: **BN00772**  
**AgSource Bonduel**  
**106 N Cecil Street**  
**Bonduel, WI 54107**

Submitted For:  
**AgSource Report Example**  
**135 Enterprise Drive**  
**Verona WI 53593**

Laboratory Sample #  
**AK07663 - AK07678**

Date Received:  
**12/18/2013**

Date Processed:  
**12/18/2013**

Information Sheet #  
**742379**

		NUTRIENT RECOMMENDATIONS													
County: Manitowoc	Account No: BN00772	Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilizer Credits				Nutrients to Apply				
				N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Legume N	Manure N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	O <sub>2</sub>	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
Field: 1			- per acre -	----- lbs/a -----			--- lbs/a ---				----- lbs/a -----				
Acres: 10		Corn, grain	111-130 bu	***	0	65	0	0	0	0	0	0	***	0	65
Soil Name/Subsoil group: Hortonville		Oats, grain + straw	61-90 bu	40	0	140	0	0	0	0	0	0	40	0	140
Plow Depth: 7.00	Previous Crop:	Alfalfa, established	4.6-5.5 ton	0	0	340	0	0	0	0	0	0	0	0	340
		Alfalfa, established	4.6-5.5 ton	0	0	340	0	0	0	0	0	0	0	0	340

There is no lime recommendation. Please see Additional Information below.

\*\*\* Please use the new Wisconsin Nitrogen Application Rates table to determine the N Application rate. Table included at end of report.

		TEST INTERPRETATION					
Cropping Sequence		Very Low	Low	Optimum	High	Very High	Excessive
Corn, grain	P	[Color scale bar]					
	K	[Color scale bar]					
Rotation pH	pH	[Color scale bar]					

LABORATORY ANALYSIS										LAB USE				MISC		
Adjusted Avg:	7.4	2.0	69	110	1640	450	119.2	0.0	0	0.0	0.0					
Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Estimated CEC	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code
1	7.4	2.0	91	126		1670	450	120.7						1	7.80	
2	7.3	2.0	46	94		1610	450	117.6						2	7.50	

SECONDARY & MICRONUTRIENT RECOMMENDATIONS	
Interpretations ----->	Ca-H Mg-Opt
Soil Mg is optimum. Maintain level with dolomitic lime.	

### ADDITIONAL INFORMATION

If barley or oats are underseeded with a legume forage, eliminate or reduce N by half.

Starter fertilizer (e.g. 10+20+20 lbs N+P<sub>2</sub>O<sub>5</sub>+K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

Because of very high P levels, P<sub>2</sub>O<sub>5</sub> applications from fertilizer or manure should be reduced and crops with a high P removal should be grown.

If alfalfa will be maintained for more than three years, increase recommended K<sub>2</sub>O by 20% each year.

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

Year 1 If corn is harvested for silage instead of grain apply extra 90 lbs K<sub>2</sub>O per acre to next crop.

A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

If alfalfa will be maintained for more than three years, increase recommended: K<sub>2</sub>O by 20% each year.

DISCLAIMER: Data and information in this report are intended solely for the individual(s) for whom the samples were submitted. Reproduction of this report must be in its entirety; partial reproductions are prohibited. Recommendations are based on University Research; it is important to note that turf quality is controlled by many factors in addition to nutrition and recommendations in this report do not guarantee the achievement of the stated goal.



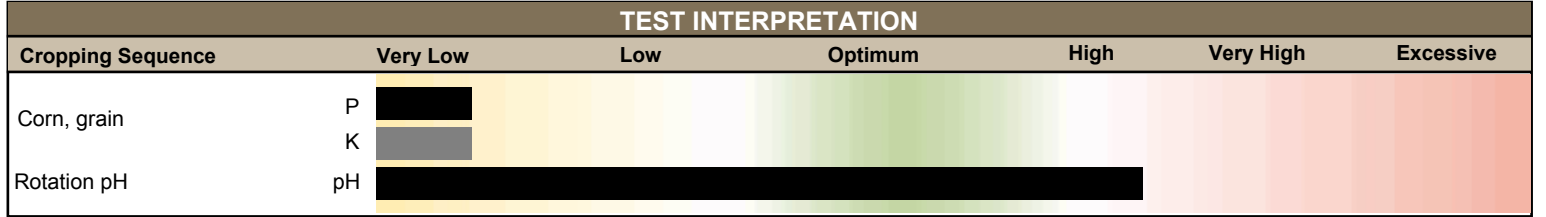


County: Manistowoc	Account No: BN00772
Field: 5	
Acres: 14	
Soil Name/Subsoil group: Symco	
Plow Depth: 7.00	Previous Crop:

NUTRIENT RECOMMENDATIONS												
Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilizer Credits				Nutrients to Apply			
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Legume N	Manure N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
	- per acre -	----- lbs/a -----			--- lbs/a ---	----- lbs/a -----				----- lbs/a -----		
Corn, grain	111-130 bu	***	85	80	0	0	0	0	***	85	80	
Oats, grain + straw	61-90 bu	40	80	155	0	0	0	0	40	80	155	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	

There is no lime recommendation. Please see Additional Information below.

\*\*\* Please use the new Wisconsin Nitrogen Application Rates table to determine the N Application rate. Table included at end of report.



LABORATORY ANALYSIS										LAB USE				MISC					
Adjusted Avg:	7.6	1.0	11	42	1947	467	135.7	0.0	0	0.0	0.0								
Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Estimated CEC	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code			
1	7.7	0.9	20	46		2180	500	150.1						1	14.60				
2	7.6	1.1	3	37		1980	480	138.4						1	13.60				
3	7.6	1.0	9	44		1680	420	118.5						1	13.70				

**SECONDARY & MICRONUTRIENT RECOMMENDATIONS**

Interpretations -----> Ca-H Mg-Opt

Soil Mg is optimum. Maintain level with dolomitic lime.

**ADDITIONAL INFORMATION**

Year 1 If corn is harvested for silage instead of grain add extra 30 lbs P<sub>2</sub>O<sub>5</sub> per acre and 90 lbs K<sub>2</sub>O per acre to next crop.

If barley or oats are underseeded with a legume forage, eliminate or reduce N by half.

Starter fertilizer (e.g. 10+20+20 lbs N+P<sub>2</sub>O<sub>5</sub>+K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

If alfalfa will be maintained for more than three years, increase recommended K<sub>2</sub>O by 20% each year.

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

If alfalfa will be maintained for more than three years, increase recommended: K<sub>2</sub>O by 20% each year.

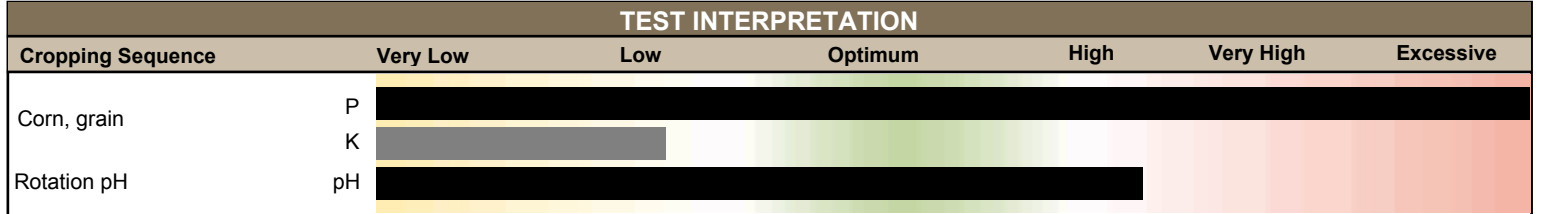


County: Manitowoc	Account No: BN00772
Field: 7	
Acres: 15	
Soil Name/Subsoil group: Granby	
Plow Depth: 7.00	Previous Crop:

NUTRIENT RECOMMENDATIONS												
Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilizer Credits				Nutrients to Apply			
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Legume N	Manure N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
	- per acre -	----- lbs/a -----			--- lbs/a ---	----- lbs/a -----				----- lbs/a -----		
Corn, grain	111-130 bu	***	0	65	0	0	0	0	***	0	65	
Oats, grain + straw	61-90 bu	40	0	140	0	0	0	0	40	0	140	
Alfalfa, established	4.6-5.5 ton	0	0	340	0	0	0	0	0	0	340	
Alfalfa, established	4.6-5.5 ton	0	0	340	0	0	0	0	0	0	340	

There is no lime recommendation. Please see Additional Information below.

\*\*\* Please use the new Wisconsin Nitrogen Application Rates table to determine the N Application rate. Table included at end of report.



LABORATORY ANALYSIS										LAB USE				MISC			
Adjusted Avg:	7.7	0.9	73	81	1873	480	133.2	0.0	0	0.0	0.0						
Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Estimated CEC	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code	
1	7.6	1.0	90	74		1760	440	124.3						1	14.30		
2	7.6	1.0	87	108		2080	560	150.2						1	13.80		
3	7.8	0.8	43	61		1780	440	125.2						1	14.00		

**SECONDARY & MICRONUTRIENT RECOMMENDATIONS**

Interpretations -----> Ca-H Mg-Opt

Soil Mg is optimum. Maintain level with dolomitic lime.

**ADDITIONAL INFORMATION**

If barley or oats are underseeded with a legume forage, eliminate or reduce N by half.

Starter fertilizer (e.g. 10+20+20 lbs N+P<sub>2</sub>O<sub>5</sub>+K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

Because of very high P levels, P<sub>2</sub>O<sub>5</sub> applications from fertilizer or manure should be reduced and crops with a high P removal should be grown.

If alfalfa will be maintained for more than three years, increase recommended K<sub>2</sub>O by 20% each year.

Because of the low potassium buffering capacity of this soil, retest every 2 years.

The nitrogen recommendation should be applied in sidedressed or split application on sandy soils.

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

Year 1 If corn is harvested for silage instead of grain apply extra 90 lbs K<sub>2</sub>O per acre to next crop.

A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

If alfalfa will be maintained for more than three years, increase recommended: K<sub>2</sub>O by 20% each year.

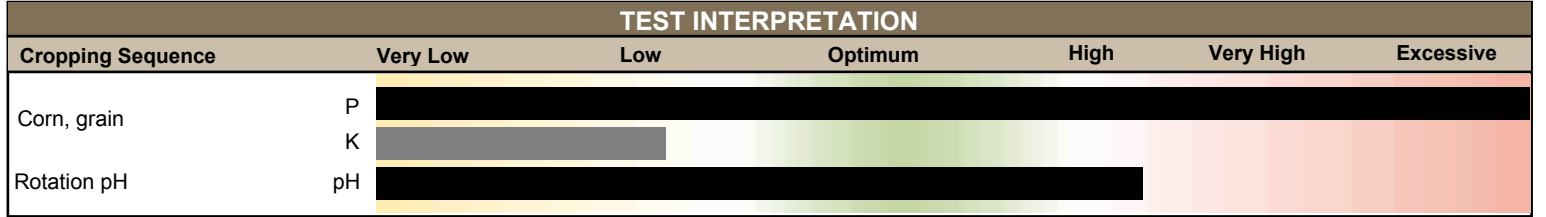


County: Manistowoc	Account No: BN00772
Field: PS-1	
Acres: 5	
Soil Name/Subsoil group: Hortontville	
Plow Depth: 7.00	Previous Crop:

NUTRIENT RECOMMENDATIONS											
Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilizer Credits			Nutrients to Apply			
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Legume N	Manure N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
	- per acre -	----- lbs/a -----			--- lbs/a ---	----- lbs/a -----			----- lbs/a -----		
Corn, grain	111-130 bu	***	0	65	0	0	0	0	***	0	65
Oats, grain + straw	61-90 bu	40	0	140	0	0	0	0	40	0	140
Alfalfa, established	4.6-5.5 ton	0	0	340	0	0	0	0	0	0	340
Alfalfa, established	4.6-5.5 ton	0	0	340	0	0	0	0	0	0	340

There is no lime recommendation. Please see Additional Information below.

\*\*\* Please use the new Wisconsin Nitrogen Application Rates table to determine the N Application rate. Table included at end of report.



LABORATORY ANALYSIS										LAB USE				MISC		
Adjusted Avg:	7.6	0.8	42	96	1690	420	119.2	0.0	0	0.0	0.0					
Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Estimated CEC	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code
1	7.6	0.8	42	96	1690	420	119.2						1	15.10		

SECONDARY & MICRONUTRIENT RECOMMENDATIONS	
Interpretations ----->	Ca-H Mg-Opt
Soil Mg is optimum. Maintain level with dolomitic lime.	

**ADDITIONAL INFORMATION**

If barley or oats are underseeded with a legume forage, eliminate or reduce N by half.

Starter fertilizer (e.g. 10+20+20 lbs N+P<sub>2</sub>O<sub>5</sub>+K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

If alfalfa will be maintained for more than three years, increase recommended K<sub>2</sub>O by 20% each year.

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

Year 1 If corn is harvested for silage instead of grain apply extra 90 lbs K<sub>2</sub>O per acre to next crop.

A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O/a) is advisable for row crops on soils slow to warm in the spring.

A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

If alfalfa will be maintained for more than three years, increase recommended: K O by 20% each year.

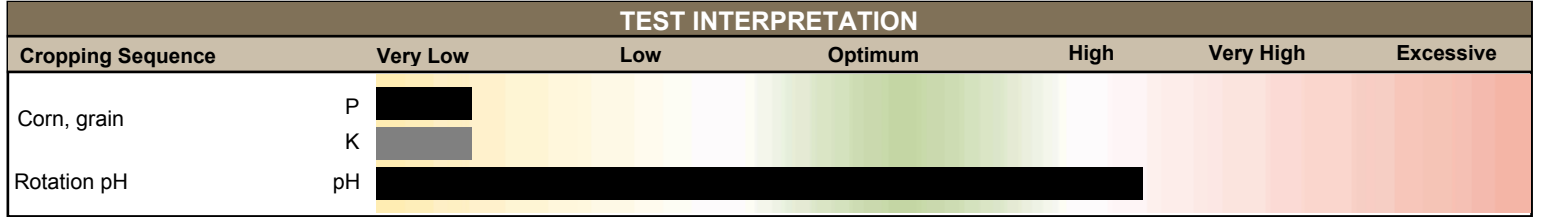


County: Manitowoc	Account No: BN00772
Field: PS-2	
Acres: 2	
Soil Name/Subsoil group: Hortonville	
Plow Depth: 7.00	Previous Crop:

NUTRIENT RECOMMENDATIONS												
Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilizer Credits				Nutrients to Apply			
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Legume N	Manure N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
	- per acre -	----- lbs/a -----			--- lbs/a ---	----- lbs/a -----				----- lbs/a -----		
Corn, grain	111-130 bu	***	85	80	0	0	0	0	***	85	80	
Oats, grain + straw	61-90 bu	40	80	155	0	0	0	0	40	80	155	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	

There is no lime recommendation. Please see Additional Information below.

\*\*\* Please use the new Wisconsin Nitrogen Application Rates table to determine the N Application rate. Table included at end of report.



LABORATORY ANALYSIS										LAB USE				MISC		
Adjusted Avg:	7.6	0.8	5	68	1550	450	114.6	0.0	0	0.0	0.0					
Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Estimated CEC	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code
1	7.6	0.8	5	68	1550	450	114.6							1	15.20	

SECONDARY & MICRONUTRIENT RECOMMENDATIONS									
Interpretations -----> Ca-H Mg-Opt									
Soil Mg is optimum. Maintain level with dolomitic lime.									

**ADDITIONAL INFORMATION**

Year 1 If corn is harvested for silage instead of grain add extra 30 lbs P2O5 per acre and 90 lbs K2O per acre to next crop.

If barley or oats are underseeded with a legume forage, eliminate or reduce N by half.

Starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) is advisable for row crops on soils slow to warm in the spring.

If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.

Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.

A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P<sub>2</sub>O<sub>5</sub> + K<sub>2</sub>O/a) is 2 5 2 advisable for row crops on soils slow to warm in the spring.

A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.

If alfalfa will be maintained for more than three years, increase recommended: K O by 20% each year.

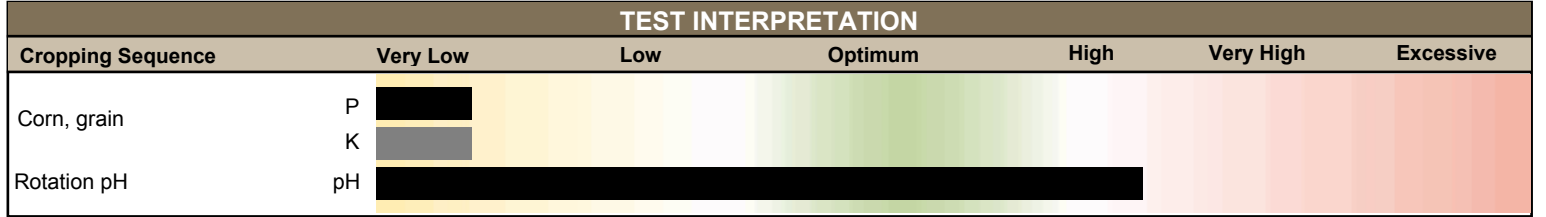


County: Manitowoc	Account No: BN00772
Field: PS-3	
Acres: 8	
Soil Name/Subsoil group: Kewaunee	
Plow Depth: 7.00	Previous Crop:

NUTRIENT RECOMMENDATIONS												
Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilizer Credits				Nutrients to Apply			
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Legume N	Manure N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
	- per acre -	----- lbs/a -----			--- lbs/a ---	----- lbs/a -----				----- lbs/a -----		
Corn, grain	111-130 bu	***	85	80	0	0	0	0	***	85	80	
Oats, grain + straw	61-90 bu	40	80	155	0	0	0	0	40	80	155	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	

There is no lime recommendation. Please see Additional Information below.

\*\*\* Please use the new Wisconsin Nitrogen Application Rates table to determine the N Application rate. Table included at end of report.



LABORATORY ANALYSIS										LAB USE				MISC				
Adjusted Avg:	7.7	0.7	12	41	1450	350	101.3	0.0	0	0.0	0.0							
Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Estimated CEC	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code		
1	7.7	0.7	5	44		1390	350	98.3						1	14.20			
2	7.7	0.7	18	38		1510	350	104.3						1	14.80			

SECONDARY & MICRONUTRIENT RECOMMENDATIONS

Interpretations -----> Ca-H Mg-Opt

Soil Mg is optimum. Maintain level with dolomitic lime.

ADDITIONAL INFORMATION

- Year 1 If corn is harvested for silage instead of grain add extra 30 lbs P2O5 per acre and 90 lbs K2O per acre to next crop.
- If barley or oats are underseeded with a legume forage, eliminate or reduce N by half.
- Starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) is advisable for row crops on soils slow to warm in the spring.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P O + K O/a) is 2 5 2 advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.
- If alfalfa will be maintained for more than three years, increase recommended: K O by 20% each year.

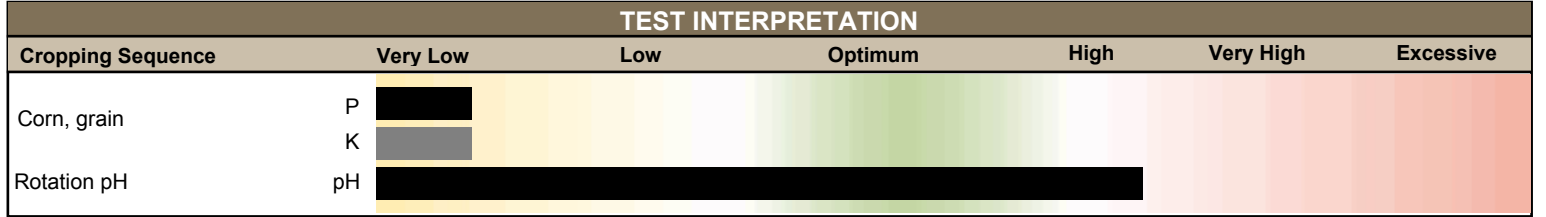


County: Manitowoc	Account No: BN00772
Field: PS-4	
Acres: 10	
Soil Name/Subsoil group: Hortonville	
Plow Depth: 7.00	Previous Crop:

NUTRIENT RECOMMENDATIONS												
Cropping Sequence	Yield Goal	Crop Nutrient Need			Fertilizer Credits				Nutrients to Apply			
		N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	Legume N	Manure N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O	
	- per acre -	----- lbs/a -----			--- lbs/a ---	----- lbs/a -----				----- lbs/a -----		
Corn, grain	111-130 bu	***	85	80	0	0	0	0	***	85	80	
Oats, grain + straw	61-90 bu	40	80	155	0	0	0	0	40	80	155	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	
Alfalfa, established	4.6-5.5 ton	0	105	355	0	0	0	0	0	105	355	

There is no lime recommendation. Please see Additional Information below.

\*\*\* Please use the new Wisconsin Nitrogen Application Rates table to determine the N Application rate. Table included at end of report.



LABORATORY ANALYSIS										LAB USE				MISC					
Adjusted Avg:	7.2	0.9	11	60	1455	340	100.8	0.0	0	0.0	0.0								
Sample ID	Soil pH	O.M. %	Phosphorus PPM	Potassium PPM	60-69 Lime Req T/a	Calcium PPM	Magnesium PPM	Estimated CEC	Boron PPM	Manganese PPM	Zinc PPM	Sulfate Sulfur	Sulfur Avail Index	Texture Code	Sample Density	Buffer Code			
1	6.8	0.8	13	55		1250	280	85.6						1	15.30				
2	7.6	1.0	9	65		1660	400	116.0						1	13.70				

SECONDARY & MICRONUTRIENT RECOMMENDATIONS

Interpretations -----> Ca-H Mg-Opt

Soil Mg is optimum. Maintain level with dolomitic lime.

ADDITIONAL INFORMATION

- Year 1 If corn is harvested for silage instead of grain add extra 30 lbs P2O5 per acre and 90 lbs K2O per acre to next crop.
- If barley or oats are underseeded with a legume forage, eliminate or reduce N by half.
- Starter fertilizer (e.g. 10+20+20 lbs N+P2O5+K2O/a) is advisable for row crops on soils slow to warm in the spring.
- If alfalfa will be maintained for more than three years, increase recommended K2O by 20% each year.
- Recommended rates are the total amount of nutrients to apply (N-P-K), including starter fertilizer.
- A lime recommendation is calculated only when soil pH is more than 0.2 units below the optimum pH. Starter fertilizer (e.g. 10 + 20 + 20 lbs N + P O + K O/a) is 2 5 2 advisable for row crops on soils slow to warm in the spring.
- A soil nitrate test may better estimate actual corn N needs. If conservative tillage leaves more than 50% residue cover when corn follows after corn, add an additional 30 N lb/a.
- If alfalfa will be maintained for more than three years, increase recommended: K O by 20% each year.





Nitrogen Application Rate Guidelines for Corn

(For more info, see http://www.soils.wisc.edu/extension/pubs/A2809.pdf.)

Justification: While the yield response of corn to applied N has not changed, the economics of corn production have. Recently soil fertility specialists in Wisconsin, Minnesota, Iowa, and Illinois have agreed to use the same philosophy to develop N rate guidelines for corn (grain). The philosophy used is based on maximizing return to N fertilizer. The new N rate guidelines were developed as a means to provide growers guidance on how much they might adjust their N application rates and maintain or enhance profitability depending upon their individual farm situation. Research data collected in Wisconsin from research farms and grower fields over a period of 20 years was used to develop the guidelines.

SUGGESTED N APPLICATION RATES FOR CORN(GRAIN) AT DIFFERENT N:CORN PRICE RATIOS

Table with columns for Soil and Previous Crop, N: Corn Price Ratio (0.05, 0.10, 0.15, 0.20), Rate, and Range. Rows include High Yield Potential Soils, Medium Yield Potential Soils, Irrigated Sands and Loamy Sands, and Non-irrigated Sands and Loamy Sands.

\*1 To determine soil yield potential, consult UWEX publication A2809 or contact your county agent or agronomist.

\*2 Includes N in starter.

\*3 Maximum return to N (MRTN) rate.

\*4 Profitability range within \$1/a or MRTN rate.

\*5 Subtract N credit for forage legumes, legume vegetables, animal manures, green manures.

\*6 Subtract credits for animal manures and second year forage legumes.

Guidelines for choosing an appropriate N application rate for corn (grain)

- 1) If there is more than 50% residue cover at planting, use the upper end of the range.
2) For small grains grown on medium and fine textured soils, the mid to low end of the profitable range is the most appropriate.
3) If 100% of the N will come from organic sources, use the top end of the range. In addition, up to 20 lb N/a in starter fertilizer may be applied in this situation.
4) For medium and fine textured soils with: < 2% organic matter, use the high end of the range; > 10% organic matter, use the low end of the range.
5) For coarse textured soils with: < 2% organic matter, use the high end of the range; > 2% organic matter, use the mid to low end of the range.
6) If there is a likelihood of residual N, then use the low end of the range or use the high end of the range and subtract preplant nitrate test (PPNT) credits.
7) For corn following small grains on medium and fine textured soils, the middle to low end of the range is most appropriate.