

the dried mixture is then pulverized or crushed. In Flanders, where they use them for the culture of flax-seed, colza, poppy, and tobacco, the farmers have reservoirs expressly for the reception of fecal matters. In these vats they remain for several months, or until transformed by fermentation into a viscid liquid matter. In this state they constitute the Flemish manure. To improve it, the pulverized marc of pressed seeds is frequently added, for the nitrogenous matter therein contained becoming rapidly decomposed, contributes materially to the efficacy of the manure. The addition has other advantages also in decreasing the fluidity of the excrements, and by becoming thoroughly impregnated with it, in facilitating its application and prolonging its beneficial effect. However, this effect is never beyond a year's duration. 26½ gallons of Flemish manure equal about 550 lbs. of horse-dung. This mode, prevalent in Belgium and Flanders, where agriculture is brought to a full development, and where great care is observed in the preservation and application of all matters promotive of the fertility of the soil, is the one most to be recommended.

The excrements being enclosed and free from exposure, are less subject to sudden changes of temperature and to fermentation, and consequently can be retained unaltered and unimpaired in quality for a long time.

When the liquid manure is to be used, it is drawn portionwise from the reservoir, and then diluted with five or six times its weight of water, in order to modify its energy and prevent injury to the plant. Thus prepared, it is spread upon the fields when they are being sowed, and upon the meadows after having been recently mowed. Sometimes it is dropped, undiluted, by the ladles-full at the foot of each plant, when its nature permits the application without too much manual labour; but in such instances care must be taken not to touch the stalks, lest they might be injured.

In the environs of Lille, a cask of thirty-five and a-half gallons of Flemish manure, costs twenty-four cents for transportation, and twelve for labour in spreading it.

The excrements of birds or fowls form a manure much richer in nitrogen, and consequently much more active than the Flemish manure. They contain, in fact, 8 and even 9 per cent. of nitrogen. They undoubtedly are the richest of mixed manure, and, moreover, are among the warmest and most alterable. In the Northern Department of France, where they are much appreciated, one of them—that most used—is pigeon's dung, \$20 value of which will fertilize or manure 9,500 square yards of ground. This rich manure is specially used in the culture of flax, tobacco, &c. It is only necessary to examine the analyses of guano, to see and be convinced of the richness of the excrements of birds and their utility in promoting vegetation. They contain, in fact, independent of accidental portions of feathers and other debris, uric acid, ammonia, coagulated albumen and phosphate of lime.

In Flanders and elsewhere, where pigeon-fanciers are numerous, they collect the dung and engage it to farmers at stipulated rates. At the usual price of \$20, for the product of 600 or 700 pigeons it will cost \$25 to \$40 to manure about three acres.

The excrements of other birds are less valuable than those of the pigeon. Usually, these latter are employed in their natural state, and without any admixture, being in this form specially fitted to assist the growth of the cereals in humid and compact soils. They are, however, of nearly equal service in the culture of clover; but for this purpose they should be mixed with ashes. In Flanders, 4,500 lbs. per three acres is the proportion for a good yield.

As has already been remarked, these manures owe their efficacy, in part, to the urine with which they are impregnated; and furthermore, it is well known that this liquid, by the decomposition of urica, one of its principal constituents, can furnish a notable quantity of carbonate of ammonia, the utility of which to vegetation has been well proved. Independent of the urine absorbed by the litter, a portion which by a little management might be retained, runs off, and is lost.

In Switzerland, it is the custom to collect the urines in cisterns and therein reserve them for some time before spreading them. In Belgium, they are imbibed by straw and then mixed with ordinary manure, and sometimes even with loam, clay, sand or plaster. That manure known in commerce under the name of "Urate," is a mixture in equal proportions of urine and plaster. It is dried and powdered, and kept free from moisture.

Whether it is more useful to employ fresh or slightly putrid urines as a manure, is a question which answers the prevalent custom in favour of the latter; but the practice in this, as in many other instances, may lead to error, for it is not based upon correct principles.

It is known, in fact, that carbonate of ammonia generated during the fermentation of urine is a very volatile salt, and that thus the more active and useful principle is liable to be dissipated when the urine is too long kept. To form an idea of the advantages which may be thus lost, remember that every 2½ lbs. of ammonia which evaporates is equivalent to a loss of 150 lbs. of grain, and that 2½ lbs. of urine will produce 2½ lbs. of wheat.

In all these cases, in order to fix the ammonia, the urine must be fixed with plaster, sulphate of iron, or mould. Sulphate of ammonia, a more fixed but not less efficacious salt than the carbonate, is thus formed.

The advice of some agriculturists to use the fresh urine, properly diluted with water, we rather hesitate to recommend.

News.

CANADA.

From statements of Father Mathew, received by the last steamer, and corroborated by his distinguished patron, Col. J. H. Sherburne, bearer of despatches to the American Government, it appears that he is deterred from visiting this country at present, chiefly by heavy pecuniary embarrassment,—the result of sacrifices in the Temperance cause, and especially of drafts upon his philanthropy from the late famine.—*Montreal Herald.*

The *Melanges Relegieux* regrets that steamboat Captains have not yet resolved to abolish their bars—those disgusting taverns—which are the source of a thousand disorders and accidents, and a real nuisance to all travellers.