

Lime—For or Against

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WHEN speaking or writing on "lime" for use on a golf course I fully realize that I am picking a hard row to hoe.

Lime, as most of us realize by now, should be according to some experts taboo on a golf course. There have been quite a few fallacies ex-

ploded of late years about the growing of grasses and perhaps it is not unreasonable to predict that others will follow, but as I have chosen lime for my subject in the hope that it may bring about further discussion, let lime suffice.

There are generally two sides to a subject and we have it here with a vengeance.

What does lime do for soils where good turf is required as on a golf course. We are told by some experts that the application of lime sweetens the soil and "why sweeten the soil when a sour or acid soil is required for the production of good turf?" Others say that it brings clover or encourages clover—and that is about the worst they can say about lime—at least that is my impression.

On the other hand what can be said about the benefit of lime when applied to certain soils. Take for instance heavy and adhesive clay which is probably more deficient in lime than any other yet to render such soil suitable for producing good turf we are advised to render it acid by frequent applications of such chemical fertilizer as sulphate of ammonia (we are also told that by this treatment clover and chickweed (*cerastium*) will disappear.

My experience of such soil following this treatment is that they are extremely slow in reaction and with considerable expense attached. I may also add that clover and chick-

weed are much in evidence. To use the words of an old tutor of mine years ago, "Lime properly applied is the key to a locked store-room."

I am convinced after years of practical experience and observation that lime properly applied to heavy soils does vastly more good than harm where good turf is required. Now Mr. "Expert" throw those bricks at me.

Lime Lightens Heavy Soils

LIME as aforesaid will tend considerably to lighten heavy soils, rendering them more mellow and friable, and to improve the texture of the soils generally. This in itself will greatly assist in preventing so much baking and cracking as is generally the case during a hot dry period. Lime by its action also assists in providing better drainage—if we realize this we should see that by so doing the soil must lie drier and therefore consequently warmer enabling work to be proceeded with as desired.

Lime greatly assists in the decomposition of organic matter by allowing the soil bacteria to work more freely without which we are told no soil is fertile. Also by its action, lime releases certain properties in the soil which are not available as plant food. It would be reasonably safe to say that without the aid of lime in some proportion we are not getting the full benefit of the numerous fertilizers, both organic and otherwise that are being applied to many golf courses. We can have too much acidity as well as too much "sweetness" for the production of good turf.

Undoubtedly sulphate of ammonia is richer in nitrogen than most chemical fertilizers and unlike phosphoric acid or lime does not leach or wash away—is this a point worth considering. An over-abundance of one food does not make up for a shortage of one or two others, however good it may be, in fact it does harm eventually. I have seen both good and bad

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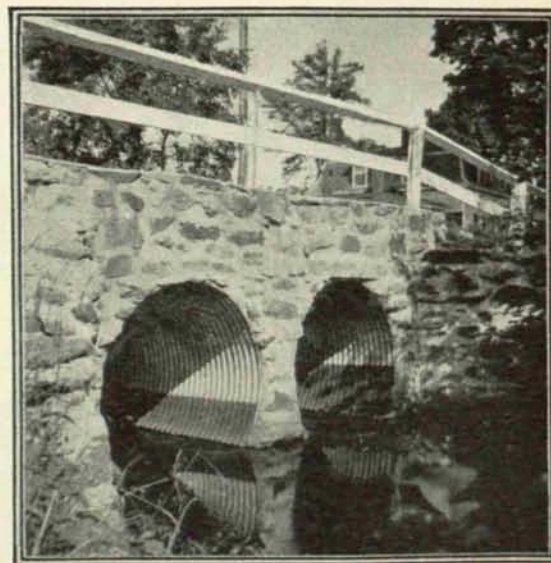
results from the use of sulphate of ammonia on plant life some thirty years ago—the remedy in the latter case was that condemned article—lime.

Lime Needed Near the Surface

WE HAVE often heard the argument that some soils are highly impregnated with lime on account of the deposit of sediment to be seen in water pipes or kettles, etc. This is absolutely correct but at the same time that is no criterion that there is sufficient lime where it is most needed, i. e. near the surface. This would apply more particularly where turf is being grown as the longer the turf remains with little or no disturbance, the more washing or leaching away of lime goes on, whether by natural or artificial means. With arable ground, conditions are somewhat different as, with continued cultivation going on more or less throughout the season, there is a better chance of bringing a certain proportion of lime to the surface and so retaining a certain amount for the need of the crop.

If we accept the fact that lime improves the condition of heavy soils then we should realize that this would mean a deeper root action, followed by a more sturdy growth of the plant and enabling it to withstand a period of drought far better than otherwise. Lime has proved to be a great aid against certain fungoid pests, and although it may be said to sweeten the soil there is more to be said in favor of the use of lime than against, if used judiciously.

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