

<i>Exports.</i>					<i>Metres Cent.</i>	<i>Francs.</i>
Firewood	...	...	...	...	270,584	526,735
Undressed lumber	...	...	...	...	512,787	2,126,910
Dressed lumber	...	...	...	...	591,712	3,787,926
Charcoal	...	...	...	...	31,379	237,487
					1,406,462	6,679,058

Value of exports over imports, 408,988 francs=about £16,197 10s.

RISE AND PROGRESS OF FORESTRY IN SWITZERLAND.

Early in the Fourteenth Century inhabitants of the more thickly-populated districts in this country were forced by apprehensions of a deficiency in wood-supply to take measures for the preservation of forests. In the year 1314 Zurich forbade its foresters "to fell, raft, or sell wood from the Sihlwald." In 1339 Schyz issued a prohibition against charcoal-burning; and in 1438 Freiberg decreed that "no wood should be cut in the environs of the city." In Entlebuch it was forbidden in 1471 "to draw wood from forests high up in the mountains;" and in 1592 Berne called attention to the need of economy in the use of wood. Finally similar decrees became general.

These ordinances, however, though effective in preserving forest areas, hampered the progress of agricultural and wine-growing interests. Zurich, for instance, forbade, in 1503, the establishment of any new vineyards, and this prohibition was kept in force up to the beginning of the Eighteenth Century. At that period the dread of a deficiency of wood became so general that it was forbidden to purvey or export any even from one village to another. Contemporaneously with these prohibitions, others were issued forbidding the pasturage of cattle, sheep, or goats in the forests.

With the advent of the Eighteenth Century, Swiss forestry began—in an official sense at least—a more active existence. In 1702 Zurich—always foremost in this work—appointed a Commission to devise a general forestry system. In 1825 Berne followed suit, and later Freiberg, Lucerne, and Schyz took action in the same direction. From this time up to ten years ago (1875) the several cantons managed their forestry business as they wished, and entirely independent of each other. In 1875, however, the imperative necessity for combined action having become apparent, the matter was taken in hand by the Federal authorities, whose attention had been called to the pressing demand for legislative action to arrest the destruction of forests, especially in the higher mountain regions. Accordingly, on the 24th March, 1876, a law was passed establishing Federal control "over the forests in all high mountain regions of Switzerland," embracing eight entire cantons.

The Model Forestry System.

The system of Zurich is a model for example, and has been so used for over a quarter of a century. The area of private forests in Zurich is 2,813 hectares (7,033 acres), divided into 70,442 separate holdings, of which the largest is not over 80 acres and the smallest half an acre.

Rates of Supply.—The population of Canton Zurich is 308,593 persons, included in 63,863 households, an average of 4·8 per household. Consumption of wood per household, 5·79 cubic metres, or a total of 369·570 metres; yield of forests, 231,475 cubic metres: thus giving an excess consumption over supply of 138,095 cubic metres.

It may thus be seen that Zurich, the model canton of forestry, with all its well-kept forests, not only is not able to supply in full the demands for home consumption, but can barely produce two-thirds of the firewood required.

Similar conditions also prevail in other parts of Switzerland, where a wood famine is frequently imminent, and is only averted by the exercise of rigid economy and constant vigilance.

Organization of the Forestry Service.

The control of the Federal (protective) forests is vested in the Central Government; that of all other forests in the Government of the canton to which each severally belongs. The technical superintendence of Federal forests is vested in the Chief Inspectorate, which constitutes Division 3 of the Federal Department of Commerce and Agriculture.

In Zurich and most other cantons (Baselland, Baselstaadt, and Geneva excepted) the forests are under the control of an over-forestmaster, and in Zurich that officer is assisted by four district forestmasters. There exists also in most of the cities and in some of the largest towns a township forestry force, mostly comprised of men scientifically trained.

Further evidence of the great importance attached in Switzerland to forestry is found in the fact that at the beginning of 1886 there were employed in that country 151 trained forestry officials and from fifteen hundred to two thousand foresters and overseers, while the latest census (1880) shows that forest culture and kindred pursuits furnished employment for 5,851 and support for 9,095 persons.

Instruction in Forestry.

The course of study comprises a term or terms of three years, the Central Government paying the expenses of instructors engaged in the courses of training for subordinate employes in Federal forest territory, and also for the finishing courses. The former generally last for two months (in the terms, spring, and fall), the latter from eight to twenty-four days.

Subjects of Instruction.

First Year.—Mathematics, experimental physics, inorganic chemistry, introduction to forestry science, excursions, general botany, zoology, with special reference to animals useful or hurtful in agriculture and forestry, map-drawing.