the shore were covered with the dust, as was every object in the neighbourhoud-the stench which before prevailed, suddenly and completely disappeared.

Nothing is more simple than the manufacture of charcoal—a few billets of wood are to be piled like cordwood, then well covered with sods, with the exception of two orifices, one to admit a little fire, and the other to allow the smoke to escape, until the heap has well taken, and then to be firmly closed for the purpose of allowing slow combustion to go on in the absence of air. When cool the charcoal may be crushed in a stout canvass bag by a lever, not by blows, and when sifted furnishes the required material for sowing.

To return to the subject of ammonia, we may examine its relation to the soil, and acknowledging the well known fact of its constant presence in rain water reasonably infer its accumulation in the soil. Professor Way, indeed, has arrived at the conclusion that rich loamy land of the Tertiary Drift contains ammonia within available depths for vegetables at the rate of one ton per acre. The form in which ammonia is contained in the soil, renders it, in general, useless to vegetables, it may be liberated however by certain processes practicably applicable. Together with potassa, this important plant food is separated by clay from its soluble salts, hence from rain-This accumulation in a comparatively inert conwater, however rich in ammonia dition is also greatly increased by certain vegetable acids, the result of the partial decomposition of leaves, roots, &c.; during the further decomposition of these bodies soluble salts of ammonia are liberated, hence one advantage of ploughing. But if we are permitted to reason respecting the great operations of nature, guiled by the infinitely smaller but not less characteristic results of chemical analysis in the laboratory, we arrive at properties of clay soil, in connection with other 1 dies, of singular interest and perhaps of equal importance. Ammonia forms with certain constructs of the soil, chemical compounds very sparingly soluble in water (sillcate of alumina and ammonia)-one gallon of water dissolves, when pure, about one grain of this compound. Now, although an acre of wheat exhales, during the period of its growth, upwards of 1,000,000 lbs. of this soluble salt of ammonia, yet it is not to be supposed that the quantity derived from this source would serve the exigencies of the plant or materially facilitate its productiveness-if all were absorbed and assimilated, it would certainly assist in the development of the straw and ensure the growth of twenty-five bushels to the acre; but we cannot be permitted to suppose that total absorption, under ordinary circumstances, would take place. Mr. Way, however, has accertained that water, saturated with carbonic acid, dissolves more than double the quantity of this ammoniacal compound, and further, that the addition of 1.97 per cent. of common salt or about § the strength of sea water, dissolves not less than 23 grains per gallon. There is great difficulty in proving the existence of this compound of flint, alumina and ammonia in soil, ; there is no difficulty whatever in making it in the laboratory, and as all the materials are present in the soil, and as common salt acts in an hitherto unexplained manner upon clay, it is at least desirable that this matter should also be experimentally investigated by the agricultural portion of our club, the n are especially as I think that a remarkable field for its blucidation lies before us. We know that many fertile soils in Canada have become what is termed exhausted, and yet apon analysis, these soils yield a very considerable amount of all the materials which plants require for their growth—but at the same time a marked smallness in the quantity of common salt is to be noticed, a very soluble substance, and one which plays an important part in effecting the solubility of certain varieties of plant food. It appears to be desirable that the exhausted flats of the Thames and other localities which have been cropped for 20 to 40 years without manuring, should be tried with common salt; say a dose of three bushels to the acre. I think we should find upon theoretical grounds the application of common salt as a solvent, of considerable value in many parts of Canada, especially in those parts of the country which are evidently of fresh water or lacustrine

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