PENNSTATE
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Agricultural Analytical Services Laboratory
The Pennsylvania State University
University Park, PA 16802
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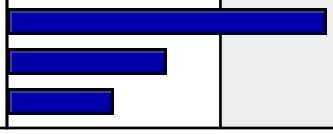
SOIL TEST REPORT FOR:	ADDITIONAL COPY TO:
JOHN JONES JONES FAMILY FARM HARMONY LANE GREENVILLE PA 22222	SAM COOK TOP GROW ENTERPRISES 111 ALFALFA RD. SMITHVILLE PA 11111

DATE	LAB #	SERIAL #	COUNTY	ACRES	FIELD ID	SOIL
06/11/2014	S01-19627	55	Centre		Front Yard	

SOIL NUTRIENT LEVELS			Below Optimum	Optimum	Above Optimum
Soil pH	7.0				
Phosphorus	35	ppm			
Potassium	100	ppm			



RECOMMENDATIONS FOR: ***Maintain Athletic Field*** ***Annual Bluegrass***

Limestone: NONE

Nitrogen: 3-4 lb/1000 square feet

Phosphate (P_2O_5): 1.5 lb/1000 square feet

Potash (K_2O): 2 lb/1000 square feet

MESSAGES

There is no reliable test for evaluating the amount of actual nitrogen (N) in soils that is available to turfgrasses over the growing season. The above N recommendation is the amount of actual N that needs to be supplied annually to ensure good turf growth. The amount of N recommended on this soil test report should be divided into 2 to 4 applications per growing season. If the N recommendation is provided as a range, use amounts in the high range for turf growing in poor soils, in high traffic areas, or where mower clippings are removed from the site.

If your soil test report contains a recommendation for phosphate and/or potash, you can use a complete fertilizer (a fertilizer containing N, phosphate, and potash) to meet recommended amounts of N, phosphate and/or potash. Split complete fertilizer applications into 2 to 4 applications per growing season until you meet recommendation or until you take another soil test. Alternatively, you can apply super phosphates (0-46-0 or 0-23-0) to meet phosphate recommendation, but do not exceed 5 lb. phosphate/1000 square feet per application. Similarly, you can apply sulfate of potash (0-0-50) or muriate of potash (0-0-60) to meet potash recommendation. Do not exceed 2 lb. potash/1000 square feet per application.

The best times of year to fertilizer turfgrasses in Pennsylvania are late summer (September), late fall (November), and mid to late spring (April or May).

LABORATORY RESULTS:

[1]pH	[2]P lb/A	Exchangeable Cations (meq/100g)					% Saturation of the CEC			Optional Tests:		
		[3]Acidity	[2]K	[2]Mg	[2]Ca	[4]CEC	K	Mg	Ca	Organic Matter %	Nitrate-N ppm	Soluble salts mmhos/cm
7.0	70	0.00	0.26	0.83	8.00	9.1	2.8	9.2	88.0			

Test Methods: [1]1:1 soil:water pH, [2]Mehlich 3 (ICP), [3]Mehlich Buffer pH, [4]Summation of Cations

COMMENTS

1. Lime may be applied at any time of the year, although fall application is considered optimum. Use a high quality agricultural ground limestone product to meet the lime recommendation on this report. Manufacturers of agricultural ground limestone products provide a number called the calcium carbonate equivalent, or CCE, on the label. CCEs with high numerical values (close to 100 or above) indicate a pure lime source (greater ability to neutralize soil acidity). The amount of lime recommended on this report is based on an agricultural ground limestone with a CCE of 100. If your lime source is close to or equal to 100, you don't need to adjust the recommended amount. In the event that you use a lime source with a CCE well below or above 100, use the following formula to adjust the required amount.

   $$\text{Actual liming material required} = \frac{\text{(Soil test recommendation in lbs of lime/1000 square feet)}}{\text{CCE of liming material}} \times 100$$

   Example Only:
   Soil Test Recommendation: Apply 75 lbs lime/1000 square feet
   CCE on label: 80 percent

   $$\text{Actual liming material required} = \frac{\text{(75 lb of lime)}}{80} \times 100$$

   = 94 lb liming material/1000 square feet

2. With the exception of golf course putting greens and tees, if the lime recommendation exceeds 100 pounds per 1000 square feet, split the recommended amount into 2 or more separate applications 4 to 6 months apart. No application should exceed 100 lbs per 1000 square feet. For putting greens and tees, if the lime recommendation exceeds 25 pounds per 1000 square feet, split the recommended amount into 2 or more separate applications 4 to 6 months apart. No application should exceed 25 lbs per 1000 square feet.

3. The source of nitrogen in a fertilizer is important in determining the growth rate, density, and color of your turf. Nitrogen fertilizers can be divided into two categories - quick release and slow release. Quick-release nitrogen sources are soluble in water, hence nitrogen is available to the plants immediately. They also can burn turf easier than slow-release sources. Slow-release nitrogen sources typically release a portion of their nitrogen over relatively long periods (several weeks to several months). Slow-release nitrogen sources can be grouped into several categories including the natural organics, ureaform, urea-formaldehyde reaction products, triazones, IBDU, sulfur-coated urea and polymer-coated nitrogen. Sources vary widely in nitrogen release rates. Slow-release nitrogen sources generally cost more than quick-release sources and this has prompted many manufacturers and turf managers to mix or blend both slow- and quick-release sources.

   The amounts of quick- and slow-release nitrogen in a fertilizer product are listed as percentages of the total nitrogen on the fertilizer label. Quick-release nitrogen is designated as ammoniacal nitrogen and/or urea. Slow-release nitrogen is designated as water insoluble nitrogen (WIN) or controlled-release nitrogen (CRN).

   When possible, use fertilizer containing 30% or more of the total nitrogen in a slow-release form as water insoluble nitrogen (WIN) or controlled release nitrogen (CRN). This information is provided on the fertilizer label.

4. Soil should be retested in three years for new recommendations.

5. Publications on turfgrass management are available from your county cooperative extension office or the