

V.—*The Re-afforesting of Ireland—the Advantages and Disadvantages.* By Fletcher Moore, Esq.

[Read Tuesday, 17th April, 1883.]

THE re afforesting of Ireland being at present before the public as one of the grand schemes for the regeneration of Ireland, I propose bringing this subject before you to-night, and pointing out what seem to me to be, from the practical view, its advantages and its disadvantages. The word re-afforesting is of itself very vague, and is open to many meanings as to the degree of planting intended by it—some people arguing that as Ireland was once densely wooded that therefore it could and should be so again, and that it is our duty at once to set to work and make it so ; but this view we may briefly dismiss by pointing out that an enormous area of the country has been brought under cultivation since then, and as to the uncultivated parts—that the deep bogs will not grow timber, and that in the high elevations, where we now meet large stumps of bog oak or fir, and higher still, where we meet the debris of birch trees, it is well known that trees would not flourish there now, as the climate, not only of Ireland but of this part of the world, has cooled down since the days of the growth of those forests.

We may, therefore, take re-afforesting, for practical purposes, to be used in its more limited sense, and as meaning the planting of those waste spaces of inferior land which are unsuited for tillage and yet are fit to grow trees. It is probable that in selecting these places we would receive many different suggestions. The artist would likely choose some rocky eminence, and say: Plant there, to give effect to the landscape. The timber merchant would say: Timber wont grow there, you must plant here in this shelterý corner near the road, or the railway, or the sea, whence they can be easily removed when ready. Whilst the agriculturist would certainly say: No, but plant that barren ground in narrow stripes, and so I will have the intervening ground either for tilling or for grazing, and I will have the surrounding plantation to give a shelter to my cattle or crops. And in this latter view, in my opinion, lies the true principle of planting, as to how and where it should be placed.

By adopting the first view, the hardest and poorest quality of timber trees only could be grown, and even then they would be too far from the road to be profitably removed when they attained any size ; but by taking the third course and planting for shelter as well as profit, a part of the initial expense might well be placed against the shelter it would bring, and the practically new climate it would make through that shelter. Nor is this improvement of local climate caused by shelter imaginary ; it is real, for as the practical gardener knows that a little shelter will save his delicate plants from a winter or spring frost, so a practical farmer knows that a belt of plantation will let him grow better and earlier crops, and he also knows that every beast on the farm has to burn away a portion of its food for the mere purpose of keeping itself warm, and that by giving it shelter he is actually saving so much of its food, as it will do with

less food and at the same time thrive better. On this very point—I know well a mountain farm in the Wicklow mountains (not very far off indeed from Glencree, which Dr. Lyons describes in his essay on re-forestation as being formerly a forest)—on that farm by judicious planting in belts or screens, the place has become quite different in its local climate to the surrounding mountains, and the plantations are highly valuable for their shelter, though practically valueless as timber owing to their distance from a demand.

Having gone thus far as to the advantages, there still remain two great questions which may be called the disadvantages: Firstly, will planting pay? and secondly, how can it be carried out? Now as to expense—before a tree is planted it will be absolutely necessary to fence in the intended site, so as to keep out all sorts of cattle, for their admission simply means destruction. Of course if there are no cattle no fence is required; but I speak from the experience of a part of the country where the cows and sheep are born jumpers, and are quite omnivorous in their tastes about young trees.

Narrow belts of plantation, though giving greater proportionate shelter than large square masses of the same acreage, will of course require a longer length of fence, and the very cheapest rate at which we could calculate on erecting even a sod fence would be 3s. 6d. per perch Irish. Should the fence be of clay it would be advisable to plant the face of it with thorns and some dwarf beech. This would add, say, another 6d. per perch—making at least 4s. a perch Irish, of seven yards, for fencing. It is of course impossible to put down any fixed sum as the cost per acre of fencing a plantation when we do not know either its size or its shape; but from my experience I would say that a moderate sized plantation, under the most favorable conditions, could not be set down for fencing at less than £8 per statute acre, small and narrow plantations costing very much more. As to the cost of planting, we will require at least 4,000 trees per statute acre, planting them a little over three feet apart. And here I would urge the greatest care in selection of the young trees, not only to get them strong and flourishing, but also to have them of a quality and description to suit the soil and the purpose for which they may be intended. If shelter be required, Scotch fir or black Austrian are perhaps the best. If for ornament, Austrian, silver, and spruce. (I omit the more expensive kinds as being more suitable for demesnes than for waste lands.) If for profit, then larch, and that only, for it is now the only timber, except perhaps oak for oak bark, that can be called valuable in its earlier stages; but we must bear in mind all the time that if the intention be to replant where trees have grown recently, then the class of tree should be changed from the former crop, or great disappointment may ensue. Thus larch after larch would not succeed well.

In Scotland they plant very small trees, and even, I believe, seeds; but this will not be found advisable in this country as the rank vegetation would most probably choke them; the cost of these trees will be found at present to be about 25s., per 1,000, for good larch; for Scotch and spruce, 21s. to 23s.; and for Austrian and silver, £2 to £3; should, however, the planting mania go on, it is certain

that with the increased demand the prices would rapidly increase also.

In some places planting is done in a very cheap manner with a planting pickaxe which makes a slanting hole in the ground, into which the roots of the young tree are thrust sideways and with little ceremony; the more laborious and expensive way of digging a separate hole for each tree is, however, far preferable and cheaper in the end, for I have seen the tree which had been accommodated with the hole beating out its axe-planted neighbour, which always seemed to have been growing its roots off to one side only, and to have kept a curve in its base from its original bad treatment; the digging of these holes and planting the trees may be set down as 18s. per 1,000 at least. So we have for trees, say £4 10s., for planting, say £3 10s., and fencing, say £8; or say £16 per acre statute for our initial expenses. We have then to pay a man for the first two years to tighten-in wind-shook trees, and perhaps to replace some dead ones, and then for twelve years there are poor-rates, county cess, and income tax, to be paid, though there is no income to pay them out of; and besides all these we must debit the planting with the rent, for no matter how poor the land is, if it be fit to grow trees, it will possess some value for grazing purposes. About the twelfth year some of the young poles may be cut out for sale; these, when of larch, were some years since bought for the English hop-fields at from 1s. 6d. to 2s. 6d. each, but this demand has apparently ceased, and there is now only the small local demand for light larch poles at a very low price, whilst spruce and Scotch of that age are quite unsaleable.

When the plantation reaches about twenty-five years, the telegraph-pole size may be said to have been attained by the larch; some years since these were easily saleable at 2½d. per foot in length, which would be from 4s. to 5s. per stick, or about 36s. per ton. Since, however, the Government have bought up the telegraph service, they have boycotted Irish timber by discontinuing larch poles, and now use prepared Norwegian fir poles instead, which do not possess the toughness of the larch pole, and frequently in storms snap off short with the strain of the wires, where in all probability a larch pole would have outstood the gale. So also the railway companies have given up larch sleepers, cut from trees of thirty to forty years growth, and use now creosoted Norwegian planks or half blocks, so that the demand now for larch is pretty much limited to propwood for the English mines, with a small home demand for cart shafts, gates, boat building, etc. The price has in consequence gone down within the last ten years about 30 per cent., and the price of the inferior timber, spruce and Scotch, has gone down so much as to leave it nearly valueless, unless when situated near to a railway or to water carriage—its present price on the Dublin quays being only about 13s. per ton, out of which would have to be deducted the cost of felling and carriage, the latter of which is very expensive, as timber is a dangerous and inconvenient load. All the other timbers seem also to have gone down in value, and the heart-

of-oak, once celebrated in song, has now to a great extent been superseded in shipbuilding by iron.

Thus, with the small use now made of home timber, and with the cost and difficulty of planting it, with the cost of paying rates and taxes whilst it is growing up, and the expense of felling and carting when grown, it is a very doubtful question whether planting, except under very favourable circumstances as to position or demand, can be expected to turn out a profitable speculation.

But there is one other serious difficulty in the way of replanting, and that is, how can the land for the plantation be obtained? If the landowner has the land in his own hands it may be easy enough, but if he unfortunately has let the lands to a tenant, how can he get any of it back for planting? Let him fix his eye on the barest, poorest, and most miserable looking patch upon the farm, and immediately it becomes transmogrified into the very best and most valuable piece, and even if the poor landowner can, under the last Land Act, succeed in getting the Land Commissioners to consider that planting would be beneficial, and to order that the landowner might have a piece of his own land back again to plant for the public benefit, the poor man will soon find that he would have to pay as much for the little bit, under the head of compensation or disturbance, as perhaps the whole farm was worth; and even if he did get it, he would probably hesitate to spend money on a plantation which would be a commonage for the neighbours' cows when young, and a handy place for them to get firing in if it succeeded in growing up.

Foreign governments have recognised the importance of native timber, and keep up schools of forestry, giving special grants for the purpose. Even our own country keeps up a large school of forestry for India; but the students for it have to get their training in either French or German schools, as England has no school to train them in.

Plantations, we are aware, do certainly improve the local climate, and as such might well be considered as for the public benefit. Is it then too much to ask the present Government, which has ere now done such wonderful things under the excuse of the public benefit, to follow the example of other countries and to give some encouragement to the growth of native timber by establishing a school of forestry, in which they could not only train their Indian students, but could also issue instructions as to what class of trees would best suit the different qualities of our native soils, and could assist by procuring seeds of trees from other countries? Should this be thought too great a stride in progress for the present, Government might give the simpler encouragement of freeing plantations from the burdens which at present are put upon them, by enacting that plantations, so long as kept up as such, should be free from all local and imperial taxation; and let them further add a clause to the Land Act to the effect, that when a tenant asks to have his so-called fair rent fixed by the Commissioners, that the landowner should have a right to resume possession of a portion of the land if he wishes, for the purpose of planting, and that at the same rent value as the Commissioners had fixed as the judicial rent for the similar class of land

upon the farm, so that the landowner should not be mulcted by having to allow a higher rent value for the part he resumed, than the judicial rent put upon the best bit of land upon the whole farm by the Commissioners, when engaged in the simple and now stereotyped operation of reducing the rent by 25 per cent.

Finally, we may sum up the question of whether we shall re-afforest or not, by saying :—If you want shelter, then plant for shelter. If you want to add to the beauty of the scenery or to give employment to the labourers, then plant for that. But as to planting trees as a speculation, and waiting for twenty-five years to get some profit, one feels inclined to give the same advice that Punch gave to those about to get married—Don't.

VI.—*On some Comparative Statistics of Irish Counties, compiled from the Returns obtained during the late Census and the Census of 1841, and other publications issued by the General Register Office of Ireland.* By T. W. Grimshaw, M.A. M.D. Registrar-General for Ireland.

[Read Tuesday, 22nd May, 1883.]

In the following statement I wish to bring under review a number of statistics which I have arranged since the completion of the Census of 1881. These statistics are not altogether derived from the census reports, but are to some extent extracted from the other publications issued by the General Register Office of Ireland.

The main features are founded on comparisons instituted between the years 1841 and 1881, as derived from the census enumerations of these periods. The reason why I have selected these epochs for comparison with one another, is that the earlier period was before the great crisis of 1847, and, what is equally important from my point of view, was the census year immediately preceding the year 1845, when the population of Ireland is supposed to have reached its maximum—being estimated in the middle of the year at 8,295,061. The remaining items of comparison are extracted from the published reports on Agricultural Statistics in Ireland, Emigration Reports, Reports on Births, Deaths, and Marriages, and Migratory Labourer Returns. It is especially gratifying to note that several of the items of information have been collected at the instance of the Statistical and Social Inquiry Society of Ireland. In arranging these statistics, I have endeavoured to place them so that the principal statistical facts with regard to the Counties of Ireland will be presented in such a way that the more important social conditions of each may be compared with any other, or with a selected group of counties, with a province, or with the whole of Ireland—the provinces with one another, and with the country as a whole.

In making the selection of the subjects to be illustrated by these statistics, I have chosen those which appear to me to present the most salient points; which tend to invite the smallest amount of