

better if a stream, however small, runs through it, catch, or beg, or buy ten or twelve pair of eels and put them in the pond to breed. They will deposit their spawn in the mud or sand in April or May, and it will hatch out in September or October. Naturally, the eel is a fish of passage, and pays a visit to the sea every year, and the passing up a river of the young eels is a curious sight. On the banks of the Thames, this passage is called *eel-fare*, and it is calculated that from sixteen to eighteen hundred young eels, each about three inches long, pass a given point in the space of one minute of time. They only travel by day, and rest at night. I myself have seen them passing the locks at Sunbury, making the gates quite dark as they clamber over them; for nothing stops them, those who can't get on die, and the rest pass over their bodies (1).

Eels are very clean feeders; if possible, they like their food alive, and in all cases it should be fresh. Still, if they can't get live fish, frogs, or worms to eat, they will take what they can find, and are not too dainty to refuse the entrails of chickens, ducks, &c. They devour enormous quantities of spawn of all kinds, and in places like the Norfolk *Broads*, where roach, dace, and bream collect in vast numbers to spawn, you can hear the eels sucking away at the spawn in the weeds, gorging themselves to such an extent that they will lie motionless on their backs on the gravel with their bellies distended with food.

There are a good many ways of catching eels, but in ponds they are generally taken with the spear or on night-lines. The spear is formed of four broad blades, spread out like a fan and slightly overlapping each other, between which the eels get wedged and retained by slight teeth cut in the edge of the blades. The spears are mounted on long slender poles, to enable them to be thrust into the mud, where the spearer notices the tell-tale bubbles which announce the presence of his quarry.

The largest eel of which we have any account was one taken in the Medway at Rochester in Kent, weight, 34 lbs.: length 6 feet, and girth 25 inches! Stoddart, a well known Scotch writer on angling, relates that having set two trimmers for pike in a sluggish stream, when he went the next morning he found that both hooks had a fish on.

After trying for some time to land one of them without success, he was astonished to find that the same fish had gorged both baits, and still more astonished was he to find that the fish was an eel that turned the scale at twenty pounds! I should like to know the weight of the heaviest eels taken in the St. Lawrence: with *Maslinonge* (*Masqu'al-longé*?) of sixty pounds, there must be some monstrous eels in the river.

Subsoiling.—More disputes in the U. S. agricultural papers on the subject of deep-ploughing and subsoiling, particularly on heavy land! A simple question, it seems to me, decides the matter: Do you dig your garden five inches or ten inches deep?—and why? Because you manure it. Plough deep or subsoil for a manured crop and you won't be disappointed.

For heavy land, in particular, deep ploughing is absolutely necessary to the production of heavy crops. Shallow ploughing may be admissible in the case of a field that has had rape or any other green crop fed off by sheep, lest the droppings of the sheep be buried too deeply; but even in this case—a rare occurrence here—we must not forget that the roots of vegetables in general push themselves out in pursuit of nutri-

(1) *Eel-fare* is evidently from the old English, to *fare*, i. e. to travel. Cf. Spenser's *Faerie Queem*. "So forth he fareu, as now be-fell, on foot." Canto III, book 2.

ment, and with an instinctive perseverance will pass over or through media which afford little or no food, in order to reach a medium in which they can luxuriate at will.

In some of our clay soils, a system of ploughing shallow, broad furrows is to be seen. I saw it in practice last summer at Richmond, after grass fed off, in the month of June, and I wondered how on earth they were ever going to get the land ready for turnips, as they intended. The truth is, that most of the ploughs used in the province will make no other sort of furrow, and the sooner they are thrown aside, the better for the farmers.

"There appears, in short," says Henry Stephens, in his *Book Of The Farm*, "every reason for inculcating deep ploughing, not only where existing circumstances admit of its adoption, but where its ultimate effects are likely to induce a gradual improvement of the soil and all its products; admitting always that a variation in depth is proper and necessary under the varying circumstances of crops and seasons."

Here, we have not horses enough for subsoiling: six at least are required for the job—two in the common plough and four in the subsoiler. But we could all manage a furrow of 8 x 11 inches, or even of 9 x 12 inches, for the fallow crops of roots or maize. For grain to succeed the fallow crops, 6 x 9 inches, and when the grass is turned up in its turn a furrow of 7 x 10 inches would complete the rotation. In my own part of England, in the county of Kent, the fallow gets its first ploughing of twelve inches deep in November, and the clover-leys are turned over nine inches deep for wheat. It takes four heavy horses to work at the above depths, but any alteration of the practice has always been followed by disastrous consequences; as many good Scotch farmers, who, coming from the light hazel loams of the border counties, introduced pair-horse ploughs on our soils, can bear witness: one and all had to discard their system and take to our old Kentish turn-wrest ploughs, with its four horses and two men!

Superphosphate.—We send our *Apatite* to England, where it is ground up, dissolved in sulphuric acid, and sold as superphosphate. It is not dear there, as the following advertisement will show:

Mark Finch & Co., Victoria Docks, London, E.

SUPERPHOSPHATES, containing 26 0/10 of soluble phosphate, £2.12.6 per ton (2240), free on rails here. We guarantee the analysis of all our manures; customers draw their own samples, when they receive the bulk, and if Dr. Voelcker, Mr. Bernard Dyer, or Mr. John Hughes, certifies that the sample is of less value than the money which has been paid for the manure, then we return the difference."

Now, £2.12.6 per gross ton equals \$11.60 per our ton; but, you will remark: the price of superphosphate you quoted in last month's journal was \$28 a ton! True enough, and the quality being considered, the difference is still more astounding, as the English manure contains 26 0/10 of soluble phosphate, and the Montreal manure only 23 0/10 of phosphates of different kinds, soluble, reverted, and insoluble, the word *available* being the term used to qualify the matter. Thus, in point of fact, even supposing the 23 0/10 of available phosphate to be all soluble, the manure in question would only fetch in England \$10.26 per ton of 2000 lbs! And so we have to pay for our home-grown and home-made article nearly three times as much as the same article costs in England, after the expenses of the voyage, &c., have been incurred. I really cannot recommend my friends to use artificial manures at this rate.

And now let us see what a good practical artificial manure, fully equal in practical utility to any advertised mixture