

THE ENCYCLOPÆDIA BRITANNICA

ELEVENTH EDITION

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where crops are generally light, Indian corn, oats and potatoes are the principal products, but tobacco, flax and cotton are grown. The thoroughbred Kentucky horse has long had a world-wide reputation for speed; and the Blue Grass Region, especially Fayette, Bourbon and Woodford counties, is probably the finest horse-breeding region in America and has large breeding farms. In Fayette county, in 1900, the average value of colts between the ages of one and two years was \$377.78. In the Blue Grass Region many thoroughbred shorthorn cattle and fine mules are raised. The numbers of horses, mules, cattle and sheep increased quite steadily from 1850 to 1900, but the number of swine in 1880 and in 1900 was nearly one-third less than in 1850. In 1900 the state had 497,245 horses, 198,110 mules, 364,025 dairy cows, 755,714 other neat cattle, 1,300,832 sheep and 2,008,989 swine; in 1910 there were in Kentucky 407,000 horses, 207,000 mules, 394,000 milch cows, 665,000 other neat cattle, 1,060,000 sheep and 989,000 swine. The principal sheep-raising counties in 1905 were Bourbon, Scott and Harrison, and the principal hog-raising counties were Graves, Hardin, Ohio, Union and Hickman.

Forests and Timber.—More than one-half of the state (about 22,200 sq. m.) was in 1900 still wooded. In 1900 of the total cut of 777,218 M. ft., B.M., 392,804 were white oak and 279,740 M. ft. were tulip-tree. Logging is the principal industry of several localities, especially in the east, and the lumber product of the state increased in value from \$1,502,434 in 1850 to \$4,064,361 in 1880, and to \$13,774,911 in 1900. The factory product in 1900 was valued at \$13,338,533 and in 1905 at \$14,539,000. In 1905 of a total of 586,371 M. ft., B.M., of sawed lumber, 295,776 M. ft. were oak and 153,057 M. ft. were "poplar."

The planing mill industry is increasing rapidly, as it is found cheaper to erect mills near the forests; between 1900 and 1905 the capital of planing mills in the state increased 117.2% and the value of products increased 142.8%.

Manufactures.—Kentucky's manufactures are principally those for which the products of her farms and forests furnish the raw material. The most distinctive of these is probably distilled liquors, the state's whisky being famous. A colony of Roman Catholic immigrants from Maryland settled in 1787 along the Salt river about 50 m. S.S.E. of Louisville and with the surplus of their Indian corn crop made whisky, a part of which they sold at settlements on the Ohio and the Mississippi. The industry was rapidly developed by distillers, who immediately after the suppression of the Whisky Insurrection, in 1794, removed from Pennsylvania and settled in what is now Mason county and was then a part of Bourbon county—the product is still known as "Bourbon" whisky. During the first half of the 19th century the industry became of considerable local importance in all parts of the state, but since the Civil War the heavy tax imposed has caused its concentration in large establishments. In 1900 nearly 40% and in 1905 more than one-third of the state's product was distilled in Louisville. Good whisky is made in Maryland and in parts of Pennsylvania from rye, but all efforts in other states to produce from Indian corn a whisky equal to the Bourbon have failed, and it is probable that the quality of the Bourbon is largely due to the character of the Kentucky lime water and the Kentucky yeast germs. The average annual product of the state from 1880 to 1900 was about 20,000,000 gallons; in 1900 the product was valued at \$9,786,527; in 1905 at \$11,204,649. In 1900 and in 1905 Kentucky ranked fourth among the states in the value of distilled liquors.

The total value of all manufactured products of the state increased from \$126,719,857 in 1890 to \$154,166,365 in 1900, or 21.7%, and from 1900 to 1905 the value of factory-made products alone increased from \$126,508,660 to \$159,753,968, or 26.3%.¹ Measured by the value of the product, flour and grist mill products rose from third in rank in 1900 to first in rank in 1905, from \$13,017,043 to \$18,007,786, or 38.3%; and chewing and smoking tobacco and snuff fell during the same period from first to third in rank, from \$14,948,192 to \$13,117,000, or 12.3%; in 1900 Kentucky was second, in 1905 third, among the states in the value of this product. Lumber and timber products held second rank both in 1900 (\$13,338,533) and in 1905 (\$14,539,000). Distilled liquors were fourth in rank in 1900 and in 1905. Men's clothing rose from tenth in rank in 1900 to fifth in rank in 1905, from \$3,420,365 to \$6,279,078, or 83.6%. Other important manufactures, with their product values in 1900 and in 1905, are iron and steel (\$5,004,572 in 1900; \$6,167,542 in 1905); railway cars (\$4,248,029 in 1900; \$5,739,071 in 1905); packed meats (\$5,177,167 in 1900; \$5,693,731 in 1905); foundry and machine shop products (\$4,434,610 in 1900; \$4,699,559 in 1905); planing mill products, including sash, doors and blinds (\$1,891,517 in 1900; \$4,593,251 in 1905—an increase already remarked); carriages and wagons (\$2,849,713 in 1900; \$4,059,438 in 1905); tanned and curried leather (\$3,757,016 in 1900; \$3,952,277 in 1905); and malt liquors (\$3,186,627 in 1900; \$3,673,678 in 1905). Other important manufactures (each with a product value in 1905 of more than one million dollars) were cotton-seed oil and cake (in 1900 Kentucky was fifth and in 1905 sixth among the states in the value of cotton-seed oil and cake), cooperage, agricultural implements, boots and shoes, cigars

¹ In the census of 1905 statistics for other than factory-made products, such as those of the hand trades, were not included.

and cigarettes, saddlery and harness, patent medicines and compounds, cotton goods, furniture, confectionery, carriage and wagon materials, wooden packing boxes, woollen goods, pottery and terra cotta ware, structural iron-work, and turned and carved wood. Louisville is the great manufacturing centre, the value of its products amounting in 1905 to \$83,204,125, 52.1% of the product of the entire state, and showing an increase of 25.9% over the value of the city's factory products in 1900. Ashland is the principal centre of the iron industry.

Minerals.—The mineral resources of Kentucky are important and valuable, though very little developed. The value of all manufactures in 1900 was \$154,166,365, and the value of manufactures based upon products of mines or quarries in the same year was \$25,204,788; the total value of mineral products was \$19,294,341 in 1907. Bituminous coal is the principal mineral, and in 1907 Kentucky ranked eighth among the coal-producing states of the Union; the output in 1907 amounted to 10,753,124 short tons, and in 1902 to 6,766,984 short tons as compared with 2,399,755 tons produced in 1889. In 1902 the amount was about equally divided between the eastern coalfield, which is for the most part in Greenup, Boyd, Carter, Lawrence, Johnson, Lee, Breathitt, Rockcastle, Pulaski, Laurel, Knox, Bell and Whitley counties, and has an area of about 11,180 sq. m., and the western coalfield, which is in Henderson, Union, Webster, Daviess, Hancock, McLean, Ohio, Hopkins, Butler, Muhlenberg and Christian counties, and has an area of 5800 sq. m. In 1907 the output of the western district was 6,295,397 tons; that of the eastern, 4,457,727. The largest coal-producing counties in 1907 were Hopkins (2,064,154 short tons) and Muhlenberg (1,882,913 short tons) in the western coalfield, and Bell (1,437,886 short tons) and Whitley (762,923 short tons) in the south-western part of the eastern coalfield. All Kentucky coal is either bituminous or semi-bituminous, but of several varieties. Of cannel coal Kentucky is the largest producer in the Union, its output for 1902 being 65,317 short tons, and, according to state reports, for 1903, 72,856 tons (of which 46,314 tons were from Morgan county), and for 1904, 68,400 tons (of which 52,492 tons were from Morgan county); according to the *Mineral Resources of the United States for 1907* (published by the United States Geological Survey) the production of Kentucky in 1907 of cannel coal (including 4650 tons of semi-cannel coal) was 77,733 tons, and exclusive of semi-cannel coal the output of Kentucky was much larger than that of any other state. Some of the coal mined in eastern Kentucky is an excellent steam producer, especially the Jellico coal of Whitley county, Kentucky, and of Campbell county, Tennessee. But with the exception of that mined in Hopkins and Bell counties, very little is fit for making coke; in 1880 the product was 4250 tons of coke (value \$12,250), in 1890, 12,343 tons (\$22,191); in 1900, 95,532 tons (\$235,505); in 1902, 126,879 tons (\$317,875), the maximum product up to 1906; and in 1907, 67,068 tons (\$157,288). Coal was first mined in Kentucky in Laurel or Pulaski county in 1827; between 1829 and 1835 the annual output was from 2000 to 6000 tons; in 1840 it was 23,527 tons and in 1860 it was 285,760 tons.

Petroleum was discovered on Little Rennick's Creek, near Burkesville, in Cumberland county, in 1829, when a flowing oil well (the "American well," whose product was sold as "American oil" to heal rheumatism, burns, &c.) was struck by men boring for a "salt well," and after a second discovery in the 'sixties at the mouth of Crocus Creek a small but steady amount of oil was got each year. Great pipe lines from Parkersburg, West Virginia, to Somerset, Pulaski county, and with branches to the Ragland, Barbourville and Prestonburg fields, had in 1902 a mileage of 275 m. The principal fields are in the "southern tier," from Wayne to Allen county, including Barren county; farther east, Knox county, and Floyd and Knott counties; to the north-east the Ragland field in Bath and Rowan counties on the Licking river. In 1902 the petroleum produced in the state amounted to 248,950 barrels, valued at \$172,837, a gain in quantity of 81.4% over 1901. Kentucky is the S.W. extreme of the natural gas region of the west flank of the Appalachian system; the greatest amount is found in Martin county in the east, and Breckinridge county in the north-west. The value of the state's natural gas output increased from \$38,993 in 1891 to \$99,000 in 1896, \$286,243 in 1900, \$365,611 in 1902, and \$380,176 in 1907.

Iron ore has been found in several counties, and an iron furnace was built in Bath county, in the N. E. part of the state, as early as 1791, but since 1860 this mineral has received little attention. In 1902 it was mined only in Bath, Lyon and Trigg counties, of which the total product was 71,006 long tons, valued at only \$86,169; in 1904 only 35,000 tons were mined, valued at the mines at \$35,000.

In 1898 there began an increased activity in the mining of fluorspar, and Crittenden, Fayette and Livingston counties produced in 1902, 29,030 tons (valued at \$143,410) of this mineral, in 1903 30,835 tons (valued at \$153,960) and in 1904 19,096 tons (valued at \$111,499), amounts (and values) exceeding those produced in any other state for these years; but in 1907 the quantity (21,058 tons) was less than the output of Illinois. Lead and zinc are mined in small quantities near Marion in Crittenden county and elsewhere in connexion with mining for fluorspar; in 1907 the output was 75 tons of lead valued at \$7950 and 358 tons of zinc valued at \$42,244. Jefferson, Jessamine, Warren, Grayson and Caldwell counties have valuable quarries of an excellent light-coloured