

Lb. Sulfur/A	Lb. Sulfur/1,000 sq. ft.	Reduction in Soil pH
100	2	0.20
250	5	0.40
500	10	0.70
1,000	20	1.20

### How to make Soils more Acid

Soils which have high pH values can be made more acid by the application of fertilizers containing ammonium nitrogen. This can be accomplished over a period of time on tees and greens by applying from  $\frac{1}{4}$  to  $\frac{3}{4}$  lb. nitrogen per 1,000 square feet per application. Frequent treatments are usually necessary to provide adequate nitrogen levels over the entire growth season. Attempts to increase the amount applied at each treatment so that the frequency of applications may be reduced often result in foliar burn or in the production of over succulent turf which is subject to injury from adverse climatic conditions. Applications of fertilizers containing ammonium nitrogen may be applied dry with a whirl-wind type spreader or may be spread with a proportioner using water as a carrier. In either case the fertilizer should be washed from the foliage and into the soil immediately following application to each green or tee.

Aluminum sulphate has been used to acidulate the soil; however, rates of application for turf have not been well worked out. This material can be extremely toxic to plants and its use on turf is not generally recommended.

Flowers of sulfur or powdered sulfur may be used effectively to acidulate the soil. It has been used on putting greens and tees where pH levels have been too high for best growth of turfgrasses. Most uniform application may be made by mixing the sulfur with sand or topsoil as a carrier and by spreading the mixture with a whirl-wind type applicator.

It is important that exactly the right amount be applied since sulfur decomposes to form sulfuric acid which in large amounts may produce severe injury to turfgrass stands. Tests with a very fine sandy loam soil to which powdered sulfur was mixed at rates from 100 lb./A to 1,000 lb./A produced the following results:

It was found that the maximum effect of the sulfur on reducing soil pH was evident within one month from the date of application. Tests with heavier soils and with soils higher in organic matter indicate less effect than on the lighter soils with lower organic matter contents.

Applications on turf should not exceed 5 lb./1,000 square feet. Treatments should be made in spring and fall rather than during summer months. Test strips on a turf nursery are advised prior to treating greens. These will enable a careful standardisation of rate of application with existing grass and growth conditions.

Since disease organisms are often more active under acid soil conditions, particular attention should be directed toward disease identification and fungus control during periods of soil acidulation with powdered sulfur.

### References

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## PREDICTION

*When one day at Heaven's gate  
St Peter meets the Coach,  
He'll hear "Now Peter, get this straight—  
It's all in the approach"!*

—Anita Raskin