

vegetables at the command of the multitude. We should then have adopted the right principle of protection instead of the fallacious one of putting import duties upon food stuffs. Had this line been followed instead of disobeying the law, no bread stuff would have been wanted, for the land would have grown all that the population required. This is done now in other lands where the average population is much thicker upon the ground than in this country, but who have followed the dictates of nature and necessity.

The doctor then gave the results of the practice as it might be carried out in the present day by means of sewage farming. At present excremental matters are but too often sent into the sea or destroyed by chemicals. If, instead of this, they be conveyed to the land, five crops may be secured instead of one; five times the amount of labor would be required, agricultural laborers would be kept at work in

the country and at good wages which would give useful profit to those among whom they live, while five times the amount of meat and milk would be provided for the population which produces the sewage. Economists will say that we do not raise them at home because we can get them cheaper from abroad; then why do we raise any at all? I contend that we only import enough to fill up our own deficiencies, and that not a single head of stock could come into the country if the land—especially if the Irish landlords had done their duty—were cultivated as it ought to be, and our excreta utilized.

Dr. Carpenter hoped the day was not far distant when Parliament would decree that sewage shall not be destroyed by chemicals or sent into the sea, that such things shall be antinational offences as much as piracy and slavery, and shall be disallowed by common consent.

MR. WYNTER BLYTH ON THE PRESENT POSITION OF DISINFECTION.

AT the meeting in February, of the Society of Medical Health Officers, England, Mr. Wynter Blyth, in introducing the subject of the present position of disinfection, expressed his intention to confine his remarks to one important change that our ideas on the subject had undergone within the last few years. When Robert Koch in 1881 gave to the world the first results of his inquiries into the relation of micro-organisms to disease, it was the general inference that pathogenic microbes, or those concerned in the propagation of diseases of the infectious kind, were exclusively, or nearly so, of the spore-bearing class, and that since the spores of all such organisms possessed great inherent vitality, no so-called method of disinfection could be deemed thoroughly efficient which did not succeed in destroying the vitality of the spores of *Bacillus anthracis*, the most resistant of all. Now, however, that the nature of pathogenic microbes was no longer a matter of conjecture, those of

most specific diseases having been identified, it was found that the *Bacillus anthracis* could not be looked on as a typical of the whole class, since the greater number, including such well-known forms as those of cholera, enteric fever, epidemic diarrhoea, septicæmia, and erysipelas, were not spociferous, but occurred as micrococci, streptococci, or bacilli, very feebly resistant to heat or chemical agents. It was, therefore, unnecessary to have recourse to powerful chemical substances the use of which was attended by various practical difficulties. In a paper read before the Royal Society he had pointed out the importance of temperature, time and space as factors, and had shown that under appropriate conditions such simple measures as lime-washing and aeration were in most cases amply sufficient for disinfection. Recent experiments, as those of Behring and of Pfuhl, published in the *Zeitsch. f. Hyg.*, had proved the remarkable efficacy of lime. Boer had observed that while the addition of very small