



Dear Soil Analysis Client,

Thank you for trusting OSU Extension with your soil analysis. Enclosed are your soil test results and an informational sheet with interpretation details. It is highly recommended that you keep these results for future reference and comparison.

Your soil results sheet summarizes the test results at the top and provides “Recommendations” in the chart at the bottom for improving your soil, based on the information you provided on the land use (e.g., crops, trees, forage, sod, etc.). Please note the units of application (i.e., broadcast lbs/acre) as you prepare to make adjustments.

The most important pieces of information are the pH and nutrient levels. For pH levels, a High or Very High test result (alkaline soil), as indicated on the graph, will correspond to a recommendation in the chart at the bottom to apply sulfur (S), and a Low or Medium test result (acidic) will correspond to a recommendation to apply lime (CaCO₃). In addition, if your soil has a Low or Medium test result for a nutrient, then there will be a recommendation for application of the nutrient in the chart. The bar for phosphorous (P) on the graph corresponds to the recommendation of P₂O₅ in the chart below it, and the bar for potassium (K) corresponds to the recommendation of K₂O in the chart. Although nitrogen is not analyzed in your sample, there will be a recommendation to add nitrogen (N) in the chart, based on your indicated past and future crop plans. A High or Very High test result for a nutrient on the graph might indicate you should beware of applying excessive amounts of the specified nutrient to your soil.

Below the “Recommendations” chart, please take notice if there are any special comments, such as nitrogen credits or limitations on application rates to prevent unnecessary excesses or injury to your crops. Applications of sulfur or lime to adjust pH should be made in late fall or early spring to avoid application during the growing season, and they should be worked into the soil, if possible.

Please let us know if you have any questions as you review your results and recommendations. We can be reached at the phone number above or email below.

Sincerely,

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Enclosures

1. Soil test results
2. Soil test analysis information

How to Read Your Soil Test Report



Agricultural soil test results for farm use

General Report Information

EACH REPORT CONTAINS 3 SECTIONS.

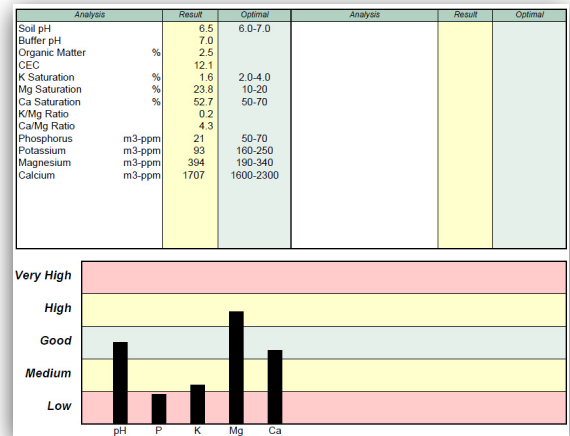
The top section contains identification information related to the sample and the requester.

The large central section contains the analytical results, both in chart and graph formats.

The bottom section includes recommendations for fertilizer and other materials, based on the intended plantings.

CENTRAL SECTION: SAMPLE ANALYSIS

The chart portion provides quantitative analysis of the sample, while the graph portion provides qualitative analysis of how the sample compares to the desired quality of soil.



Section containing test results; top chart gives analytical results and desired range for each measurement; bottom graph indicates qualitative status.

Recommendations		Nutrients expressed in broadcast (lb/A, except Fe (fstar) and Mn (row))										
Yr	Crop	CaCO3	N	P2O5	K2O	Mg	S	B	Cu	Fe	Mn	Zn
26	Fescue, Tall, Hay	2 ton	0	51	97	182	0					

Fescue, Tall, Hay: Reduce N-10 lb/a, P2O5-20 lb/a, and K2O-40 lb/a if grazed, as credit for manure recycling. The recommendations are based on crop removal plus a 7 to 10 year P and K buildup program.

Section containing recommendations for fertilizer and other materials, with special notes underneath the chart.

- pH: indicates acidity or alkalinity of soil with 7.0 being neutral
- Organic matter: holds water, resists compaction, and improves clay and sand
- CEC (Cation Exchange Capacity): indicates soil's ability to hold and supply cations to plants
- Saturation: percentage of the CEC that is occupied by the element
- Phosphorous (P): essential nutrient required by plants
- Potassium (K): essential cation element required by plants
- Magnesium (Mg): essential cation element required by plants
- Calcium (Ca): essential cation element required by plants

BOTTOM SECTION: RECOMMENDATIONS

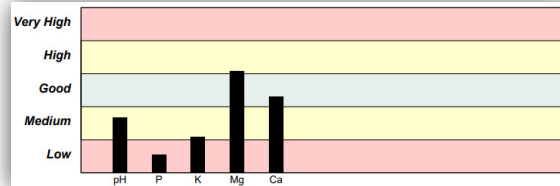
The chart portion provides recommendations for fertilizer and nutrient applications to support the indicated plant types, given broadcast applications. The comments under the chart provide special instructions or clarifications to the recommendations, based on specific plant types and land uses for which the sample was submitted.

- CaCO3 (lime): recommendation raises pH
- Nitrogen (N): essential nutrient required by plants
- Potash (P2O5): source of phosphorous (P) in fertilizers
- Potassium oxide (K2O): source of potassium (K) in fertilizers
- Sulfur (S): recommendations lowers pH

How to Read Your Soil Test Report



Example Report Evaluation



Lower pH, so lime (CaCO_3) is recommended but no sulfur (S) recommended to grow crops

Lower phosphorous (P), so P_2O_5 addition recommended to grow crops

Lower potassium (K), so K_2O addition recommended to grow crops

Higher magnesium (Mg), so no Mg addition recommended

Recommendations		Nutrients expressed in broadcast lbs/A except Fe (foliar) and Mn (row)										
Yr	Crop	CaCO_3	N	P_2O_5	K_2O	Mg	S	B	Cu	Fe	Mn	Zn
24	Hops	23 cwt	1952C	159	232	148	0					

Lime expressed in 100% pure CaCO_3 . Adjust accordingly. D=Dolomitic. C=Calcitic.

Hops: Establishment year apply 75 lbs N/acre. 2nd+ years apply N 30-45 days after emergence. Do not use chloride fertilizers. Monitor & adjust nutrient program based on annual tissue analysis.

HOW TO USE THE RECOMMENDATIONS SECTION (specific to what is grown)

- Review the numbers given for N, P_2O_5 , and K to determine NPK ratio to seek on a fertilizer package

N	P	K
10	15	10

 - In this example, the numbers are close (159, 232, and 148), so the NPK ratio will be close
 - The numbers given in an NPK ratio are the percentage of the weight that is each element
 - In a product with an NPK of 10-15-10, this indicates that 10% of the weight is nitrogen (N), 15% of the weight is phosphorous (P), and 10% of the weight is potassium (K), so a 50-lb bag has 5 lbs of N, 7.5 lbs of P, and 5 lbs of K
 - If the ratio cannot be matched at all, it may be necessary to apply 2 products to achieve the proper amounts
- Review the lbs/acre and calculate the size of your area tested
 - This recommendation is in lbs/acre (circled at the top of the section), so if you have a 5-acre field, you will need five times the amount given (e.g., 795 lbs of N, 1160 lbs P_2O_5 , and 740 lbs of K_2O)
 - In this example, calcitic lime is also recommended, so for a 5-acre field, you will need five times the amount given (e.g., 9760 lbs of CaCO_3)
- Note limitations or additional adjustments below the table (circled on the left side of the section)
 - In this example, nitrogen (N) recommendations for different years of establishment are given
 - In this example, chloride fertilizers are recommended against, and plant tissue analysis is recommended for adjustments through the growing season

Learn more about Tri-State Fertilizer Recommendations for Corn, Soybeans, Wheat, and Alfalfa at: go.osu.edu/FertRecs



Learn more about the Corn Nitrogen Rate Calculator at: go.osu.edu/CornNrateCalc

