

of the sun. Dunging, I think, is often proceeded with too early in the season. We have seen that the soil is a workshop in which the constituents of plants are constantly being prepared. Now, if we put on the dung in the beginning of summer, all our future workings of the land tend to promote this process more rapidly; the consequence is, that at seed time the soil is full of the food of plants; and this at a time when the plant does not require it. "When a seed," said Professor Johnston, "is committed to the earth, if the warmth and moisture are favorable, it begins to sprout. It pushes a shoot upwards, it thrusts a root downwards; but, until the leaf expands, and the root has fairly entered the soil, the young plant derives no nourishment other than water, either from the earth or from the air. It lives on the starch and gluten contained in the seed." But even if the plant does derive nourishment from the manure in the autumn, the only effect produced will be, that it becomes *winter proud*. But the dung is not so much exhausted in this way, as by encouraging the growth of weeds, and by being washed from the soil by the winter rains. That dung is washed from the soil is placed beyond doubt, I think, when we call to remembrance that, on the average, throughout England, upwards of 31 inches of rain fall in the year, and that for every perpendicular inch per acre there falls 100 tons of water. In summer this immense quantity of water does not do so much harm, as a great part is taken up again by evaporation, the land by this means only lending a little ammonia to the air; but in winter, on drained land in particular, nearly the whole has to run through the soil, as the evaporation is very trifling. It is much better, I fancy, not to manure the land until the end of August, in which case the dung is not prepared to afford nutriment to plants until the spring, the very time at which the young plant requires a powerful stimulant to rouse it from the torpor of winter. Instead of the usual practice of dunging land, I have tried and commend that, explained by Stephens, in his "Book of the Farm," which is, to have the field drilled, and dung put into the land, in exactly the same manner as is done for turnips. When this method is pursued, the weeds should be gathered previous to drilling, and again after; if then the land is not perfectly clean, the drills may be split again and again, and gathered until it is so. By deferring the cleaning of the land until this time, there is a much better chance of lifting the weeds *unbroken*. The advantages of having the land drilled up, I conceive to be these:—There is a larger surface exposed to the air than can be by any other form. The dung is more evenly distributed over the land, and there is not that waste of manure which occurs when it is left on the surface for days, as we sometimes see it. The land, too, is lying in that form in which it can best receive heavy rains. The best manner of making the seed bed is with the small ribbing plough,

the ribs being about fourteen inches from centre to centre. The seed may be put in with the broad-cast sower or by hand. This answers a better purpose, I think, than with the Suffolk drill, as the plants have more room in which to spread their fibres, to seek their proper nutriment. The ribbing or drained land should be across the drains, for by this means every part of the ridge has its fair proportion of active soil; whereas, if the land be gathered up, it is robbed of it. The ribs, too, can be formed more regularly, and with the least loss of land, and there is less chance of forming an impervious layer over the drains. It is injurious, I think, to have the soil too finely pulverized at seed time; for if heavy rains come, it is apt to run together; or if it is dry, it is in so contracted a state that the winter frost and moisture cause it to swell, throwing up and exposing the roots of the plant. But if sown with a clod, even if the roots are thrown out a little, these clods, by being reduced to a powder, fall over the exposed parts, and so protect them; and, besides this, they form a fine mould, in which the grass seeds will freely germinate in the spring. In the usual course of cropping adopted in this district, bare fallowing occurs once in the four years, or often twice in seven.—*Farmer's Magazine*.

THE FARMER.

SKETCHES FROM A MODEL FARM.—Whoever strives to improve the condition of agriculture merits the gratitude of the community at large; and it is with satisfaction, therefore, that we mention the name of Lord Torrington as having caused a homestead, upon a very improved plan, to be arranged at Pekham Green, Mereworth, near Maidstone, which, with buildings and machinery complete, cost upwards of 2000*l*. The farm-house possesses every convenience and comfort; the offices adjoining are enclosed within a wall, and the whole capable of being secured by lock and key. On entering the gate facing the east, stands the large bullock or cattle lodge, entirely under one roof, and capable of containing forty-eight head of cattle, besides calves and sheep. A sketch of this will be found at the head of our calendar for July. It is of an oblong square 53 feet 7 inches, by 90 feet 6 inches, and divided into six compartments, each beast having a feeding trough and cistern to itself, whilst pipes convey currents of cool air to the animals' heads. According to the principle carried out, there is a covered drain, by which the drainage and refuse passes off into a receiver, where, after lying about a fortnight, it becomes perfectly eligible to be used as good manure. There are several rooms adjacent to this building, one for cooking the food for the cattle, of which we give a view, another, with two floors, with a machine for cutting turnips, &c.; and at the end is an oil mill complete, for making the linseed cake; the chaff