WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
MATERIALS CONTROL, SOILS AND TESTING DIVISION

MATERIALS PROCEDURE

DETERMINING APPLICATION RATE OF GROUND AGRICULTURAL LIMESTONE BASED ON pH TEST

1.0 PURPOSE

1.1 To provide guidance and instruction in determining the application rate of agricultural limestone to specific areas, based on pH, prior to seeding.

2.0 SCOPE

2.1 This procedure is applicable to all projects and is intended to be used in the field.

3.0 DEFINITIONS

3.1 Section - An entire cut, fill, or median area, or any portion thereof, to receive either permanent or temporary seeding.

3.2 pH - The acidity or alkalinity of a substance expressed as a numerical value.

3.3 Average pH - The average of individual pH determinations from each section.

4.0 PROCEDURE

4.1 All pH determinations shall be made in accordance with instructions that accompany soil reaction kits furnished by this Division to the District Materials Organization.

4.2 For through cuts or through fill slope sections, the average pH will be determined from a total of six individual readings. If both sides of the roadway are seeded concurrently, three of the individual readings shall be made on each side.

4.3 For side hill cut and side hill fill sections, the average pH will be determined from six individual readings from each side of the roadway.

4.4 For medians, the average pH will be determined from six tests for each section.

4.5 For all other miscellaneous sections not listed above, the average pH will be determined from two tests.

5.0 DETERMINING APPLICATION RATES OF AGRICULTURAL LIMESTONE

5.1 Using the average pH set forth in paragraph 4, each section will be limed at the rates specified in Table 1 for the type of soil and seed mixture.

6.0 DOCUMENTATION

6.1 Results of pH determinations and locations will be documented on the attached worksheet(s), with one copy being forwarded to the Materials Control, Soils and Testing Division by the District Materials Organization.

Gary L. Robson, Director
Materials Control, Soils
and Testing Division

GLR:h

Attachments

TABLE 1

RATES FOR APPLYING AGRICULTURAL LIMESTONE

(Pounds per Acre)

Soil pH	Degree of Acidity	Crownvetch and Lawn Mixture (mixtures C_1, C_2 D)		Sericea Lespsdeza and K_{31} Fescue (mixtures A and B)	
		Sandy Soil	All Others	Sandy Soil	All Others
7 +	Neutral to Alkaline	0	0	0	0
6.0 to 6.9	Slightly Acidic	1000	2000	0	0
5.5 to 5.9	Medium	2000	4000	1000	1000
4.5 to 5.4	Strong	3000	5000	1500	2000
3.5 to 4.4	Very Strong	Not Suitable for Crownvetch		3000	4000
<= 3.4	Toxic to most Plants	Not Suitable for Crownvetch		5000	8000

West Virginia Division of Highways

Field Determination of pH

Project:				County:		
Date:				Signature:		
Section Sta. to Sta.	Right and/or left	Cut or fill	pH Values	Average pH	Sandy or Other	Appl. Rate
			1= 2= 3= 4= 5= 6= ∑=			
			1= 2= 3= 4= 5= 6= ∑=			
			1= 2= 3= 4= 5= 6= ∑=			
			1= 2= 3= 4= 5= 6= ∑=			