pounds of ground limestone per acre is looked upon as a light application; 4,500 pounds of hydrated or 6,000 pounds of ground limestone as a heavy application. The best procedure is to determine the acidity of the soil then gauge the amount of lime to use with reference to the crop involved and the kind of lime employed.

What Is Cheapest Form of Lime to Buy?

A good answer to this familiar question is: Use the form of lime which can be put on the land *at the lowest cost per unit of oxide.*

According to state law every manufacturer of agricultural lime must guarantee on the bag the content of his product in lime (CaO) and magnesia (MgO). The sum of these two figures will indicate the *total oxide.* By referring to the state chemist's bulletins you may see how near the various manufacturers come to satisfying the guarantee. Dividing the cost per ton by the total oxide will give cost unit of oxide. Comparing different kinds or makes of lime by this method, however, will give only an approximate idea of their relative cheapness, since cost of hauling has not been considered. Each man will have to figure what his cost will be to get the lime from the railroad station to his place. In the figures below we have assumed a haul of four miles at a cost of $0.22 per ton mile. We have also assumed that a man has received quotations from four different lime companies. Putting the figures down on paper they would look about as follows:

A. A high-grade pulverized limestone
Cost delivered to club's R. R. station $7.00
Hauling four miles..... .88
Total cost $7.88
Total oxide 52% or 52 units; $7.88 divided by 52=15.1 *cents per unit.*

B. A high-grade hydrated lime
Cost delivered to club's R. R. station $12.00
Hauling four miles..... .88
Total cost..... $12.88
Total oxide 75% or 75 units; $12.88 divided by 75=17.1 *cents per unit.* Some high-grade hydrated actually run as high as 79% oxide, in which case the cost would be 16.3 *cents per unit.*

C. A low-grade hydrated lime
Cost delivered to club's R. R. station $11.50
Hauling four miles..... .88
Total cost..... $12.38
Total oxide 63% or 63 units; $12.38 divided by 63=19.6 *cents per unit.*

D. Pulverized oyster shells
Cost delivered to club's R. R. station $6.00
Hauling four miles..... .88
Total cost..... $6.88
Total oxide 46% or 46 units; $6.88 divided by 46=14.9 *cents per unit.*

It may be seen from the above figures that pulverized oyster shells would be slightly the cheapest of the four kinds. These are merely assumed figures, however, set down to show the method of getting at the answer to the problem. Although there will be some difference in cost of applying the different forms of lime it will not be considerable; hydrated lime weighs less than pulverized limestone or oyster shells per unit of oxide but it occupies practically the same volume and takes about as long to distribute.

Lime on Turf

Kentucky bluegrass seems to be greatly stimulated by lime as is white clover. The bents and fescues are not much affected by lime on most soils. As putting grass must necessarily be kept highly fertilized there may be no objection to using a certain amount of lime to increase nitrification in the soil as well as to control certain types of turf disease. On the other hand, lime may stimulate certain weeds as well as Kentucky bluegrass and white clover, and to this extent lime is a detriment.

On fairways there is no reason to doubt the excellent effect of lime where the turf is composed largely of Kentucky bluegrass and white clover especially where lime is used in conjunction with commercial fertilizer. If, however, the turf is composed of red-top, bent or fescue, lime may not be necessary nor desirable.

J. B. Smith, Club Manager's Head, Dies in Hospital Blast

J. BARKER SMITH, secretary and general manager of the Cleveland Athletic club, and president of the Club Managers' association of America was among the victims of the Cleveland hospital explosion.