

When the carbonic acid has been expelled in the kiln, there remains of this what is *considered lime*, but in fact a fraction over one-half consists of foreign matters! And nearly the whole of these are such as abound in all soils.

Taking into consideration the large quantity of lime that should be used upon every farm of moderate size, it is obvious that the cost of hauling this great amount of impurities in certain kinds of lime is a serious matter, and should be obviated as far as possible.

In many instances farmers and others possessing wood or other fuel prefer to purchase the stone, (if it does not occur on their own land,) and burn it in their own kilns. To such the summary of the above results in the following table will show the loss of weight in the kiln, the weight of lime produced, and the weight of the foreign matters therein. The quantity assumed being one ton of 2,000 pounds:

	No. 1.	No. 2.	No. 3.	No. 4.
	Pounds.	Pounds.	Pounds.	Pounds.
Weight of limestone . . . . .	2,000	2,000	2,000	2,000
Loss of weight in calcining . . . . .	863	863	719	588
Gross weight of lime . . . . .	1,137	1,137	1,281	1,412
Weight of foreign matters . . . . .	40	69	546	707
Weight of pure lime in one } ton of the stone . . . . . }	1,097	1,068	735	705

The table needs no explanation, and the farmer will plainly see that if this subject be properly investigated, he can frequently be saved a vast amount of the severe expenses of hauling useless sand, etc., as well as be aided in avoiding the use of inferior qualities of lime on his land.

In many districts there are none other than very impure kinds of lime accessible, but so essential is lime that it is certainly much better to use these than none. Many instances have come under my notice in which they have produced beneficial effects of a decided character. In some districts it has been clearly shown that certain kinds of impure lime produced their good effects more quickly than the pure lime, but they are not so lasting, and the liming must be sooner rendered. The causes of this depends of course upon the characters of the foreign matters. When finely divided siliceous matter is disseminated in the stone, silicate of lime (important to plants) is formed by the heat of calcining. Sulphuret of iron exists frequently in limestone, and a portion of the sulphur combines with the lime, and after exposure to the air forms gypsum. Some of the impurities also contain silicate