

## LIME FOR HEAVY LAND.

SIR,—I am much in need of information with regard to fertilizing my land. It is a yellow loam with clay bottom and hard clay surface in spots. It is mostly in fruit of all kinds, but more especially grapes. Will lime be beneficial? If so, how many bushels to the acre?  
H. GOODWILLIE, *Welland, Ont.*

It is quite possible that on soils such as that described by our correspondent, lime might prove beneficial, but it should not be continued unless the land is at the same time heavily dressed with barnyard manure. Lime has the effect of rendering the other fertilizing elements in the soil available about the roots of the plants, unlocking them, as it were, from its grip. In consequence of this comes the old couplet,

"The use of lime without manure,  
Will surely make the farmer poor."

The action of lime upon the heavy clay is to make it warmer, mellow, and of better tilth, and this good effect is often observable for years. With regard to the quantity that may be applied to the acre, it may be observed that lime is less freely applied than in former years. In the Old Country it was at one time customary to apply six to eight tons to the acre on heavy soils, but now-a-days the opinion prevails that one or two tons to the acre, applied once in six or eight years, is an abundance. There is a probability that loam, such as our correspondent describes, is not rich enough to be benefited by lime alone, and that barnyard manure would be the best fertilizer.

## TREATMENT OF THE SEEDS OF THE WHITE ASH.

SIR,—How should I treat White Ash seeds previous to planting, and when should they be planted?  
O. F. BIRCHARD, *Kingscourt, Ont.*

In order to have the best success, the seeds of the ash tree should be planted in the fall, as, if left until spring and then planted dry, they will be almost sure to fail. The seeds, too, ought to be collected fresh from the trees by some one who is acquainted with them, because if purchased from seedsmen they may have been kept too long and thus have lost their vitality.

The White Ash is not very productive of seeds, and one who is not well acquainted with their distinguishing characteristics might mistake the seeds of the Green Ash for them. The seed of the White Ash is round, without margin, the wing attached to the apex, while in the Green Ash the wing is continued as a margin nearly to the base of the seed, which is acute. The seed of the former ripens about the first of October, and, if kept from becoming dry and planted in the autumn, they will vegetate with certainty. They should be covered very thinly with earth, and, to prevent washing by heavy rains, should have a mulch of leaves or straw, which should be taken off in the spring. If kept until spring, the seeds should be mixed with damp sand to prevent them from drying.