Lowering Soil pH

Aluminum Sulfate, Ammonium Sulfate and Soil Sulfur (elemental sulfur) are products or soil amendments that are often used to acidify soil by 1 or more pH units.

When selecting the best method of acidifying the soil, consider:

- How much you want to lower the pH
- Whether the soil amendment used will provide beneficial nutrients
- Time frame on how quickly you need to change the soil pH
- Budget

Acidification occurs faster when the products are incorporated into the soil than when its left on top of the soil surface.

Mixing these products into the top 6 to 10 inches of the top soil is generally adequate to acidify soils, but may take up to a year before you have their full effect on the soil pH.

If your pH is above 7.0, an application of Aluminum Sulfate will be effective in lowering soil pH to the 5.5 range which is desirable for growing acid loving plants. Recheck soil pH every 2 weeks.

Hi-Yield Soil Sulfur (elemental sulfur) is slow acting but long lasting material. Its effect on soil acidity will not be complete until 6 to 8 weeks after applying.

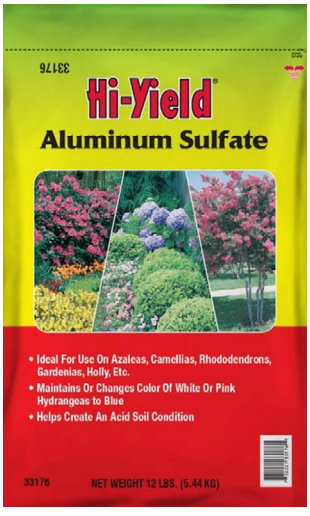
Iron Sulfate can also be used to lower pH but requires 6 times more product than elemental sulfur. Iron Sulfate reacts faster at 3 to 4 weeks than Soil Sulfur.

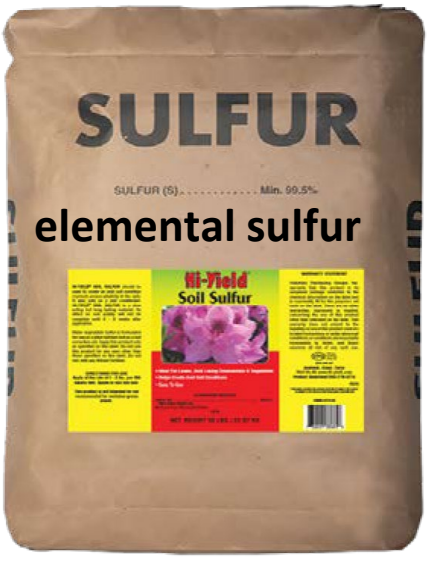
Soil types, The basis for a good garden is the soil available for the plants to grow in. Loam is a soil type that contains all 3 of the basic soil particles: silt, clay and sand. By weight, its mineral composition is about 40-40-20% concentration. The soil type determines how much product is needed and which is best suited for your needs.

Aluminum Sulfate is faster acting than elemental sulfur because it is very soluble. The advantage of elemental sulfur is that it is more economical, particularly if a large area is to be treated. Six times as much aluminum sulfate is needed as elemental sulfur.

Ammonium Sulfate can help maintain acid soil conditions, but will not be as effective in significantly reducing soil pH. Our Ammonium Sulfate of 21-0-0 at 10 lbs. per 1,000 sq. ft. can change the pH from 7.5 to 7.4. Over application of this high nitrogen can burn the roots.

Of the 3 amendments, Aluminum and Ammonium are chemical reactions compared to Soil Sulfur (elemental sulfur) is a biological reaction.





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The following tables are approximate amounts of amendments needed to lower pH in soils.

Table 1 - **Hi-Yield Soil Sulfur (elemental sulfur)**
Silt Soil to a depth of 6 inches

		Desired Soil pH				
		6.5	6	5.5	5	4.5
Present Soil pH		Pounds Soil Sulfur (elemental sulfur) per 100 Square Feet				
	8	3	4	5.5	7	8
	7.5	2	3.5	4.5	6	7
	7	1	2	3.5	5	6
	6.5		1	2.5	4	4.5
	6			1	2.5	3.5

Table 2 - **Hi-Yield Soil Sulfur (elemental sulfur)**
Sandy Soil to a depth of 6 inches

		Desired Soil pH				
		6.5	6	5.5	5	4.5
Present Soil pH		Pounds Soil Sulfur (elemental sulfur) per 100 Square Feet				
	8	2	2.7	3.6	4.7	5.4
	7.5	1.4	2.3	3	4	4.7
	7	0.6	1.4	2.3	3.3	4
	6.5		0.6	1.1	2.7	3
	6			0.6	1.7	2.3

Table 3 - **Hi-Yield Soil Sulfur (elemental sulfur)**
Clay Soil to a depth of 6 inches

		Desired Soil pH				
		6.5	6	5.5	5	4.5
Present Soil pH		Pounds Soil Sulfur (elemental sulfur) per 100 Square Feet				
	8	4.5	6	8.25	10.5	12
	7.5	3	5.25	6.75	9	10.5
	7	1.5	3	5.25	7.5	9
	6.5		1.5	3.75	6	6.75
	6			1.5	3.75	5.25

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Table 4 - **Hi-Yield Aluminum Sulfate**
Silt Soil to a depth of 6 inches

		Desired Soil pH				
		6.5	6	5.5	5	4.5
Present Soil pH		Pounds Aluminum Sulfate per 100 Square Feet				
	8	18	24	33	42	48
	7.5	12	21	27	36	42
	7	6	12	21	30	36
	6.5		6	15	24	27
	6			6	15	21

Table 5 - **Hi-Yield Aluminum Sulfate**
Sandy Soil to a depth of 6 inches

		Desired Soil pH				
		6.5	6	5.5	5	4.5
Present Soil pH		Pounds Aluminum Sulfate per 100 Square Feet				
	8	12	16.2	21.6	28.2	32.4
	7.5	8.4	13.8	18	24	28.2
	7	3.6	8.4	13.8	19.8	24
	6.5		3.6	10.2	16.2	18
	6			3.6	10.2	13.8

Table 6 - **Hi-Yield Aluminum Sulfate**
Clay Soil to a depth of 6 inches

		Desired Soil pH				
		6.5	6	5.5	5	4.5
Present Soil pH		Pounds Aluminum Sulfate per 100 Square Feet				
	8	27	24	49.5	63	72
	7.5	18	31.5	40.5	54	63
	7	9	18	31.5	45	54
	6.5		9	22.5	36	40.5
	6			9	22.5	31.5

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