



Lime Recommendations

Maintaining the soil pH in a proper range is an essential part of a good soil fertility program. Lime should be applied when the soil pH is lower than desired for the cropping system.

The amount of lime required to adjust the soil pH to the desired level will depend on the individual soil sample characteristics: soil acidity level (pH), soil texture, organic matter, etc. We group soils into three categories when making lime recommendations, based on organic matter (OM) content and cation exchange capacity (CEC).

Following are tables showing lime recommendations for the three categories. These recommendation rates are based on the use of a specific quality lime: CCE = 90%, 95% passing 8-mesh, 60% passing 20-mesh, 50% passing 60-mesh, and 40% passing 100-mesh. See Fact Sheet # 6, *Adjusting Lime Recommendations*, for more information about our lime quality standard and how to adjust application rates for liming materials of varying quality.

Mineral Soils:

Most soils of the Great Lakes region fall into this lime recommendation category: CEC > 7.0 meq/100g and OM <10%. Lime recommendations are made using the buffer pH test result. The standard lime recommendation is made to raise the soil pH to 6.5.

Mineral Soils: Lime Recommendation (Tons/Acre)		
Buffer pH	Target pH = 6.9	Target pH = 6.5
6.8	1.5	1.0
6.7	2.5	2.0
6.6	3.5	3.0
6.5	4.5	4.0
6.4	5.5	4.5
6.3	6.5	5.5
6.2	7.5	6.5
6.1	8.5	7.0
6.0	9.5	8.0

Organic Soils:

Some soils of the Great Lakes region have a very high organic matter content (>10%). Lime recommendations are made using the soil pH test result. Our standard lime recommendation is made to raise the soil pH to 5.3; no lime is recommended at higher soil pH values.

Organic Soils: Lime Recommendation (Tons/Acre)	
Soil pH	Target pH = 5.3
5.2	0.0
5.1	0.7
5.0	1.3
4.9	2.0
4.8	2.6
4.7	3.2
4.6	3.9
4.5	4.5
4.4	5.1

Sandy Soils:

Sandy soils of the Great Lakes region usually have a relatively low CEC (<7.0). Lime recommendations are made using the soil pH test result. Like mineral soil, our standard lime recommendation is made to raise the soil pH to 6.5.

Sandy Soils: Lime Recommendation (Tons/Acre)		
Soil pH	Target pH = 6.9	Target pH = 6.5
6.3 - 6.6	1.0	0
6.0 - 6.2	1.5	1.0
5.7 - 5.9	2.0	1.5
5.4 - 5.6	2.5	2.0
5.1 - 5.3	3.0	2.5
<5.1	3.5	3.0