

found in Manitoba. They seem less shy to grow than turnips. In the spring, even when fed in the smallest quantities, they are a valuable ingredient in the feeding of milking cows, to whose milk they add no unpleasant flavor. The excellent keeping qualities of the mangold are well known. Some authorities go so far as to contend that mangolds improve so much by keeping, that in the following April or May they are worth almost half as much again as when pulled. This improvement is attributed to a chemical change which takes place in the roots, and which results in an increase in the percentage of sugar and digestible albuminoids present." (1)

That those who go so far as to contend, that they improve so much by keeping that, in the following April and May—add June and July,—they are worth almost half as much again as when pulled, are right we are sure; but may the improvement in quality not be principally owing to the loss of water, just as old hay, in England, always fetches a pound a load more than new hay; old oats, a shilling a bushel more than new oats; old oatmeal, two or three pounds a ton more than new meal—i. e., when used for hounds;—and old beans, for horses, as much as fifteen pence a bushel more than new beans. There cannot be much theoretical value in the chemical changes in these articles of food; but practice says that the practical value of the loss of water in them is very great.

*Value of Stations.*—If all the experiments at the Stations in the United States are carried on in the same careless way as the following example, they must be valuable acquisitions:

"The old style idea was that manure must be properly rotted before being used, and if it is wanted for a limited quantity of green crop, it is perhaps best to rot it before it is used. But we grow very few green crops and must for the application of most of the manure we make find out how to apply it in the way that gives least trouble and brings most satisfactory results. Experiment stations have tried a good many varieties in the way of applying manure. The Ohio station has just published the results of two years' actual test of the difference between rotted manure and that drawn directly from the stable and found that on a corn crop the manure taken from the stable

made a good deal better yield than that from the yard and rotted. The second year the land was sown to wheat and the results were about equal. But at this stage it was recollected that the manure direct from the stable was dropped by richly fed cows, while that from the yard was from poorly fed stock. Such experiments are not worth the paper they are written on, because the main virtue in any manure comes from the quality of the feed."

We quite agree with the *North-West Farmer*, that such experiments are not worth the paper on which the results are written, and we very much fear, from the few numbers of the bulletins that reach us, that an enormous proportion of the money of the public is annually wasted at these institutions. We are still in favour of the "old style idea," and prefer rotting manure for all crops, even for top-dressing meadows. Those who like to see their fields full of weeds, can use fresh dung if they like, but as long as Lawes and Gilbert, at Rothamsted, England, allow their farmyard manure to rot, and turn over their mixens, we cannot possibly find fault with the practice. As for the heat of a properly made dung-heap not killing weed-seeds, theorists may oppose the doctrine; but as long as practice shows that weed-seeds are killed by a moist heat, such as is the heat in a mixen, we advise all our friends to rot their dung. An instance:

In 1884, we were manuring an acre of land for potatoes; the mixen, that we had carefully prepared by piling up in a square form, and turning over once, when the heat had risen to something like 160°, had just run short by two or three drills. We drew on enough *raw* dung, derived from the same source as the mixen, but never heated; the crop of weeds on the two or three drills was a sight to be seen, while the drills manured with the heated, rotted dung were as clean as usual.

Why should dung be rotted for "a limited quantity of green-crop and put on raw for a corn-crop?" Because the rotted manure would be ready to assist the young plant at the start, we suppose, and the great free-growing corn can look after itself. But a trifling dressing, say, 200 lbs. of superphosphate would, if drilled in close to the seed, be much more likely to bring on the turnip-crop in its early stages than the best dung, and the half of the dressing of farmyard dung would carry the growth on in the subsequent stages.

(1) The proper way to spell the name of the root is *Mangel*. Ed.