

DRAIN FOR ROADS.

(For the Canadian Agriculturist.)

Stamford, C. W., 4th Jan., 1851.

Sir,

Mr. Moyle, in a late number of the *Agriculturist*, has given a section of a drain to be built with plank, under the centre of plank roads. That a drain is necessary who can doubt, that has travelled upon the planks with the mud flap, flap, flap beneath them, and at times squitting six or eight feet right into your face. Likely Mr. Moyle's is the best or most convenient. I will suggest another mode of obtaining the same object, by having the two middle timbers, not scantlings, but whole trees, hewed to 10 inches or more, according to the size of the trees; these laid under the wheel tracks, would leave an open space, the width of the track, to be filled with large stones at the bottom and small stones for a covering under the planks, thus forming a drain and a solid foundation for the horses' feet;—and wherever stones can be conveniently obtained, a road more solid and much more durable can be made.—Likely the expense would be too great; yet as the road would remain firm with so solid a centre and last many years longer, it would pay. Roads are not made for the passing day, and no reasonable expense should be spared in the making, so as to ensure durability. Plank or scantling, as now used upon the bare soil, sink, and the planks begin to spring. If this can be prevented, in any way, a great point will be gained. A practical difficulty in laying down the plank, from the thickness of the centre pieces, may be a fatal objection to my plan. That more strength in the centre of the road is necessary, few will doubt, and likely some person conversant with the subject, may suggest a suitable remedy; more scope being given to private enterprise by sale of the roads.

Yours, &c.,

J. J.

INQUIRY AS TO THE CAUSE OF SICKLY VEGETATION IN SPRING.

(For the Agriculturist.)

Sir,

A ten acre field in cultivation, has for the six preceding years presented a curious appearance in May or early June; whether winter wheat or spring crop, uniformly bearing a sickly appearance, and suspending all growth in the plants, while a yellow cast is predominant. Having attained that stage, in a few days it begins to recover, the crop is not behind at harvest, but it does not amount to more than two-thirds of the usual produce. Twice in six years a light dressing of dung from the yard, has been spread, with benefit. Plaster has been used four seasons, and yet each spring presents the same sickly hue; the soil is heavy clay, far from rich; works heavily and with small profit.

Can you, or any of the correspondents of the *Agriculturist*, say which of the chemical proportions of the soil is lacking? The sulphates were partially supplied by the plaster and the dung; are the phosphates or carbonates wanting? If so, in what way can they be profitably supplied? Can subsoiling be useful on a hard poor clay?

Yours truly,
J. J.

Stamford, January 1851.

[Our correspondent does not inform us how the field in question has been farmed for many years past. From what we have observed of the heavy clays in his district, and from the description which he gives of this particular field, we are inclined to think that the appearance and results of which he complains are induced by a general, rather than special exhaustion of the soil by over-cropping. It requires a very carefully conducted *chemical analysis* of a soil to determine accurately its exact constituents and their relative proportions; such knowledge too, when obtained, can rarely be turned to any good account in the management of a farm, except under the guidance of a sound judgment and much practical experience. In the case in question, the crops assume a yellow hue (a sure indication of sickness,) and their progress retarded, just at the time when their growth should be the most vigorous and uninterrupted. Now this may arise from chemical or mechanical causes, or from both. If on dry land, deeply and thoroughly cultivated, the crops put on a yellow sickly appearance in spring, not traceable to drought or sudden changes of temperature, it may be fairly assumed that the soil is deficient in *nitrogenous* substances, and the only means of meeting the evil, during the period of growth, is to apply manures, rich in nitrogen, which can be readily yielded up to the pressing wants of the crop. The nitrates of potash and soda (the former, common saltpetre,) being deliquescent salts, are well adapted for such a purpose. We have applied them to all kinds of grain in a growing state in England, more or less every year, for *doctoring* sickly crops, and generally with complete success. Unhealthy patches in the same field arising from very local causes may by these