

FORMS OF LIME.

Agricultural lime may be purchased in various forms. It may be purchased as quicklime, known also as stone lime, lump lime, burned lime, milked lime, and by other names. It is well to remember that in the familiar process of "slaking" with water the increased weight is as follows: If we consider the weight of quicklime as 56 lb., when it is completely slaked there would be 71 lb. of "slaked" or "hydrated lime," providing no surplus water was added. If the same 56 lb. of quicklime is exposed to the air until it is completely air-slaked, the weight would increase to 100 lb. The values in the table which follows are based on the above. In a great many places it is found that ground limestone rock is the most economical form of lime to use for agricultural purposes. It has the same chemical composition as air-slaked lime, but air-slaked lime will usually give quicker results on account of being in a finer state of division.

COMPARATIVE VALUES.

In purchasing lime it is necessary to know the comparative values. The following gives a comparison based on the amount of calcium (weights having approximately the same value):

Quicklime.	Water-slaked or Hydrated Lime.	Ground Limestone Rock.
1,000 lb.	1,320 lb.	1,800 lb.
2,000 "	2,640 "	3,600 "
<i>Comparative Values per Ton.</i>		
\$3.60	\$2.70	\$2.00
5.35	4.05	3.00

THE FORMS OF LIME AND HOW TO APPLY.

Quicklime.—Quicklime is purchased in hard lumps and consequently is not suitable for applying uniformly over the fields. It must be slaked. This is conveniently done by placing in small heaps uniformly disposed over the field and covering with soil. If the weather and soil is damp the lime will absorb enough moisture to slake, but it is usually a good plan to throw a small amount of water over the piles before covering over with earth. It should remain in the pile two or three weeks to become thoroughly slaked. As high as 2,000 lb. can be applied to clay, but it is seldom wise to apply more than 1,000 lb. to the lighter sandy soils. Freshly slaked lime is caustic in its effect. For this reason it is always wise to apply in the fall. This form of lime applied in large quantities is apt to hasten unduly the decomposition of the vegetable matter in the soil. Where there is a surplus of vegetable matter, as in peaty soils, this result is beneficial, for much plant-food is released. Ground limestone or thoroughly air-slaked lime is always safer to apply.

Ground Limestone.—Besides composition, fineness is an essential if good results are to be obtained from its use. The analysis of samples of limestone from various points in this Province would indicate that there are plenty of sources where satisfactory deposits of limestone are to be found. Where quick, prompt action is desired, 75 per cent. should pass through a 100-mesh sieve. A coarse material 50 to 75 per cent. of which will pass through a 50-mesh sieve will be quite satisfactory; such material, however, is slower acting. Larger applications of such material would be necessary. Ground limestone is not caustic and will not injure a growing crop or sprouting seeds.

Special machinery is now manufactured to pulverize limestone. It is a mistake to expect a jaw-crusher to do the work of a grinder. The hammer principle should be sought when any pulverizing has to be done. The moisture in the stone causes the fine material to pack between the jaws and breakage of the machine results.