

change for the better in the tastes and opinions of the farming population.

Still very much remains to be accomplished in the way of creating an interest in the great cause of our country. Agricultural societies, our provincial association, our agricultural journals, are yet, comparatively speaking, struggling for existence! However, while the intelligent and the enterprising, the lovers of their race, and the well wishers of Canada, are redoubling their exertions, progress is made, slow at present, but sure and lasting in its results. You are, gentlemen, engaged in a noble cause; and I trust most sincerely that your success may in every respect be more than commensurate with the highest expectations of one who has resolved to devote his "talents in promoting peace and good will, in the diffusion of useful knowledge, the improvement of agriculture, the advancement of the social and moral condition of the people, and of those principles of our common christianity which all good men both believe and practice."

I intended to make a few other observations, but feel that it would be trespassing on your space.

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Perth, Bathurst District,
July 9, 1849.

SHALL WE MAKE COMPOSTS?—In the *Cultivator* for January, 1849, I read a notice of a work entitled "*Scientific Agriculture*," &c., by Dr. M. M. Rodgers. I have since procured the book, and in glancing over its pages, I came to the following, under the head of "Compost."

"It was formerly supposed, that great advantage was derived from the combination of several different substances together, and forming what are called *composts*. The recipes for these compounds are numerous, and go to prove that the discovery of a good compost requires but little scientific or practical skill. When a compost heap is made up of several materials, which are all separately good manures, it follows of necessity that the resulting compound must be a good fertilizer. But it is impossible to supply any more in this way, than if these several ingredients were applied to the soil separately. And a little knowledge of chemistry will shew that by this means no new elements can be generated. Neither can any new property be developed which could not be done by their separate action. We see that whenever a substance which has little or no fertilizing power, is in this way manufactured into good manure, it is done at the expense of some powerful fertilizer which is distributed by the mixture, and consequently, loses just as much of its efficacy as the other gains. Thus, although this process serves to dilute and extend manures which are too powerful or too expensive, it absolutely supplies none."

The author goes on still further to explain, that the principal advantages of composts, are the dilution of manures which are too strong when used by themselves. Thus, among other substances, he mentions "caustic lime," the object in using which, he thinks can be much better attained by mixing, and diffusing it through some other substance, "such as saw-dust, sand, *barn manure*," &c.

Now the inference from the above remarks is, that ordinary composts are unprofitable—that no effect is produced that would not take place if the substances were applied separately, and that, consequently, the labour of forming the compound is lost.

It strikes me that Dr. R.'s reasoning is not entirely

sound, and that his conclusions are not wholly reconcilable with facts. It is not strictly true that the same effect is always produced by the use of substances applied separately, that would follow from their combination. For instance, peat, in its natural state, frequently contains an acid which is prejudicial to vegetation, and its fertilizing properties are locked up, as it were, until they are liberated by the action of some substance which causes a decomposition. Hence, it has been found highly useful to mix with peat alkalies of some kind, by which the acid is destroyed, and the peat brought into a soluble condition. Potash and ashes are used for this purpose; the ammonia of animal manure, urine, and all animal matters, produce a similar effect. Thus, Doctor Dana, in his *Muck Manual*, states that—"the power of alkaline action is alone wanting, to make peat good cow dung," and that—"by the addition of alkali to peat, it is put into the same state which ammonia gives to dung."

Here, then, is one example of the advantage of combining or mixing substances to be used as manure. But it may be asked—"Why will not the same effect be produced, if the peat and the alkalies are both spread, separately, on the same land?" For the obvious reason that they are not brought sufficiently, and for a proper length of time, into contact. The alkalies being spread over a larger surface, and exposed to the air and rains, are soon dissolved and carried into the soil below the peat.

But there are other advantages, in mixing different substances in a manure heap. The farmer should endeavour to save all the excrements of his animals, both solid and fluid, as well as all other substances which are capable of enriching his land. The readiest way of saving urine, is to retain it by means of some absorbent—such as charcoal dust, peat, loam, straw or other vegetable rubbish.

Again, if it were true that substances ultimately produced the same effect when applied to the soil by themselves, as when combined, there is still, in many cases, a convenience in composting. It is inconvenient to use corn-stalks and other litter in their crude state. If applied to the surface, they do not readily rot, and they interfere with cultivation by obstructing the operation of the implements used. If buried beneath the surface,—which is not always readily effected,—they sometimes cause the soil to be dry and *luffy*. There is no way that these matters can be used to so good advantage as by mixing them with animal manure, and saturating them with urine. By this means, the ammonia soon brings on a decomposition, by which the fibrous structure is cut down and they are brought into a comminuted state, fit to be used as circumstances require. But we may cite other authority in favor of composts. J. Prideaux, an agricultural chemist of considerable distinction, advises to mix in the manure heap—"peat, sods, turf-parings, ditch and pond scourings, way-soil, humus soil in whatever form, and ashes of all kinds. All *liquids* in which vegetable or animal matters have been soaked or boiled; and all that contain fertilizing materials, as soap-suds, dish-washings, pot-liquor," &c. "We must remember," he adds, "that vegetable matters work sour, and that animal substances generate ammonia, which neutralizes the acid, and is fixed by it, so that in due proportion they correct each other. Urine gives most ammonia."

One word, before closing, in regard to mixing "caustic lime" with "*barn manure*," recommended by Dr. Rodgers, as one of the means of "diluting" the lime. This is a kind of compost that I am not in favor of. I had supposed, if any thing has been established by chemical investigation, that caustic lime should not be mixed with animal manures. Thus Prof. Johnston says, guano should not be mixed with quick lime—