

eaten. Well, then, where does the grass get it? From the soil, do you think? Just consider; take a hundred years—what has been added to the soil of that farm during that period? Hardly anything; the farmer may perhaps have bought some bran and some meal every season for the pigs; but then he has sold the bacon made by his purchases, so that the farm has lost as much as it has gained, in that respect. He has bought no manure. It will not do to say the farm continues to yield the grass because of the manure that is added, for none has been added to the farm. Manure, has, no doubt, been added to the field, but none has been imported from without the farm, and yet, five tons of cheese have been exported every year; and how has that great draught upon the farm been maintained without loss? The manure that is applied to the field helps the grass greatly; but it cannot supply the cheese I speak of; for you must acknowledge that the manure is just what remains of the grass after the cows have taken the butter and cheese out of it, so that every year, the land is robbed of so much cheese; that is, if the cheese be in the soil. But can you believe that it is? Can you believe that every year, the soil of this farm is the poorer by five tons of cheese than it was? Why, how long had it stood this waste? If we suppose that it has been yielding at that rate during 1,000 years, there must have been 5,000 tons of cheese in the soil of that farm—50 tons of cheese in every acre of it, at the beginning, and if anything, the farm is more fertile now than it was then—fuller of cheese, no doubt, than ever; so that for all we know, there must be thousands upon thousands of tons of cheese in it still. Ah! but that explanation cannot stand; we cannot believe that the wood of our trees, or the cheese, or the butter of our dairy farms comes out of the soil. Where do they come from then?

Now, before attempting to answer this question, let us take the case of an arable farm. Suppose we take our own, at — for instance. It contains about 272 acres of land—off 120 or 130 acres of it, every year, we cut a crop of wheat, which may average from 32 to 36 bushels of wheat per acre; and besides these, 4,500 or 4,600 bushels of wheat, we sell annually, probably, ten or eleven tons' weight of beef, mutton, and bacon; that is, the animals we sell off, are, on the whole, heavier by that weight, than they were when brought on. We buy some 100 or 300 bags of meal and linseed as food for the live stock every year, so that much is added to the soil every year, and that may account for 500 or 600 bushels of wheat we sell off; but where do we get the 4,000, and where does all the beef

and mutton that we sell, come from? It will not do to say that it comes from the manure; for set a watch upon the entrance gate of the farm, and count what goes in and what comes out of it in a year; hardly any manure goes in, and you will find that 1,000 bushels of grain go off the farm in a year, and you will find that ten or eleven tons' weight of meat go off the farm more than comes on it in the year. Where does all that food come from? The question is, whether or not it can be supposed to come from the soil.

During the past ten years, we must have sent off the farm 30,000 or 40,000 bushels of wheat, and 100 tons of meat. I take our own case as it is, the only one I am perfectly acquainted with; but any cultivator of the soil will, if he looks back a few years, have to acknowledge the same remarkable truths in the case of his own farm. Do you think that all that bread and beef came out of the land? Why, the land is richer and better after all that has been taken out of it than it was before; and if it be kept in cultivation for years to come, it may yield hundreds of thousands of bushels of wheat yet; they are not there now, most certainly,—where will they come from? Neither the wood of our trees, nor the dairy produce of our grass lands, nor the grain and meat of our arable lands can be supposed to come from the soil. If all the wheat, oats, rye, barley, beans, peas, bacon, butter, cheese, beef, mutton, and so on, that England has produced since it was first cultivated, were piled upon the land now, it would be more than a foot deep over the whole island. Deeper than the soil itself is, on the average, over the country. And should things remain as they are for another 1,000 years, the land will have yielded another such lot; that is, more food in point of bulk and of weight, than the soil itself actually is. Where has it, where will it all come from? That is the question. (The answer will appear in our next number.)

TRIAL OF SUB-SOIL PLOUGHS.

On last Tuesday, 12th inst., a trial was made of the comparative merits of a sub-soil Plough manufactured by the firm of Rapelle & Co., of Rochester, in the State of New York, and one of English manufacture, made by Read. The trial took place on the farm of J. B. Marks, Esq., near Barrie'sfield, Read's Plough is the property of Charles Penner, Esq., of Lacine, the one which was exhibited at the Provincial Show, held in this City in 1849, on which occasion the first prize was awarded to one of the Rochester made ploughs. Read's plough carries the palm in England, as making by far the best work of all