The non-use of night soil in England. Alan Macfarlane

One of the best surveys of the various forms of manuring and fertilizing land in various parts of England from the sixteenth to eighteenth centuries is provided by Campbell. She describes the use of lime and marl (an enriching earthy substance). Where these were not present all kinds of thing were used. 'Norden says that on the coast of Cornwall a certain kind of seaweed and sea sand were spread over the soil for its enrichment. Pebbles and stones from the shore were burned and spread on the land in Sussex, Kent and Suffolk. Refuse from the streets of London and the city ash heaps was spread over Middlesex farms. Dredges from the river were used in Hampshire...Plot tells how chippings of stones were used near Banbury, and "Taylers shreds" near Watlington.'[1] Animal manure, however 'was the fertilizer most commonly used by all farmers, and that which received the highest praise from the writers on husbandry...'[2]

What is noticeable in Campbell's summary of contemporary accounts is the omission of any mention of 'night soil', though a certain amount might have been included in the 'refuse' that came out of London onto Middlesex farms. Other general surveys of early modern agriculture in England also omit reference to the use of night soil. Lord Ernle's **English Farming, Past and Present**, for instance, mentions a number of manures and fertilizers, almost identical to those noted by Campbell, from the medieval period to the eighteenth century. But apart from a brief reference to the sweepings of streets or town refuse, there is no mention of night soil.[3] The most detailed account we have of farming in the seventeenth century, that of Robert Loder, mentions various experiments with different kinds of manuring. He used cattle and sheep dung, horse and cow dung, mud from the pound, black ashes (probably wood, peat ash or soot), malt waste, dung from the pigeon-cot.[4] But in all of the accounts there is no reference to night soil. Likewise in a detailed diary and letter book of the early eighteenth century, Nicholls Blundell writes that 'The only fertilizers known apart from animal manure, were lime, shells from the burned moss of undrained land, seaweed and marl...'[5] Another account of manuring practices is provided in Ruston and Witney's **Agricultural Evolution of a Yorkshire Village**. They give accounts of manuring using mud, lime, ashes, pigeon dung and manure, but there is no reference to

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[1] English Yeoman, p.175

[2] ibid

[3] Farming, 94,97,109

[4] Loder, Farm Accounts, p.xviii

[5] Blundell, Letter Book, p.135

night soil.[6]

Slicher van Bath summarizes many of the types of fertilizing agent. 'Besides marl, the land in Norfolk was dressed with loam, gypsum, oyster shells, seaweed, burnt earth, mud, fish, rape-seed cakes, ash, buckwheat, compost, leaves and town refuse.' We are further told that French travellers returned from England in the eighteenth century with reports that the land was manured with 'sheep-dung, rags, shreds of wool, salt, shells, seaweed and marl.'[7] What is noticeable for its absence in this list is human excrement or night soil.

Finally if we turn to a few books of advice, the one explicit reference to the use of night soil to which some writers have drawn attention is that by the early sixteenth century writer Thomas Tusser in his **Five Hundred Points of Good Husbandry**. Here at last we seem to have explicit advice to use night soil. Yet, in the whole of his account, there is but one reference to the matter, under the month of November. The question is explicitly labelled 'Cleansing of privies', in other words, he is giving advice about household cleanliness, not specifically about manuring. The verses explain that 'Foule privies are now to be clensed', and that this 'baggage' if 'buried in garden, in trenches alowe', will 'make very many things better to grow.'[8] In other words, this is a sanitary matter which can also be put to some use for vegetables. It is hardly a central part of the agricultural economy, and is obviously a rather covert and dirty job. Anyone who has a privy of this kind will know that a hole or trench has to be dug - and Tusser is just pointing out that the operation might as well yield some profit.

Two centuries later another well-known adviser on husbandry wrote a book of advice in the midst of the agricultural revolution. In Arthur Young's **Farmer's Calender** there is a good deal about the various stages of manuring. For instance, February is 'the proper season for laying on several sorts of manure, such as soot, coal-ashes, wood-ashes, lime, malt-dust etc.[9] In July 'Do not let the marle, chalk, mud or clay carts, stop this month...'[10] But in all of his advice advocating the experimenting with various kinds of manure and fertilizer, he never mentions night soil. The soil was increasingly given fertility by using the new techniques which are a central feature of the 'agricultural revolution' of the seventeenth and eighteenth century. Clovers, alfalfa, new grasses, turnips were alternated with the cereals in new rotations. Several helped to fix nitrogen in the soil. It appears that with all these alternatives there was no

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[6] p.106

[7] Van Bath, p.261-2

[8] Tusser, 500 Points, p.51

[9] Young, Farmer's Calendar, p.43

[10] Young, Farmer's Calendar, p.224

need for night soil as a fertilizer. When Houghton at the end of the seventeenth century examined the chemical and economic potentials of urine and faeces, it was the medicinal value of each that he tried to promote.[11]

As London grew, an increasing number of people drew attention to the wasted potential of all the night soil, pointing to what happened in Paris, and working out schemes which would increase both profit and health. A particularly forceful account is provided by articles in the nineteenth century **Rural Cyclopedia**. It was pointed out that 'by far the greatest waste of all occurs in the sewerage of our towns and cities. This is of wondrous importance, both for the enormous value which it draws off for agriculture, and for the incalculable evil which it inflicts upon the public health...'[12] The writer of an article on manure quoted the following passage. While other countries made some use of night soil, 'in our highly refined and civilized country, we send them down our water-closets, to be wasted in the rivers, and finally in the sea; while we send our gold into Russia and Peru, and our ships to Ichaboe and Saldhanna Bay, to bring back to us what we have so wantonly wasted, to be converted into food, and again wasted in its turn. Our hordes of population, instead of being enrichers of the island, in an agricultural point of view, are absolute impoverishers. They draw off the corn, the roots, and the flesh from the land; and they send it away into the sea, by means of the Thames, the Severn, the Humber, the Tees, and Tyne, and scores of other great wasters of the elements of human food. The Medlock, into which not more than the drainage of 100,000 is imperfectly discharged, is said by Mr. Grey to contain sufficient phosphoric acid to supply 95,000 acres of wheat, 184,000 acres of potatoes, or 280,000 acres of oats, and to hold in solution a sufficient quantity of silica to supply 50,000 acres of wheat.'[13]

The author believed, that a solution would soon be found. Various ideas were put forward, for instance that the night soil be dried like the French 'poudrette' and sold under a suitable euphemism. Already foreign companies were marketing under names such as 'Alkine-vegetative powder' or 'Owen's Animalized Carbon'. Another scheme was to use the new power of steam to pump liquid manure out from the cities and to make it available from stand-pipes in every farm.[14] Yet despite the fact that it was calculated that this would reduce the price from ten shillings per ton to seven or eight pence,[15] the schemes did not work. Liebig thought it was something to do with the 'domestic arrangements peculiar

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[11] Houghton, Husbandy, ii, nos. 158-165

[12] Ruralf Cyclopedia, p.347

[13] Rural Cyclopedia, p.347

[14] Rural Cyclopedia, p.177

[15] ibid

to the English' which 'render it difficult, perhaps even impossible, to collect the immense quantity of phosphates...which are daily sent into the river in the form of urine and solid excrementa.'[16]

Probably more important was the economics of the situation, caused by the huge abundance of alternative fertilizers and manures. Chadwick noted that 'In the parts of some towns adjacent to the rural districts the cesspools are emptied gratuitously for the sake of the manure; but they only do this when there is a considerable accumulation...'[17] In general, there seemed to be a surprizing lack of demand. 'It might have been expected, from the value of the refuse as manure (one of the most powerful known), that the great demand for it would have afforded a price which might have returned, in some degree, the expense and charge of cleansing. But this appears not to be the case in the metropolis.'[18] He found that 'at present, with the exception of coal-ashes, which are indispensable for making bricks, some description of lees, and a few other inconsiderable exceptions, no refuse in London pays half the expense of removal by cartage.'[19] Indeed, the situation was so bad that night soil could not be given away; 'the evidence of a considerable contractor for scavengering etc. who states, with respect to the most productive manure - "I have given away thousands of loads of night-soil; we knew not what to do with it".'[20] 'The value as manure of the contents of the privies was constantly being stressed by the scientists - it was stated that the amount available in Birmingham in one year was worth £100,000 to the farmers - but the difficulty was to find an economical method of transporting it to the country. It was all very well to say that the 'chamber-pot is a penny savings bank' but when it came to collecting the contents by house-to-house visits and transporting them in carboys to distant farms the cost was found to be prohibitive.'[21] Smith describes how after the introduction of guano in the 1840's, whatever market there was for human manure collapsed entirely and though various schemes staggered on, they 'proved neither efficient nor profitable'. [22] The result of this was that whereas in Japan night soil could be used in lieu of rent, in England one had to pay to have it taken away. 'But the expense of this mode operates, as

[16] Rural Cyclopedia, p.347

[17] Chadwick, Report, p.119

[18] Chadwick, Report, p.118

[19] Chadwick, Report, p.118

[20] Chadwick, Report, p.118

[21] Drummond, Food,310.

[22] Smith, Health, 220.

the reports from the large towns show, as a complete barrier to all cleanliness in this respect in the dwellings or streets occupied by the labouring classes. The usual cost of cleansing cesspools of a tenement in London is about 1/- each time. With a population generally in debt at the end of the week, and whose rents are collected weekly, such an outlay may be considered as practically impossible, and the interior landlords delay incurring the expense until the nuisance becomes unbearable.'[23]

The economic factor was probably a major one in the almost total avoidance of the use of night soil in England. 'Excepting America, where manure is still of comparatively small value, no civilized country is so wasteful of its phosphates as Britain.'[24] It is tempting to believe that there may also have been some other factors, perhaps cultural or biological. As suggested earlier, human beings may have developed some in-built aversion to the smell and sight of their own excrement which means that, all things being equal, they would rather not use the material. The aversion may apply to all 'dung'. For instance, Audrey Richards described how the East African Bemba realized that human and animal excreta do increase the crops, but they are very loath to use either on the gardens because they are 'dirty'. 'Manure of cattle was thrown away unused. The village refuse was recognized to make the whole difference to the poor soil of some gardens, but it was never collected and spread,'[25] This aversion may be particularly strong when the diet is a very high protein one, for the faeces of carnivores smells much more than that of herbivores. The fact that the English were known as the greatest consumers of meat in Europe may have played a part. The fact that John Evelyn differed from his Roman authority Columella in being 'against the use of human dung, unless it be well ventilated and aired',[26] may have something to do with this. Houghton at the end of the seventeenth century noted that 'Man's Dung we have Antipathy to...'[27] Yet the Dutch and Flemings were great meat and fish consumers and seem to have tolerated the practice.

Nor can we really explain the avoidance of the use of night soil in terms of some particular classification of dirt. There was, as we have seen in Tusser's allusion, some shame about the substance which led to secrecy in its use in vegetable gardening. Yet the history of the word 'dung' suggests that there was no innate objection to human and animal manure being lumped together and used for medical purposes. Human and animal faeces could both be called 'dung'. Thus in the early sixteenth century,

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[23] Chadwick, Report, p.117

[24] Rural Cyclopedia, p.347

[25] Richards, Land, p.324

[26] Lisle, Observations, i, p.39

[27] Houghton, Husbandy, ii, 165

Phaire described the 'dung' produced by little children, and how it could be used in medicine. [28] Later in the seventeenth century, the Puritan writer Dod described faeces as 'parents own dunge' in one of his metaphorical passages.[29]

[28] Phaire, Children, p.42

[29] Dod, Godlie Forms, p.291