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The Field.

Value of Wood Ashes for Manure.

At this season of the year, when the increased consumption of wood for fuel has commenced, it may not be out of place to remind our farmers of the value of wood ashes as a manure. We say "remind," for scarcely any farmer needs to be informed of the fact, which has been repeatedly noticed in every agricultural publication, and which his own observation must have verified. He can hardly fail to have been struck with the remarkably luxuriant growth of grass or grain on those spots where a log-heap or brush has been burned. And in his kitchen garden, he has, no doubt, seen evidences of the value of this fertilizer in the increased productiveness of those portions of the ground on which, perhaps only for the convenience of getting rid of refuse, wood ashes have been scattered.

To retain all their virtue, it is highly important that ashes should be kept dry; for water will dissolve out a large proportion of the most valuable salts, yet even leached ashes need not be thrown away, as of no account: for, though far inferior in fertilizing qualities to unleached ashes, they are by no means useless. One very important result of the employment of this manure in the growth of cereals is the increased strength and luxuriance of straw thereby promoted—a result due to the presence of silicates on which so much of the stiffness of the straw depends. Other ingredients, essential to both straw and grain are furnished by this important fertilizer. Ashes are valuable also for promoting the growth of grass, and Professor Leibig recommends sowing them broadcast on meadows, to increase the quantity of hay.

In reference to the utility of this much-neglected aid to the farmer, a writer in the *Country Gentleman* says:—"Several salts are necessary for a full growth and maturity of a wheat crop. In using the superphosphate of lime, the farmer uses but one of the salts necessary for the perfection of a wheat crop. But in the use of ashes the farmer applies to his land, besides the several salts of potash, more or less of several other salts, no less valuable, according to the kind of timber from which the ashes were produced. Ashes from the beech contain nearly 20 per cent. of the salts of phosphoric acid. According to the analysis of De Saussure, one hundred pounds of ashes would be sufficient for the production of 3,820 pounds of straw. But, besides the other salts of potash, the ashes either furnish, ready prepared, or produce after being put upon the land, a good supply of the silicate of potash, a salt as necessary as any other salt of potash, or even as any salt of phosphoric acid. But the ashes, besides furnishing several important salts, may perform another office in the economy of agriculture, no less important. In the

preparation of compost, they may be used as a solvent, to convert into important manures many other things useless without being dissolved. And this, too, without destroying any of their efficacy as salts. They give compactness to light sandy soils, and render heavy clay soils light and friable. They serve, too, to neutralize whatever superabundance of acids there may be in any soil."

We earnestly recommend the farmer carefully to save for use in the spring all the ashes he can collect from the home consumption of fuel during the winter, and, where he has opportunity, to procure from other sources a supply, leached or unleached, of this valuable fertilizer. If people knew from experience the worth of this simple manure, there would be no ashes wasted, neither would there be any to sell, except by those who have no soils to improve, or no crops to raise.

Top-dressing Grass Lands.

It was justly considered the height of unreasonableness and exactingness in ancient days, that an oppressed people were compelled to make brick without straw. While the necessary material was withheld, the full tale of product was expected and demanded. Something not unlike this injustice is to be seen in the treatment to which meadows are frequently subjected by their owners. They are mowed year after year, and if they do not maintain the point of productiveness they reached at first, complaint is made as if some grievous wrong had been done the proprietor. Now repeated mowings are very exhausting, and unless manure is applied in the shape of top-dressing, it is unreasonable to expect that meadows will maintain their fertility. We should like to know how many Canadian farmers ever think of top-dressing their grass lands. We are persuaded their number is but small. It is the subject of wide complaint that meadows in this country are soon exhausted, and do not hold out as they do in Britain. One reason for this is the practice of repeated mowing without manuring. We know several intelligent agriculturists on this continent who maintain that there is no necessity whatever for breaking up worn land, and declare as the result of actual trial, that if a meadow be only treated to liberal doses of manure, it will continue to yield heavy cuttings of hay year after year. The liquid droppings of horses and cattle should be carefully collected for this purpose. Liquid manure is the very best application that can be made for the purpose of keeping up the fertility of grass land. In the vicinity of Edinburgh, Scotland, meadows have been made to produce six or seven crops of grass annually by a plentiful application of liquid top-dressing, obtained from the city sewerage. The description of grass which furnishes these abundant crops of soiling is generally Italian Rye Grass,

a species which grows very tall and produces fodder very much relished by horses and cattle. Every farmer should have a liquid manure tank, into which the urine of stock should be conveyed by a drain-pipe from the stable, byre, and hog pens. This should be applied to the land with a watering cart constructed especially for the purpose of distributing it evenly over the field.

Instead of the liquid manure being distributed by means of a watering cart, it may be used first to saturate muck or compost, which is afterwards put on the land in the shape of top-dressing. Its effects are more lasting when thus applied than when it is conveyed to the land as a liquid. We have no doubt that a great deal of valuable meadow land is deteriorating for want of a more just and common-sense mode of treatment. Top-dressings of liquid or solid manure, bone dust, guano, ashes, &c., will be found of immense benefit applied to such lands. The fall of the year is a good time to make such applications. The late autumn and early spring rains wash the fertilizing material into the ground, so that the following year a very perceptible improvement may be confidently expected, as the result of the course recommended in this article.

Familiar Talks on Agricultural Principles.

ROTATION OF CROPS.

CONSIDERATIONS of profit or convenience alone often determine the question what crops are to be put into a given piece of land. Sometimes mere impulse is acted on. But there is no subject connected with practical farm-work that more needs to be settled according to fixed and well-known principles of agricultural science. There need be no difficulty in determining to what use a particular field ought to be devoted. The question what product is it most fit for, will readily settle the matter.

If every field on a farm could be treated each year to a liberal dressing of barn-yard manure; impulse, accident, profit or convenience might decide the use to which it should be put, without any very serious detriment. But only a small part of a farm at a time can be well manured. The crop that is first put in after land is dunged, takes up certain kinds of plant food. If the same or a similar crop be put in next year, more of the same kind of plant food is abstracted, and this course cannot be long pursued without rendering the land utterly incapable of yielding that particular crop. But if after the first crop that succeeds a liberal manuring, a crop of a totally different kind be cultivated, other descriptions of plant food are drawn upon, and the drain upon the soil is less severe. The fundamental fact in regard to a rotation of crops is, that no two plants of different kinds, require the same substances in equal proportion for their nourishment. A field which will not yield a second good crop of wheat, may, without another