University of Minnesota SOIL TEST REPORT Department of Soil, Water, and Climate Soil Testing Laboratory Minnesota Extension Service Lawn and Garden Agricultural Experiment Station JANE DOE 1900 SANDY LANE Page 1 **MINNEAPOLIS MN 55401** Report No. 1 Laboratory No. 114 07/18/12 Date Received Date Reported 04/19/18 SOIL TEST RESULTS Sample/Field Number: 1B Soluble Estimated Organic Nitrate Olsen Bray 1 Sulfur Calcium Magnesium Lead Buffer NO3-N SO4 -S Soil Matter Salts Phosphorus Phosphorus Potassium Zinc Iron Manganese Copper Boron pН Texture % mmhos/cm Index ppm P ppm P ppm K ppm 7.6 Coarse 2.8 45 40 89 INTERPRETATION OF SOIL TEST RESULTS РРРРРРРРРРРРРРРРРРРРРРРРРРРРРРРР Phosphorus (P) pН 9.0 5 10 15 20 25 3.0 4.0 5.0 6.0 7.0 8.0 Medium High V. High Acid Optimum Alkaline Low KKKKKKKKKK Potassium (K) Soluble Salts 4.0 5.0 6.0 7.0 8.0 9.0 10.0 25 75 125 175 225 0 1.0 2.0 3.0 Possible Problem Excessive Salts Satisfactory Medium High V. High Low **RECOMMENDATIONS FOR: Home Lawn** LIME RECOMMENDATION: 0 LBS/1,000 SQ.FT. Grass watered Clippings removed TOTAL AMOUNT OF EACH NUTRIENT TO APPLY PER YEAR:\* NITROGEN PHOSPHATE POTASH 3 LBS/1,000 SQ.FT. 0 LBS/1,000 SQ.FT. 3 LBS/1,000 SQ.FT. THE APPROXIMATE RATIO OR PROPORTION OF THESE NUTRIENTS IS: 10-0-10

**Client Copy** 

Use a fertilizer with the percentage of nutrients closest to the above ratio. Apply according to the instructions on the fertilizer bag or container, or determine the amount required from the instructions given on the back side of this report. Since meeting the exact amount required for each nutrient will not be possible in most cases, it is more important to apply the amount of nitrogen required and compromise some for phosphate and potash.

\*CAUTION! Do not apply more that 1 lb. nitrogen per 1000 sq. ft. in one application to avoid burning the grass, unless a slow release form or organic fertilizer is used. It is recommended that up to 50 percent of the nitrogen be of the slow release form.

-Apply another 1/3 of the above total late summer. -Apply the remaining 1/3 of the above total early fall. -Apply 1/3 of the above total late spring.

Grass clippings left on the lawn is a sound practice because they recycle nutrients.

County: DAKOTA. For additional information, contact the YARD & GARDEN LINE: Phone: 612-301-7590 Website: www.extension.umn.edu/yardandgarden

# **Explanation of Soil Test Report**

Fertilizer Nitrogen %

(First number of fertilizer

Soil pH: This is a measurement of acidity, which is important because it affects:

- 1) the availability of several plant nutrients, 2) the activity of soil microorganisms,
- 3) the ability of soil to hold plant nutrients.

The optimum pH for most plants and soil microorganisms is between 6.0 and 7.0. Some plants, however, such as blueberries, azaleas and others prefer more acidic conditions (i.e., lower pH). Since grasses are quite tolerant to a wide pH range, lime is generally not recommended on established grasses.

Since meeting the exact amount required for each nutrient will not be possible in all cases, it's most important to match the Nitrogen (N) required. The amount of fertilizer to apply that will give the recommended amount of nitrogen can be obtained from the following table:

#### Table to Determine Total Amount of Fertilizer to Apply Based on Actual Nitrogen Recommended:

0.15 lb. N/100 sq ft

0.1 lb. N/100 sq. ft

Nitrogen Recommended

0.2 lb. N/100 sq. ft

4.00

1.0 lb. N/1000 sq. ft

Total lbs. fertilizer to

20.0

Buffer Index: This test is used only to determine the lime requirements and should not be confused with soil pH.

Organic Matter: The Regular Series test includes an estimate of the percent organic matter. The	grade on bag) 45	Total lbs. fertilizer to apply / 100 sq. ft			apply/1000 sq. ft
		0.22	0.33	0.44	2.2
classifications used for organic matter are: Low 0-3%, Medium 3.1-4.5%, High 4.6-19%, and Organic	37	0.27	0.40	0.54	2.7
Soil 19.1% or greater.	36	0.28	0.42	0.56	2.8
Organic Matter has many important functions in soils, some of which are:	33	0.30	0.45	0.60	3.0
Organic Watter has many important functions in sons, some of which are.	32	0.31	0.46	0.62	3.1
1) to improve soil structure, water infiltration, drainage, and soil aeration	30	0.33	0.50	0.66	3.3
on clayey type soils.	28	0.36	0.54	0.72	3.6
2) to act as a reservoir of available plant nutrients	27	0.37	0.56	0.74	3.7
3) to increase the water holding capacity of sandy soils. When organic	25	0.40	0.60	0.80	4.0
s) to increase the water holding capacity of sandy sons. When organic	24	0.42	0.63	0.84	4.2
matter is low, large amounts of peat, compost, crop residues, manure or other	22	0.45	0.68	0.90	4.5
organic amendments are required to change the organic matter content of the soil.	21	0.48	0.72	0.96	4.8
	20	0.50	0.75	1.00	5.0
Soluble Salts: This test is used primarily to check for high amounts of salts in "black" dirt that is used	19	0.53	0.80	1.06	5.3
in now landscaping or for ton desping numerous and for nossible salt deman to greas from salted strats	18	0.56	0.84	1.12	5.6
in new randscaping of for top-dressing purposes and for possible said damage to grass from safed streets	16	0.63	0.95	1.26	6.3
and sidewalks. Excess salt must be leached by intense watering before the plants will grow normally.	15	0.67	1.00	1.34	6.7
	13	0.77	1.15	1.54	7.7
Lead: Recommended for soils or sandbox sand to which young children may be	12	0.83	1.25	1.66	8.3
repeatedly exposed	10	1.00	1.50	2.00	10.0
repeatedry exposed.	8	1.25	1.88	2.50	12.5
	6	1.67	2.50	3.34	16.7

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Other Special Tests: Recommendations are not provided for these tests since the interpretations are limited to special situations. The tests are provided for professionals only.

Interpretation of Soil Tests: The relative levels of various nutrients are indicated by a series of symbols. A line of P or K letters ending in the lower areas of the block, represents a low level of the nutrient.

Recommendations and Calculation of Fertilizer Required: Lime and plant nutrient recommendations are given in pounds per area (1000 square feet for turf, or 100 square feet for gardens, trees or shrubs). Plant nutrients are expressed as nitrogen (N), phosphate (P205) and potash (K20). The recommended plant nutrient requirements can be met by applying a given amount of fertilizer(s).

Commercial fertilizers are identified with a 3-numeral code that indicates the percentage of nitrogen, phosphate, and potash. A common garden fertilizer labeled 10-10-10 contains 10% of each of the three plant nutrients. Most garden centers sell fertilizer blends (10-10-10) rather than single nutrient fertilizers like 20-0-0 or 0-0-60 which are available from fertilizer dealers. Because there are a limited number of fertilizer blends on the market you may not find one that exactly meets the ratio recommended (reported on the front side). In this case, you should select a fertilizer blend with the closest ratio of N-P2O5-K2O to that recommended.

Example: If the N (nitrogen) recommendation is for 0.1 lb. N/100 ft. sq. and the fertilizer grade you selected has a ratio of 18-6-12 (column 1), you will have to apply 0.56 lbs of this fertilizer (from column 2) for each 0.1 lb. N recommended per 100 square feet.

3.00

Note: 2 cups (1 pint) of dry fertilizer weighs about 1 pound.

### **General Information**

## For Home Lawns: follow these rules when applying fertilizer:

2.00

- 1) use a formula designed for lawns (not trees, flower beds or farms).
- 2) apply fertilizer during the spring and late summer (do not fertilize frozen ground).
- 3) apply fertilizer uniformly in two directions with a mechanical spreader.
- 4) sweep up any fertilizer accidentally applied on sidewalks and driveways to prevent its movement to storm sewers, lakes and streams.
- 5) water the lawn thoroughly after fertilizing to dissolve the nutrients and force them down to the soil surface to combine with the soil.

## For Vegetable and Flower Gardens:

Manure, compost, or other forms of organic matter may be added. These amendments provide a good source of trace nutrients as well as improve soil granulation. Three to five bushels of manure or compost per 100 square feet are recommended.