stirring the soil below, whatever stones of the weight of not more than four hundredweight it may encounter in its pro­gress. When stones exceed the above weight, a lad fol­lowing the plough marks their situation with a tally, that they may afterwards be removed with crowbars. These, with others found upon the surface, are the stones with which the drains are filled ; and thus, while the drains serve as leaders for conveying the water away when collected, the thorough stirring of the subsoil permits a more rapid per­colation, and also evaporation, by which the ground becomes very speedily dry, and consequently much better fitted for the reception and nourishment of seed of every kind. The expense of subsoil-ploughing, when paid in money, gene­rally varies from 24s. to 30s. the acre ; but it is now becom­ing a part of the routine labour of the farm. Supposing it, however, to be contracted for, and paid in cash, the extra expense does not exceed one fifth of the cost of trenching with the spade, and yet the work is as effectually done. The reader ought to remember, that the calculations are adjusted to the Scotish acre, and that four Scotish are equal to five statute acres ; so that the amount of money requir­ed to execute four Scotish, will cover the expense of five imperial acres.

In noticing this part of the subject, we shall first copy two short extracts from a writer in the Quarterly Journal of Agri­culture for June 1839, pp. 69 and 70. Speaking principally of the draining, he says, “ This so great benefit, not for Scot­land only, but for the whole kingdom, is as yet in its infancy. Already the fame and the utility of it is spreading all over the island ; and we have not a doubt, in a short time, there will not be found a spot that has not been made anew by means of this simple yet powerful and efficient system of draining....It is perfectly wonderful to behold the mighty change this thorough-drain system is making in the different parts of the country where it is in operation. Wet land is made dry, poor weeping clays are converted into turnip-soil, and even what would formerly have been accounted dry is advanced in quality. Whole parishes in the vicinity of Stir­ling are completely transformed from unsightly marshes into beautiful and rich wheat-fields ; and where the plough could scarcely be driven for slush and water, we see heavy crops per acre, and heavy weight per bushel, the quantity and the quality alike improved.” But these statements, although true, and in no degree exaggerated, are yet of too general a nature to fix the attention of the reader. We shall therefore simply state two facts, which are well authenticated, as illustrative of the beneficial results of these decided improvements in agriculture. In the Carses, which have been cultivated from time immemorial, and have always been very productive, and which have sometimes been considered beyond the reach of improvement, the most distinct improvement is visible even in the best years ; and in wet seasons the con­dition of the crop is still more distinctly marked for the better. In the driest seasons it is not beyond the truth to say, that the crop is larger from a sixth to a fourth, and the quality vastly improved in weight and fineness, while in wet and cold seasons, such as 1838 and 1839, it is impossible to estimate the value of these admirable improvements. Again, with respect to the other kinds of soil in Stirlingshire, namely, the dry-field, our remarks must be understood to apply less generally, as the soil is not so uniformly good ; yet are the effects more decisively manifested here than in the Carses, as in wet seasons, without the draining and subsoil-ploughing, many fields would scarcely carry any crop at all, and so both seed and labour would be lost. The following statement may be received as applicable to many different instances of management. A small field of seven Scotish acres had during sixteen years of a nineteen years’ lease produced upon an average the sum of from 10s. to 15s. the acre as its whole return. At this period, when the farmer felt himself secure in the prospect of another lease, he drain­ed the ground at intervals of only fifteen feet, in consequence of the great wetness of both the active and subsoil. It was then subsoil-ploughed, and covered with a crop of potatoes and turnip. This was in 1836, a very wet season. The product was a good fair crop of both. In 1837 it was sown with barley, and produced the heaviest crop of that grain that had hitherto been produced on the farm. This yielded more pounds per acre than it had formerly given shillings. In 1838, although an exceedingly bad season, it yielded fully two tons of hay per acre; and in the ensuing year, al­though only seven acres in extent, it produced more food to the same number of milk-cows than thirteen acres of an undrained field did in the preceding year. As these were the first crops after being drained, there is reason to believe, that when again subjected to tillage after pasture it will be still more productive, ns the drains will have had more time thoroughly to dry the field. Many such instances of bene­ficial influence could easily be pointed out in dry-field farm­ing, but this would only be a useless repetition. It is per­tinent enough to add, that not only are the crops improved, but both the seed-time and the harvest are rendered earlier than formerly ; a circumstance of vital interest in the up­land districts, where, under the ordinary modes of culture, it has not unfrequently been difficult, and sometimes impossi­ble, to get the corn to ripen at all in wet seasons, which so frequently occur in our climate.

The encouragement of the landlords, most of whom are resident in this county, has been prompt and judicious, especially in patronising the introduction of the draining system, which is the basis of modern agriculture. Decidedly the most active of these were Mr Murray of Polmaise, the late Mr Graham of Airth, and Mr Moir of Leckie, who were among the first to direct their attention to this subject, and who effectually introduced the new system among their tenantry, and thus obtained for it a fair field. Since then its advantages have been so manifest as to induce the most prejudiced and stubborn of the farming population to adopt it to a greater or less extent. Nor has any popular clamour ever been raised against the improved culture ; a proof that even the rural population are beginning to admit new ideas.

Another circumstance which has risen out of this im­proved agriculture, is the establishment of Drummonds Ag­ricultural Museum ; an institution which, while it may be called the offspring of the improved culture, has yet had a very beneficial effect in promoting the objects which gave rise to it. It was begun in the year 1831 by the Messrs Drummond, the spirited seedsmen in Stirling, and was founded, and for the first two or three years conducted, at their own expense. The gentlemen, and some of the more public-spirited of the farmers, of the district, have since con­tributed so much towards its expense, that the public are now admitted gratis. It is still, however, the Drummonds Mu­seum, and they arc at this moment building large premises for containing it and their own business establishment. The principal object contemplated by this museum is the collecting together under one view practical working spe­cimens of every possible, or at least known implement, connected with agriculture, from the twisting of a straw-rope to the ponderous draining plough, the invention of Mr Macewan, farmer at Blackdub, near Stirling, and which is drawn by twelve horses. Few persons, even of those who are most conversant with the details of agriculture upon the most extensive and complicated scale, could have the slightest idea of the immense variety of implements here exhibited, both for show and sale. To specify particulars would answer no purpose. Besides the implements, there are also specimens of every kind of grain, root, or fruit, which will bear exhibition, along with soils, sections of drains, corn and hay stacks, amounting in all to between six and eight thousand specimens ; and few weeks pass with­out additions being made to the number. It is only fair to