

quantity of rain that we have, makes it much easier for us to supply *liquid manure* by top-dressings of concentrated powdered manure, to be washed in by the rains or heavy dews. A dry climate and sandy soil may require frequent manurings, and as liquid manures both water the land and manure it, they are suitable for Flanders, but by no means to the large farms, stiff soils, and moist climate of Britain.

The Scotch farming is only suitable to Scotland, or to a country similar in climate, scanty population, large capital, good markets, and the taxation per acre small. It is seldom that a country can have the advantage of good markets, without the disadvantage of heavy taxation, and a superabundant and expensive poor; but Scotland has such an advantage, owing to its vicinity and connection with England. The fact often stated of rents being comparatively high in Scotland, is occasioned by the English landlords, rents being greatly diminished by higher taxes, tithes, and rates. The capital turnip crops are caused by its being a root suited to moisture and colder atmosphere, and to cloudy skies and mists. The culture on ridges or raised drills so suitable for a climate generally too wet, is hurtful in one often too dry. The greater growth of potatoes is from the same reason. Our climate, except in its western parts as Yorkshire and Lancashire, does not suit them so well, and in our eastern districts landlords forbid their being (if grown on a large scale) sold off the farm. Barley is universally reaped and tied up in Scotland. In the eastern part of England, it is always mown and carted loose; and we have our reasons. Our barleys are from the drier climate, generally very short and brittle in the straw, and often not more than one and a half feet high; they could not, therefore, be reaped or bound, and from being nearly always grown with clover, which is, especially when the barley is short, tolerably long, the tying up in sheaves would be still more objectionable.

The English on their side, object to the Scotch growing so much oats in lieu of wheat; but here the Scotchman is right; oats suit his climate better, and form many favourite articles of Scotch diet. The Englishman says, the Scot uses more seed than is necessary for his crops; but the Scot is right, as more seed is there destroyed by wet and frost, and the thicker sown seed comes ripe earlier.

The Scotchman, says the Englishman, ought to have complete steam thrashing machines to thrash, dress, and sack the corn at one operation, and not thrash by flail, or use little portable cut-down machines. Here the Englishman has various good reasons—not to mention that many English leases forbid thrashing by machine. The population of England, which *must be supported, work or not work*, is so dense, that it is often advantageous to thrash by hand, even if costing more money. But with English hired out machines, the saving in expense is very little, the only ad-

vantage being in expedition and freedom from pilfering. The advantages of flail thrashing are the supply of straw fresh to cattle, the procuring straw straight and less broken for various purposes, and the better condition in which barley is sent out for malting and seed. But machines are now made that do these two latter points as well. In Scotland, the corn from the late harvests and uncertain climate is cut greener,—this makes it thrash out worse than the English, and the straw, from this practice and the damp climate, is less brittle; both these render the corn more suitable for machines than for flails. Coals are cheap in most of the southern parts of Scotland; and the fact of coals costing only 7s. or 8s. a ton in many parts of Scotland, and more than 30s. in many, especially the inland, parts of England, is a hindrance to the use of steam thrashers in this country—this evil railroads will remedy. Farms in Scotland are large; the interest of the money spent for the engine is therefore much less per acre than it could be on the moderate sized farms of England, and they can also keep the machine more constantly employed. There is another reason why the English have not disused the flail, and that is that they are more skilful with it, and it is a better implement in England than in Scotland. In Scotland, judging from the engraving in Stephen's *Book of the Farm*, it is only a couple of sticks tied together with a thong of leather; but, besides this thong, the English flail has a small ashen bow, which allows a complete circular motion at every stroke of the flail.

The Englishman, in his turn, objects, but with little reason, that irrigation is not practised in Scotland; but why should it? Irrigation is only useful on a sandy, gravelly, or otherwise barren soil in a hot climate, where the water not only cools the ground, but supplies moisture and food to the grass or plants. But what is the use of constant watering in a climate naturally too wet, or of cooling the soil in a climate naturally too cold?

The Scotchman ploughs deep and rightly on his deep stapled loamy soils, where one of the objects is to carry off the superfluous wet more quickly; but he is wrong in finding fault with the Englishman for ploughing shallow; for why should the Gloucestershire farmer plough deep on the stone brash soils, when the subsoil is naturally very loose and open from the quantity of stones therein? or the Norfolk farmer loosens his sands which are too loose and blowing already, or break up the "pan" as the Scotch advise him to do, to let "the goodness of the soil into the subsoil?" Which goodness or richness does not mean the manure only, but the made soil of marl and clay, which, the "pan" being broken, would very quickly sink below a cultivated depth. In fact, it does so, and an extra deep ploughing is sometimes used to bring part of a former coat of marl again to the surface. In the fenny parts of Gloucestershire, (as Mr. Pusey tells us), merely par-