

Water pH	Buffer pH	Alfalfa	Potato Grass	All other crops
		Lime Requirement		
		ton/acre ENP		
6.5	---	0.0	0.0	0.0
6.4	---	2.0	0.0	0.0
6.3	---	2.0	0.0	0.0
6.2	---	3.0	0.0	0.0
6.1	---	3.0	0.0	0.0
6.0	---	3.0	0.0	0.0
<6.0	6.8	3.0	0.0	2.0
<6.0	6.7	3.5	0.0	2.0
<6.0	6.6	4.0	0.0	2.0
<6.0	6.5	4.5	0.0	2.5
<6.0	6.4	5.0	0.0	3.0
<6.0	6.3	5.5	0.0	3.5
<6.0	6.2	6.0	0.0	4.0
<6.0	6.1	6.5	0.0	4.5
<6.0	6.0	7.0	0.0	5.0
<6.0	5.9	7.5	0.0	5.5
<6.0	5.8	8.0	0.0	6.0
<6.0	5.7	8.5	0.0	6.5
<6.0	5.6	9.0	0.0	7.0
<6.0	<5.6	9.0	0.0	7.0

Guideline based on effective neutralizing power (ENP) of ag lime (1000 lb/ton).  
Reduce lime guideline by 1/2 for western Minnesota, western Iowa, North Dakota, and

**Comments:**

1. Soil pH determines if lime is needed.
2. Buffer pH determines the lime rate required to increase soil pH.
3. Alfalfa is the most responsive agronomic crop, followed by the other legumes. Cereal crops are least responsive to lime application.
4. Some very low pH (<5.5), sandy soils with organic matter may have buffer pH suggesting that NO lime is necessary. A minimum of 1 ton/acre ENP ag lime may be required.
5. Calcitic (calcium) and dolomitic (calcium and magnesium) limestone materials are equally effective liming materials, based on ENP rating. Dolomitic limestone may be preferred if soil test magnesium is low.

**Minimum pH for common crops**

Alfalfa	6.5
Soybean	6.0
Other legumes	6.0
Corn	5.5
Small grains	5.5