

Land and Materials Administration • Resource Management Program

State Sewage Sludge Task Force
(State Biosolids Advisory Committee)

Members

Maryland Department of the Environment
University of Maryland Cooperative Extension Service
Maryland Department of Agriculture
U.S. Department of Agriculture
Natural Resources Conservation Service
Public/Private Generators
Public/Private Applicators

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Maryland Farm Bureau
Local Governments

Coastal Plain Soil pH Management Advisory

The following is an advisory of the State Biosolids Advisory Committee (SBAC) to farmers utilizing sewage sludge, which may contain significant amounts of lime. As you know, the application of lime on agricultural land is widely practiced to maintain the optimum pH of soil so as to increase crop productivity. On some soils, higher than optimum pH may also increase the possibility for lime induced manganese (Mn) deficiency in sensitive crops (soybeans, wheat, and oats). This possibility for Mn deficiency in the State of Maryland is primarily in Coastal Plain soils.

Some sewage sludge applied to agricultural land contains significant amounts of lime which may raise soil pH. To prevent lime induced Mn deficiency from possibly reducing yields of sensitive crops following the application of limed sewage sludge, the SBAC recommends that the soil pH not exceed a level of 6.5 for those soils with a high potential for lime induced Mn deficiency (see the attached list). If limed sewage sludge is applied to soils having a moderate or low potential for Mn deficiency (also shown on the attached list), the SBAC recommends that the soil pH not exceed the range of 6.8 to 7.0.

Sewage sludge which is not lime stabilized or lime amended will not raise the pH of soil and will not cause lime induced Mn deficiency. You may request that an applicator apply only a non-limed sewage sludge to your property or apply the limed sewage sludge at application rates calculated not to exceed a certain soil pH. The applicator should be able to give you an estimate of the resultant soil pH following the application of limed sewage sludge at various application rates. Be aware that Sewage Sludge Utilization Permits are issued for a 5 year term; however, you may elect not to accept repeated applications of sewage sludge for any reason, including soil pH management decisions.

A crop Mn deficiency in plant tissues can only be verified by laboratory analysis. The farm owner and/or operator, therefore, is being asked to notify the sewage sludge applicator as soon as possible of a suspected Mn deficiency (for instance, yellowing between the veins of younger leaves on soybeans) following the application of a limed sewage sludge. The sewage sludge applicator agrees to conduct plant tissue analysis upon such notification, and to take whatever other steps are necessary and prudent to correct a Mn deficiency which has been caused by the application of a lime amended sewage sludge. These corrective measures may include foliar application of Mn and/or the application of sulfur to reduce the soil pH. This agreement is to remain in effect for a period of 5 years after the application of a limed sewage sludge to any field. To avoid creating a Mn deficiency, the farmer should consult with the sewage sludge applicator prior to the application of additional lime to any sewage sludge amended fields. Application of additional lime without first consulting with the sewage sludge applicator may release the sewage sludge applicator from further obligation.

It is recommended that the property owner notify new farm operators of this advisory if the operator or owner changes within 5 years after the application of lime amended sewage sludge on their property.

_____	_____
Property Name	Property Address
_____	_____
Property Owner	Sludge Applicator
_____	_____
Farm Operator	Date

Questions or for additional information, please call the Department at (410) 537-3314