

be employed, the process amounts to little else than a saturation, and nearly the same end could be gained by throwing rank urine upon the fields. If moss or any other vegetable matter be employed, then the urine acting on the fibrous mass promotes fermentation and decomposition, and thus an additional value is given to the product. Mud dragged from the bottom of bogs or ditches, and replete with aquatic plants, or any other vegetable material, is, therefore, preferable to simple earth."

The Flemish Farmers go to great expense and trouble in constructing brick cisterns for the reception of urine, to which they give a decided preference; so much so, that they throw water over their dung heaps, and collecting the liquid manure, throw it over their fields. But although the urine, when mixed with earth and vegetable matter forms such an excellent manure, the English and Scotch Farmers condemn the practice of making a solution or wash from the dung heap by the assistance of water. Turnips increase the secretion of urine: cattle fed upon them will pass about two-thirds of the weight of the turnips in urine, so that six cows will enrich earth and vegetable matter sufficient to top dress an acre of grass land. The urine of all animals, diluted, forms a nutritious manure for plants. Sir Humphry Davy was of opinion, that it contained the "essential elements of vegetables in a state of solution," he thought that the putrefaction of the urine destroyed the soluble animal matter, and that, therefore, it should be used when fresh; but that even in this state it was a powerful manure. Mr. Johnstone, of Hillhouse, thought that when the urine was diluted with water, either accidentally or intentionally, that the process of putre-

faction increased its fertilizing properties. Sir Humphry Davy agreed that the urine should be diluted before it was used, because he thought that it contained too much animal matter, "to form a fluid nourishment for absorption by the roots of plants." Mr. Johnstone allowed the urine to flow over his dung heap: he collected it afterwards. The dung he used for potatoes and turnips, and the liquid manure generally to clover grass. He applied it at the rate of 2,400 gallons to the acre; and in a sward of grass, not watered, he cut a quantity weighing 20 lbs. and in a similar sward, watered with liquid manure, he cut a quantity weighing 48 lbs.; these were cut some time before the grass was ripe. He found the early spring months the best time for its application. Liquid manure is equally valuable in the garden. The Chinese purchase it even by the pint for their fruit trees. The Italians found it beneficial to their grape vines. It is an excellent manure for gooseberries and strawberries, applied just before the bursting of the bud in spring. It is very profitable also applied to potatoes, which, when this is used, need no other manure. "To the cabbage and colewort tribe it is equally valuable." "We would impress on every cultivator of the soil," says Mr. Jackson, "that it is for his own interest to collect this valuable liquid by every possible means; and as he has the experience of other countries to guide him, he need have no fears of applying it.

*Night Soil*, which implies the excrementitious discharges from the human body, is used in many countries as one of the most powerful manures. It is in common use both for the garden and fields in China, and is exported largely from Paris to Flanders and the Low Countries. 'The disagreeable fetor of' it is cor-