THE CANADIAN HORTICULTURIST.

BONES AS A FERTILIZER.

SIR,—Could you give me any information in your valuable book how to dissolve bones to make them fit for a fertilizer?

CHAS. MITCHELL, Port Elgin, Ont.



UR correspondent has asked a very sensible question. Old bones contain very valuable fertilizing elements, and many farmers habitually allow them to waste about their premises without seeming to have any idea of their value. As we have frequently mentioned in these pages, there are three essential elements required for the growth of plants, and these are, nitrogen, phosphoric acid and potash. Now

one source of supply of the phosphoric acid is in bone meal. True, the same element is furnished very cheaply in the Canadian phosphate rock, known to geologists as apatite, of which there are large quarries in the country between Kingston and the Ottawa River. These are being worked most extensively, and the product shipped far and wide, much of it being exported to the Old Country. This ground rock can be purchased for about one cent a pound, and is a cheap and valuable fertilizer for lands that are lacking in this particular element. Fresh ground bones contain about 25 per cent. of their own dry weight of phosphoric acid, and this is worth about five cents a pound. Bone meal, therefore, is worth about one and one-half cents a pound, on account of this particular ingredient. But, besides this, they also contain about three or four per cent. of nitrogen.

Of the value, therefore, of old bones, there is no question, but the great problem is how easiest to make them available for use as a fertilizer; for, if applied to the ground whole, many years should elapse before they would be sufficiently decayed for the plants to make use of the phosphoric acid which they contain. One method is by reducing them with sulphuric acid, but this need not be described here as it is both expensive and dangerous, for unless the acid is handled with the greatest care, one's clothes are sure to be burned and the operator may perhaps receive personal injury also.

The simplest way of reducing bones to powder, is probably by burning and then crushing. This is one which any farmer can operate with little expense, except the time and labor necessary. The bones should be piled with enough dry waste wood to burn them perfectly white. Bones being greasy will make a very hot fire of themselves, so that it will not be necessary to use more than half their bulk of dry soft wood in order to accomplish this. The white ashes are then removed to a plank floor and pounded until they are quite fine. The pounder may be made of a block of wood, sawed square at the ends, to which a handle is attached. This meal can then be sown upon the land or used in connection with potash and nitrate of ammonia, at the rate of four parts to one each of the potash and nitrate, in making a complete fertilizer.