

Reducing Your Soil pH

The soil pH value is a measure of soil acidity or alkalinity. The pH value of soil is one of a number of conditions that affect the quality of plant growth.

What Affects Soil pH?

- Rainfall – soils with heavy rainfall tend to have lower pH values than soils in dry conditions due to the leachability of calcium and magnesium.
- Fertilizer applications containing ammonia or urea speed up the rate at which acidity develops.
- Soil Origin – soils developed from basic rock material typically have higher pH values than soils developed from acid rock material.

The materials most commonly used for lowering soil pH values are Aluminum Sulfate, Ammonium Sulfate and Elemental Sulfur. Aluminum Sulfate will change the soil pH instantly since the aluminum produces the acidity as soon as it dissolves in the soil. Both Ammonium Sulfate and Elemental Sulfur take time to breakdown to sulfuric acids in order to lower soil pH. The fineness of the material, the soil moisture and soil temperature are also other factors that may slow the process down.

Whichever product you choose, all should be worked into the soil to be most effective.

The table on the following page can be used as a guide to help lower your soil pH level.

LAB FACTS

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Reducing Soil pH with Elemental Sulfur

		Desired Soil pH											
		4.0		4.5		5.0		5.5		6.0			
		SOIL TEXTURE CLASSIFICATION											
Initial pH		sandy	loamy	clay	sandy	loamy	clay	sandy	loamy	clay	sandy	loamy	clay
		*****Sulfur required (Lbs per 1000 square ft)*****											
4.0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.5	4	10	16	0	0	0	0	0	0	0	0	0	0
5.0	8	20	32	4	10	16	0	0	0	0	0	0	0
5.5	12	29	47	8	20	32	4	10	16	0	0	0	0
6.0	15	38	61	12	29	47	8	20	32	4	10	16	0
6.5	19	48	77	15	38	61	12	29	47	8	20	32	4
7.0	23	57	92	19	48	77	15	38	61	12	29	47	8
7.5	27	67	107	23	57	92	19	48	77	15	38	61	12

Note: To Convert lbs/1000 square feet to Pounds Per Acre, multiply by 43.56

Aluminum Sulfate, multiply lbs/acre of Sulfur by 6.0

Ammonium Sulfate, multiply lbs/acre of Sulfur by 2.6

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