

tried ; all three have up to the present grown well, but whether they will continue to do so is a question for the future to answer. The Austrian and Weymouth pine require the least anxiety, and even if the spruce does not grow well it will still be very beneficial as a protection to the soil under the Scotch fir. The squares which have already been mentioned are planted with one-year-old plants, four or five on a square.

Where the ground is free from roots, &c., and not too uneven, and where the moorpan layer does not lie too deep, at the most 18 inches beneath the surface, the plough can be used with effect. If the ground is covered with scrub or strong heather it must first be cleared.

We had a good opportunity of seeing this manner of cultivating in the Luneburg Heath, where it was being carried out on a large scale. Formerly a so-called underground plough was used, but as it sprang too easily over hard moorpan without raising it, it has of late years been superseded by the sowing plough. The sowing plough has in front a small wheel which can be raised or depressed at pleasure, according to the depth of ground the plough is meant to turn up. The plough should be longer and narrower than usual when it is required to go very deep, as one of such a construction passes more readily through the moorpan. The coulter must be high, and swung in such a manner that both earth and moorpan are completely thrown up.

A vigilant supervision is very necessary, and it must be seen to, that the yellowish-coloured sand lies on the surface.

Two furrows must first be ploughed with the common agricultural plough, the sowing plough then enters and turns up the second furrow. A third is then ploughed with the common or fore plough, followed by the sowing plough, and so on.

In order to save expense, strips eight feet in breadth at a distance of six feet from each other are as a rule ploughed.

When the moorpan does not lie deeper than 12 inches, a pair of horses is sufficient, and the expense is about 27s. per morgen : if the stratum occurs at a depth of from 14 to 18 inches, six horses are necessary, and the cost is about 54s. per morgen. Eighteen inches is the maximum depth at which the layer may lie if the ploughing is to be done effectually. Ploughing is only done by the job. The ploughs are furnished by the Forest Department, but the contractor is responsible for repairs and the cost of transport.

When the ground has been sufficiently exposed to the atmosphere, the sowing or planting is carried out in a manner similar to that already described.

## V.

### AN ACCOUNT OF THE LAWS AND REGULATIONS RELATING TO THE MANAGEMENT OF VILLAGE AND ECCLESIASTICAL FORESTS IN THE PROVINCE OF HANOVER.

By GEORGE ROSS, Forest Probationer. Dated May, 1872.

MORE than a century ago certain laws were made for regulating the management of the village, church, &c., forests in the former Kingdom of Hanover. They were faulty, and the object, to effect a decided change for the better, was not attained ; but in the year 1815 certain laws were passed for the forests of villages, churches, and public institutions in the principality of Hildesheim, by which a regulated and lasting economy was insured. The beneficial effects of these laws soon became apparent, and it was considered desirable to adopt a similar code for the forests of other municipalities, as their unscientific management and administration gave great cause to fear that they would become more and more waste and barren.

In consequence of these circumstances, and in the interest of the public welfare, a law was passed in the year 1859, with the acquiescence of the principality of Calenberg-Grubenhagen, similar to that one which had been in force in Hildesheim since 1815. By this law it was enacted that certain restrictions should be put upon the rights of the proprietors of the village, church, &c., forests in the principalities of Calenberg-Grubenhagen and Göttingen, together with all lands belonging to them, and that the forests should be managed and governed according to the following regulations, as the indiscriminate and prodigal use of such rights had endangered the forests, to the injury both of the heirs of the proprietors and the community at large.

The principal provisions of this Act are contained in the following seven paragraphs :—

§ 1. The management of the forests is placed in the hands of the higher forest authorities and officers ; the supervision of the management is given to the district civil officer.

§ 2. The following are to be looked upon as the items of management :—

- a. The laying down of fixed plans of operation for the purpose of insuring a lasting supply of wood ;
- b. The appointment of supervision of the yearly felling and cultivation ;
- c. The fixing proper and regular divisions to be cut yearly, and rendering an account of the proceeds of the same ;
- d. The assignment of permissible minor forest products, such as seed, foliage, grass, pasturage, &c.

The administrators have not the right to determine how the felled wood shall be used or sold to the best advantage : after it is felled, the proprietors are at liberty to deal with it as they like.

§ 3. By the laying down of a general plan of operations, and the yearly estimate of felling and planting, the forest proprietors or their representatives are to be allowed, on application, a conference with the forest officer, in order to state their views and wishes, and every consideration is to be given to their proposals, so far as this can be done without prejudice to the forest.

Should the proprietors not be contented with the plan of operations, the district officer has to decide for or against it, and in the event of an appeal from his decision, the duty devolves upon the Minister of the Interior, whose verdict is final.