

or cut each other, the sap is vitiated and causes a curl in the leaves, and specky fruit. I would prefer a saw to a bill or hatchet in taking off the large branches; but the wound should be always smoothed after it with a knife, and the cut smeared afterwards with a medicated tar, a receipt for making which I will insert below.—Any raggedness or laceration in the cortex, or bark, should be pared down to the quick, and the medicated tar applied with a brush. Moss, &c., should be rubbed off, and any branch which, even in three years time, would injure the symmetry of the tree should be lopped off. It should be remembered that the beginning of November is the best time for pruning—some authors mention other times. It is also sometimes necessary to place dung round the roots, and cut some of them if too numerous. When trees are much thinned of wood they generally throw out an abundance of shoots in the spring following, which should be rubbed off, but not cut; for cutting tends to increase their number. I am certain that many persons, from prejudice, will be averse to heavy pruning; but experience shows us that a tree overloaded with wood never produced good fruit.—It may have more in number—but every costermonger knows that it is the fine fruit that sells the orchard, and that the inferior rubbish are scarce worth the cost of gathering them. Pruning fruit trees is as necessary as the hoeing of turnips, and it will yet become as general. Mr. Boulding, of Sittingbourne, highly approved of the above-named essay. He applied the directions recommended by Mr. Bucknall, both to his apple trees and cherry trees and had all of them free from specks, and of a superior quality. Every farmer should have an orchard near his house; not to speak of the fruit, the very blossoms purify and perfume the circumambient air, and, according to many medical men, for this reason, apple trees near a house are conducive to the health and longevity of the inmates. In Herefordshire, where there are very many orchards, the people live to a great age; this has been long remarked, and is owing to the above cause, and the plentiful use they make of cider. We are told in history, that when King James I. visited Herefordshire, ten men and women, whose united ages made one thousand years and upwards, danced a Morris-dance before that monarch.—*Vid. Butler's Chronol. and Biog.* The medicated tar I allude to is made thus: Take $\frac{3}{4}$ oz. of corrosive sublimate, reduced to fine powder with a wooden hammer, and dissolve it with a glass of gin, or spirits, in a three pint earthen pipkin, stir it well and fill the vessel gradually with vegetable or common tar; stirring all till they are well incorporated, and the mixture will do for about 200 trees. Note.—The corrosive sublimate is a deadly poison, and should not be left long without mixing it for fear of mischief to any creature or member of his family. Yours, &c., J. T. DUNNE.

ON SUBSOILING.

By Mr. ALEXANDER OGG, *Land Surveyor, Union street, Aberdeen.*

At a time when Agricultural improvement is creating so much interest—and when Agriculturists generally are aware, that, by energy and perseverance, combined with caution, experience, and capital, it is practicable in many cases to double the produce of the soil—and when large sums of money are about to be expended on such improvements—I trust I may be excused for troubling you with the following remarks regarding subsoiling.

The importance of this improvement, particularly in connexion with thorough-draining, is now generally admitted.—The difficulties, however, are so various that comparatively few have as yet been induced to give it a fair trial. The want of sufficient strength and the expense are the principal objections.

I have for several years subsoiled all my land previously to green cropping, a considerable part of which was thoroughly-drained; but part was haugh land, and did not require draining, and had few or no earth-fast stones in it. The subsoil, however, within 5 or 6 inches of the surface, was exceedingly hard and stiff; but the operation was less expensive, and required less strength, than if it had been of a tilly subsoil with large boulders or rocks. In every case where subsoiling has been applied, I have found it productive of very beneficial results.

This season, however, I had to subsoil a field having a very hard tilly clay subsoil with some earthfast stones; and finding that the work could not be accomplished without a greater strength of cattle than I had on the farm, or could conveniently procure, I resolved to make an experiment of subsoiling this field by manual labour—it having been previously thoroughly drained.

I employed a plough with a pair of heavy strong oxen, with six good labourers to follow the plough with common shoulder earth-picks, who, after the plough had opened a furrow from ten to twelve inches deep, were distributed at equal distances along the furrow; each having his part allotted to him, and standing on the firm bottom of the furrow, he commenced by making an opening to the requisite depth—say from 6 to 8 inches—in the subsoil and then, by striking the pick in a horizontal direction into the subsoil to the depth above mentioned. Each man proceeded in this way, working backwards, until his portion was completed. The stones which could be removed were thrown on the surface; and any large ones were taken out by the assistance of the other men, or their position marked for being afterwards blasted. The horizontal strokes of the pick were found much more efficient than the downward strokes and much easier to the labourer.

In similar operations, the number of workmen required will depend on the nature of the subsoil; but from 6 to 10 men

will generally be found sufficient to keep a plough going.

The expense in this case was about £22 per imperial acre for the manual labour, including the expense of boring and blasting a few of the stones. The labourers were paid at the rate of 12s per week for 8 hours a day. The man and oxen required, little or no more time than if a subsoil plough had been employed, doing nearly one third of an acre per day. In that case six horses would have been required, which, with one man to hold another to drive, and at least two men to remove the stones, the expense would have considerably exceeded that of the manual labour, notwithstanding the high rate of wages.

There is no doubt that subsoiling may be used with advantage in many cases where it is never thought of; and many of the difficulties might be got over, were Agriculturists generally aware of its beneficial effects. The expense of procuring proper subsoil ploughs and harness has in many cases prevented tenants from making a fair trial. The difficulty would perhaps be obviated, were proprietors to procure subsoil ploughs and harness suited to the subsoils on their respective estates, and let them out to their tenants at a reasonable rate. We might then hope to see the operation of subsoiling become general.

Or were a few spirited contractors to furnish themselves with these implements, and a sufficient strength of cattle, to execute the work by contract, they would, by becoming acquainted with such work, execute it more efficiently, and at a cheaper rate, than it could be done by tenants individually; and I have no doubt that such contractors would be well employed.

This subject seems worthy the consideration of our local associations, and I trust, they will bestow upon it that attention which it deserves.—If these few hurried remarks be of use in directing the attention of Agriculturists to this important subject, my object will be fully gained.

THE POTATO DISEASE.

IMPORTANT COMMUNICATION.—The following fact about the potato plant may not be unimportant at this time of the year. I last year received, direct from the Brazils, two barrels of genuine wild potatoes, small, but very healthy, having been grown in a district where no potato blight has been known. They were planted, about the end of February, in land that had remained in pasture more than twenty years. The situation and soil were favourable,—the latter a little stiffish. No dung was used in setting them, but a few decayed leaves and a little sand. Under these circumstances, then, it might be well expected that if potatoes can escape disease, these would have a fair chance—wild Brazilian potatoes, planted in England for the first time, in a favourable situation, and in virgin soil. Yet in the autumn the disease failed