

quality of the young crop, and eventually to the extinction or destruction of the more valuable description by others more hardy, and saved from the axe by their comparative worthlessness.

The method adopted for the transformation of such tracts into regular plantations or forests is very instructive, consisting in gradually thinning out the less valuable sorts or white wood, and encouraging the growth of thick clumps or groves of those which it is wished to retain, which gradually reproduce themselves, and eventually, aided by artificial sowing or planting where required, cover the ground and constitute a close and regular forest.

It would not do to condemn the plänter-betrieb entirely for India, as, within certain limits, it has its advantages, but there is no doubt that we should at least experiment as above, and favour the more valuable timber trees at the expense of the inferior descriptions. Some idea of this did present itself to Mr. A. J. Stuart, Sub-Collector of Tinnevely, early in 1871, and proposals on the subject were under consideration when I came home.

PRUSSIA.

Out of a total area of nearly 35 million hectares, Prussia has upwards of 8 million hectares classed as forest. (The hectare may be computed as $2\frac{1}{2}$ English acres, the exact relation being 2.4711431.) Area and classification.

Of this, however, 53 per cent., or upwards of 4 millions of hectares, consists of private forests, and the remainder, with which we have more immediately to do, is divided into

a. State forests	...	...	...	...	2,486,598 hectares
b. Communal forests	...	...	...	...	1,246,965 "
c. Ecclesiastical forests	...	...	...	...	69,825 "
Total	...	...	...	...	3,803,388 "

equal to 9,508,470 English acres, or close upon 15,000 square miles; and of the area of State forests (upwards of 6,200,000 English acres), only a fraction over 4 per cent. is classed as waste or unproductive, although 10 per cent. is devoted to other purposes, which include the sites of forest houses and buildings, gardens, pasture lands allotted to the forest employes, &c., &c. The yield for 1871 of this great extent of woodland, the greater proportion of which ($1\frac{1}{2}$ million hectares, $3\frac{1}{2}$ million English acres) consists of Scotch fir, pure or mixed, is estimated at 5,688,785 "fest metres," or 204,796,260 cubic feet, representing a yield of 2.4 fest metres of wood per hectare, or 34.5 cubic feet per English acre of the area actually devoted to the production of timber. Yield.

This yield may appear small in comparison with that of other States, but the figures are taken from *Bernhardt's Forststatistik*, one of the most recent and reliable publications. I am, however, inclined to think that the apparent great difference is in some measure explained by more accurate returns for Prussia than some of the other States, and from the average yield being rigidly calculated on the total area devoted to the growth of timber whether actually stocked or not, whilst other States compute it on the area under or capable of producing timber only. A considerable extent of the area classed as forest in Prussia must consist of moors and barren wastes only now being actually planted up. I have endeavoured to explain this more clearly in the remarks on the tabular statement given at page 25, in which the average yield per English acre in several States is exhibited.

The money value or cash receipts by the sales of timber and firewood is $12\frac{1}{2}$ million of thalers (about 15s. per hectare), to which, however, has to be added upwards of a million and a half of thalers for forest products and miscellaneous receipts, raising the total income from the Government forests to close on 14 millions of thalers (£2,100,000).

The disbursements, which are divided into ordinary and extraordinary, amount to $7\frac{1}{2}$ million of thalers, leaving $6\frac{1}{2}$ million thalers, or little short of a million sterling, as the actual profit for the year. Receipts and Disbursements. When it is considered that this result is arrived at without trenching on the capital or stock of timber in the forests, which, on the contrary, is being increased and improved in every province of the kingdom, and that the indirect value to the people of many forest privileges, which they exercise free of charge, must be very great, not to mention the benefit to all in the shape of public recreation grounds and improved climate, some idea may be arrived at of the enormous value and benefit of a system of State forests and forest management as matured and worked out in Prussia. The ordinary expenditure includes pay of the forest establishments, all ordinary working charges, cost of the forest academies at Neustadt and Münden, and expenses connected with the preservation of the game, and other sporting charges, all of which are managed in Prussia and Germany generally by the Forest Department.

Under extraordinary expenditure are classed commutation of rights and servitudes (for which £75,000 is allotted), purchase of land, contribution to public highways (as distinct from forest roads, which are provided for under ordinary expenditure), and supplemental charges for cultivation and the forest academy at Münden.

The forests, as already stated in the Report on the Hanoverian Forests, form part of the finance or revenue department, and are presided over by an "Oberland-forstmeister" and "Ministerial Direktor," aided by a revenue councillor and joint "Ministerial Direktor" and a numerous council or board, with suitable office establishments and secretaries for the various branches. Establishments.

The forest academies are at Neustadt-Eberswalde, near Berlin, and Münden, in the Province of Hanover (formerly the Hanoverian Forest Academy).

The Oberland-forstmeister is curator or governor of the academies, and at the head of each is an "Ober-forstmeister," who is aided by a numerous staff of professors and assistant professors.

There is also a special control office of account, or Accountant-General for Forests, at Potsdam, where all the forest accounts of the several provinces are finally checked and audited before going into the general ministry of finance.

The 12 provinces of Prussia, several of which represent kingdoms of a few years ago, are divided into 30 circles (*Regierungsbezirk*), and to each of these an "Ober-forstmeister" (who may be classed