

the workman? It is well known that the lowest wages in England were paid in the most pauperised counties. But in Ireland, where there is no out-door relief, the least and the most pauperised provinces are on a par as regards the wages of independent labour; in Ulster, men's wages are 7s. 3½d., and that province has fewest paupers; but in Munster, the most pauperised, the wages are only 1½d. a week less? Taking corresponding districts in England, we find that in Northumberland wages are 14s., while in Dorset they are only 9s. 4d., or 30 per cent. less. Is there any escape from the conclusion?"

The Chairman, in proposing a vote of thanks to Mr. Purdy for his valuable contribution to the industrial statistics of the empire, observed "that there was one very important point of progress in an agricultural and social point of view, especially in Ireland—namely, the advance of the weekly wages beyond the money power of cottier labour and proprietary. In a text-book on agriculture by Mr. E. Murphy, the Professor of Agriculture at Queen's College, Cork, he sets down eight acres as the quantity of land workable at high culture by a farmer and his family, and that by the employment of a degree of skill not always found in large farms the money result obtainable by the labour of his family, and that, too, if they had no casualties, was £23 per annum, or say 8s. 10d. per week, or 1s. 3d. per diem, exclusive of milk and potatoes. Milk and potatoes were frequently given, plus the money wages stated in the statistics. But the average wages of the family, for man, woman, and child, had now risen to 14s. 5d. weekly on the average in Ireland, whilst in Scotland the family wages had got to 23s. 11d. weekly. The money power of these wages was greater than Burns' cottier or small farmer could get; more than Burns himself could have got. The wage family might feed better than he could on the produce of his small farm."

Sea-weed as a Manure.

The utilization of waste products has occupied much attention of late years, both among manufacturers and agriculturists, and there can be no reasonable doubt but both these great classes of human industry will continue to reap many advantages by steadily pursuing a course of investigation in this direction. Sea-weed, of course, is only available in its crude form as a manure in places near the coast, so that by far the larger portion of Canada is precluded benefitting from this source. Sea-weed is extensively used as a manure along the coast of the New England States, and it might also be

in some situations on the Gulf and Lower St. Lawrence. In a recent number of the *Farmer's Magazine*, [English], we meet with the following observations:—

"The utilization of a common waste substance was recently brought before the public, in an admirable paper read before the Society of Arts by Mr. Stamford, on the useful application of sea-weed. From an elaborate chemical experiment which he had carried out, and a personal examination of the Scottish and Irish kelp works, he produced facts tending to show the great importance of this subject, and how much might be made of it in a commercial and agricultural point of view. It is not necessary that we should follow him into the chemical inquiry and the manufacturing processes and results, by which he proceeds to show how much may be done to add to the various commercial products obtained from sea-weed. Our business lies with the agricultural phase of the question, and how we may be able to diffuse some information of importance to many who have hitherto neglected, or else not duly appreciated, the rich stores which nature has so bountifully placed within their reach. In England generally sea-weed is little valued by agriculturists as an actual fertilizer, and appears to be regarded rather as an economical and useful covering to protect turnips and other roots from winter frosts. Farmers object to its bulk and expensive carriage—particularly now so many portable artificial manures are offered for sale, and recommended so strongly by their manufacturers as possessing great fertilizing value in a small compass. Mr. Stamford speaks strongly upon this. "There can be no question," he observes, "that many of these are worthless rubbish, and perfectly useless, except to line the pockets of the vendor; and the farmer would do well to turn his attention to the composition of sea-weed ash, which really does contain all the constituents of a good manure in a small compass." The ash from the charcoal, in making kelp, usually contains over 20 per cent. of earthy phosphates, the proportion being about that in Peruvian guano; and if the crude ammoniacal salt obtained by distillation were added, in the proportion of about 40 per cent., a manure would be obtained worth from £10 to £12 per ton, of which from 3 to 4 cwt. would be sufficient for an acre of land. The phosphate of magnesia it contains points to its special application to beet-root and clover—Mixed with about 5 per cent. of the chlorides of potassium and sodium, it would be equally beneficial to other root and cereal crops. Liebig divides crops according to their wants into three classes—potash plants, lime plants, and silica plants; such a manure contains the food for all or either of these.

The value of sea-weed as a manure is most