THE CANADIAN AGRICULTURIST.

HOW TO DISSOLVE BONES.

Chinguacousy, May 2nd, 1856.

STR,—I notice in your January number the superior value of bones dissolved in sulphuric acid, compared with ground bones, as an application to the Turnip crop. Would you be so kind as to inform your readers what quantity of sulphuric acid to a certain quantity of bones, and what kind of a place or vessel to dissolve in, and how used after dissolved; and you will much oblige, your humble servant,

JOHN SNELL.

Ist. How THE BONES SHOULD BE PREPARED.—The bones to be used cannot be broken too small; the more extensive the surface presented to the action of the acid, the more rapid and perfect will be the solution. The bones usually employed are in too large pieces; and a higher price should willingly be given for them when reduced to a powder. In every farmyard, an old sugar hogshead should be kept, into which all the bones, woollen rags, old hats, and broken leather should be thrown and preserved for being reduced to manure in the vitriol vat.

2nd. QUANTITY OF VITRIOL TO BE USED.—The acid should be purchased of full strength, that is, of the specific gravity at which it is sent from the manufactory, viz., I.845. It should be kept in a closed vessel, as when exposed it rapidly attracts moisture from the air, and becomes weaker. It must not be forgotten that it will burn both the skin and clothes, if allowed to come into contact with them. When the strong acid is mixed with water, a considerable amount of heat is produced ; twenty-five pounds of oil of vitriol mixed with ten pounds of water, will raise the temperature to 266 degrees. The proportion of acid to be used in the preparation of vitriolized bones, is one hundred weight of acid for every two hundred weight of bones to be dissolved. A smaller amount of acid is frequently applied; but the above proportions will give the most satisfactory results.

Brd. QUANTITY OF WATER AND MODE OF APPLYING IT.—When unminted vitriol is poured upon bones, violent action is produced, but continues for a very short time, as the gypsum, which is the first new compound formed, covers the surface of the pieces of bone with a crust, which prevents the acid from coming into contact with the unaltered portions, and in consequence its action is retarded, and a perfect solution is not procured. If we drop some concentrated vitriol upon a piece of limestone, there is a bubbling up or effervescence from the escape of carbonic acid gas; but it continues only for an instant. A crust of gypsum forms and protects the stone from the acid; but if we use vitriol diluted with water, the action and escape of gas continue for a much longer time. The best plan, therefore, is to thoroughly moisten the bones we intend to dissolve, by pouring over them a quantity of water and allowing them to soak in it for an hour or two before adding the acid. The quantity of water used should be three or four times that of, the vitriol to be employed. This mode of applying the water obviates the trouble of mixing together the vitriol and water in a separate vessel, as some recommend, and the heat generated, by adding the strong acid to the moistened bones, greatly facilitates the decomposition, and hastens the preparation of the compound.

4th. How THE MIXTURE OF THE ABOVE MATERIALS SHOULD BE MADE.—Six bushels of bones, ground as fine as possible, are to be placed in any convenient vessel; an old iron boiler, or a sugar hogshead, even though not perfectly water-tight, may be made fit for use by plastering up the holes and seams with plaster of Paris, or by filling them with melted pitch or asphalte; and even a hole dug in the ground,

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