

## Germany – Agriculture and Forestry

Max Weber

At the last German Census of trades and callings (1895) the number of persons engaged chiefly in agriculture and forestry was 8,300,000, or about 37½ per cent of the total productive population. This is about the same percentage shown by the U.S. census of 1900, which was 35.9 per cent; but this latter figure would be increased by the large number of land labourers counted simply as laborers. At the same census of 1895 the number of individual agricultural undertakings was 5,500,000, with an area of 43,200,000 hectares (1 hectare = 2½ acres). Of this total 'agricultural' area 7,600,000 hectares are woods, to which must be added 6,100,000 hectares of timber-land devoted purely to forestry. The greater part of the forests, about 7,000,000 hectares, is in the possession of the German states, especially Prussia and Bavaria, and of the local parishes and municipalities; though many forests are owned by large landed proprietors and by private foundations and associations. In strong contrast to the primitive forestry conditions that prevail in the United States, German forests, usually even those owned privately, are nurtured with all the care that the highly developed technic of forestry has made possible, the period of cultivation not seldom being 100 years. In this way 11,000,000 hectares were devoted to the cultivation of high timber, i.e., 2,600,000 hectares to leaf-bearing trees, 8,400,000 hectares to pines and firs. The yield of lumber in 1900 was 20,000,000, of firewood, 18,000,000, of stumps and brushwood, 10,500,000 cubic meters, besides the byproducts, especially tan-bark. Yet this yield does not supply the demand for wood in Germany. In 1904 lumber and building timber were imported to the extent of \$20,000,000.

### *Division of land and kinds of production*

Of the total agricultural area in 1904, 26 per cent was woodland, 49 per cent arable land, including gardens and vineyards, 11 per cent

meadows, and five per cent pasture-land. Of the arable land, 61 per cent was planted with grain and leguminous crops, 17½ per cent with chopped crops, especially with potatoes and sugar-beets, 10 per cent with forage, 2.6 per cent with fruit and garden vegetables, and 8.7 per cent remained fallow. As regards grain, the dependence of Germany on foreign imports has not increased essentially in recent years. At times it has even decreased. On an average the yearly imports of grain exceed the exports by 2,000,000,000 kilograms, worth \$125,000,000; i.e., as to value, about 1-6 or 1-7 of the German yield, or, as to quantity, about 1-5. In live stock, Germany imports horses, oxen, and cows for \$45,000,000; also hogs, but to a limited extent, owing to the restrictive hygienic (in reality protective) measures; further, hides and guts. On account of the ever-increasing intensity in the cultivation of the soil, the number of sheep in Germany has decreased from 28,000,000 in 1860 to 9,700,000 at present (U.S. 62,000,000). On the other hand, from 1873 to 1900 the number of horses increased from 3,300,000 to 4,200,000 (U.S. 16,000,000), the number of cattle from 15,700,000 to 19,000,000 (U.S. 61,400,000), and the number of hogs from 7,000,000 to 17,000,000 (U.S. 48,600,000). In 1900 for every 100 inhabitants there were 7.5 horses (U.S. 22), 33.6 head of cattle (U.S. 81), and 30 hogs (U.S. 82). From the high and increasing prices of land alone one could infer that in Germany there has been a considerably greater increase in weight and quantity, than in quality. In 1900 the sale-value of horses was \$575,000,000, of cattle more than \$1,000,000,000, and of hogs, \$250,000,000. As to the number of horses and cattle per hectare, Germany and England are about equal; but Germany is far ahead in hogs, and England in sheep. In all these categories, except sheep, Germany is ahead of France.

Of the great staple side-products of German agriculture, sugar and alcohol are by far the most important. Sugar-beets utilize the best German soils, while Irish potatoes for spirits make profitable the cultivation of the worst, especially the sandy soils in east Germany. In the form of alcohol the bulky crop, which could not be shipped profitably, is made easily transportable, and thus this soil is brought into cultivation. Both these industries have been nurtured up to their present importance by certain protective measures, and have been kept in immediate connection with the production of the raw material. Alcohol-distilleries owned by farmers, especially the smaller ones, have been favored in the way of taxation. Such a distillery is allowed to produce a certain fixed quantity of alcohol on the payment of the minimum of revenue. Accordingly, of the

13,200 grain and potato distilleries in Germany in 1900 there were less than a thousand that were not owned by farmers. Besides both industries are strongly organized into trade unions—('Kartelle'). The total product of all alcohol distilleries in 1903–1904 amounted to 3,850,000 hectoliters of pure alcohol, of which 3,330,000 was distilled from grain and Irish potatoes. Of potatoes, 2,660,000,000 kilograms were used; of grain, 380,000,000 kilograms.

The total yield of Irish potatoes in Germany in 1904 was 36,330,000,000 kilograms. As a food-product, potatoes play a larger part in Germany than anywhere else; and in the production of potatoes Germany trebles the United States and is equaled only by Russia. Sweet potatoes are not raised in Germany. As to other products, the German climate prohibits the production of cotton and, practically, of Indian corn. The cultivation of tropical fruits is likewise excluded. As to other fruits, Germany and the United States are favored, each for special sorts. In the cultivation of grapes, for fine wines, Germany has a considerable advantage, owing to the age of this industry and the care that has been bestowed upon it. Of the world's total yield of grain, (wheat, rye, barley, oats) in 1903, which was estimated at 285,000,000,000 kilograms, Germany produced 24,500,000,000 kilograms, the United States 91,100,000,000 kilograms, or three and seven-tenths times as much as Germany. However, it is claimed that the estimate for Germany is too low. In 1903 Germany had 1,800,000 hectares in wheat, less than one-eleventh as much as the United States had; though the yield in the latter country was only four and eight-tenths times greater. In 1903 the yield of wheat per hectare in Germany was 1650 kilograms (U.S. 850 kilograms), in 1902 it was 1540; and in 1904 it was again 1650. On the better soils the average yield is often more than double this amount. The yield of rye was 10,000,000,000 kilograms (U.S. 750,000,000 kilograms); of barley 3,300,000,000 kilograms (U.S. 3,000,000,000); and of oats 7,900,000,000 kilograms (U.S. 12,400,000,000). The money value of the American yield of 1903 is estimated at \$1,740,000,000 (1902: \$1,720,000,000), i.e., only somewhat more than double the value of the German yield, if we apply here the same method of valuation. This is explained by the fact that for grain Germany is import-territory, and especially by the fact of the agrarian protective tariff.

#### *Land holdings and indebtedness*

The superiority of Germany as regards the yield of grain per hectare is due to the more intensive cultivation of the soil, and particularly