

small quantity of the grain produced was exported. The railways have made prices of grain uniform over large tracts; and in times of famine and scarcity in the neighbouring Provinces the surplus grain of the country is exported, thus causing a rise in prices. During the famines of 1897 and 1899-1900 prices of grain were extraordinarily high, though, while grain was being imported for the relief of the affected areas, it was being largely exported for the relief of the affected areas, it was being largely exported from the other parts of the State to Provinces where large profits were probable. During the famine of 1899-1900, *jowars* sold at 5 seers per rupee in Aurangabad, at $3\frac{3}{4}$ seers in Bhir and Nander, at $4\frac{1}{4}$ seers in Parbhani and Osmanabad, and at $5\frac{1}{4}$ seers in Bidar. In Table III the price of salt is given for Hyderabad city only, the prices in the country being almost the same.

Forests

A total area of nearly 18,000 square miles is under forests, which are divided into three classes: the 'reserved' (5, 184 square miles), the protected (4, 408 square miles), and the open or unprotected (8, 387 square miles). In the 'reserved' and protected forests, trees are under the control of the Forest department; but in the open forests only sixteen species are 'reserved': namely, sandal (*Santalum album*), teak (*tectona grandis*), *shisham* (*Dalbergia Sissoo*), *Eboni* (*Diospyros melanoxyton*), satin-wood (*Chloroxylon Srvieteneia*), *eppa* (*Hardrvickia binata*), *nallamadi* (*Terminalia tomentosa*), *bijasal* (*Pterocarpus Marsupium*), *batta-gunam* (*Step hegyne parvifolia*), *somi* (*Soymida febrifuga*), *dhaura* or *tirman* (*Anogeissus latifolia*), *kodsha* (*Cleistanthus collinus*), *sandra* (*Acacia Catechu*), *bhandara* (*Adina cordifolia*), *mokab* (*Schrebera srvietenoides*), and *chinnangi* (*Lagerstroemia parviflora*). The forests from six divisins - Warangal, Indur, Nirmal,

Mahbubnagar, Aurangabad, and Gulbarga - the two last being in Marathwara, and the remainder in Telingana. Each division is under an Assistant Conservator. The management of this department is guided by the Forest Act of 1899, which empowers the Conservator to exercise full control over 'reserved' and protected forests, and 'reserved' species of trees in open forests. Timber is supplied to purchasers at prescribed rates, while cultivators receive free timber and fuel for agricultural implements and domestic purposes. Minor produce, such as grass, branches, and leaves, &c., is likewise granted free to the local ryots. Free grazing is also permitted, under certain restrictions. After meeting the local demand, timber of various kinds is exported to different parts of the State. Local railways and the military workshop are also supplied with timber, exploited and transported departmentally. No use is made of elephants nor are floating operations resorted to.

No special fuel and fodder Reserves are maintained, but the grazing in the 'reserved' and protected forests is regulated by the department, and fees are collected either departmentally or through contract agency. Grazing rights in the open forests are auctioned annually by the Revenue department. In years of scarcity cattle are sent to the forests, which are then thrown open to free grazing. Measures are adopted to prevent the destruction of trees for leaf fodder, and some attempts have been made to store fodder. Edible fruits, roots, and flowers are utilized during famines by the destitute and starving poor. Some of the valuable forests are protected from fire by making regular fire lines, prohibiting the carrying of inflammable materials, closing areas to grazing, and by the appointment of patrols and guards.

FORESTS

There are no special plantations of any economic value in the State. The following table shows the area of each class of forest in each Forest division in 1901:-

Forest Divisions	Area in square miles			
	Reserved	Protected	Open	Total
Warangal	2,368	...	2,000	4,368
Indur	907	644	2,980	4,531
Nirmal	700	3,307	2,000	6,007
Mahbubnagar	800	322	547	1,669
Aurangabad	288	69	600	957
Gulbarga	121	66	260	447
Total	5,184	4,408	8,387	17,979

As the forest survey and demarcation have not been completed, the areas shown above are only approximate, and it is possible that as much as one-third of the total is really cultivated. The forests are not equally distributed in all parts, the two Districts of Osmanabad and Bhir having no forest at all, while the forests in Karimnagar (Elgandal), Warangal, and Adilabad (Sirpur Tandur) occupy half the area of the State lands. The Martha Districts are far less wooded than the Telingana country.

The figures given below the average revenue, expenditure, and surplus of the Forest department for a series of years:-

	Average for ten years ending 1890	Average for ten years ending 1900	1901	1903
Revenue	Rs. 1,02,546	Rs. 2,02,546	Rs. 3,45,445	Rs. 3,69,511
Expenditure	72,360	1,14,904	1,44,369	1,47,125
Surplus	30,186	87,100	2,01,076	2,22,386

valuable coal, being semi-bituminous hard coal which does not coke but yields a good gas for lighting purposes. This is the seam which is now being worked. Its thickness is from 3 to 7 feet and its area about 9 square miles, and at the average thickness of 5 feet it is computed to contain not less than 47, 500, 000 tons of coal. The royalty paid to the State varies from 8 annas to R. 1 per ton. In 1896 the total royalty released was Rs.1,25,000. The output of coal from the Singareni coal-field rose from 3, 259 tons in 1901, in to 1887 to 144, 668 in 1891 and 421, 218, and was 419, 546 tons in 1904.

Gold occurs in Lingsugur District, in the rocks of the transition series, in the Muski, Bomanhal, and Sagar formations. The total area of gold-bearing rocks in this territory, as proved by the Geological Survey of India and by the prospecting operations of the Hyderabad (Deccan) Company, is about 1, 240 square miles. The first band of rocks lies between the Tungabhadra and Kistna rivers, and is composed essentially of a schistose black hornblendic trappoid. This band was actively prospected in 1896-97 by the Hyderabad (Deccan) Company, and a subsidiary company has since been formed to work the quartz. The average yield here, it is alleged, has been an ounce to the ton, and certain specimens have yielded as much as 20 oz. to the ton, but this is rare. Want of water for working the stamps has hampered operations, but this difficulty has been got over by the construction of an artificial reservoir. The next band is at Bomanhal, extending from the left bank of the Kistna west of Surapur for about 20 miles, and disappearing under the black cotton soil between the Bhima and the Kistna. This band is not more than 3 miles in width and is chiefly composed of hornblendic schists. Undoubted traces of old workings have been found in this locality, and from

The practice of shifting cultivation in forests, or *pode*, which was very common some years ago, is now strictly prohibited; but illicit clearances for temporary cultivation are sometimes made, and, when found out, departmental punishment is inflicted on the offenders.

Several grasses are known to possess economic properties. The fibres of *mannakopri* and *modian* are extensively used for making ropes, stringing cots, and various agricultural uses. If properly treated, these might also prove suitable for manufacturing paper. Among other minor products, *mahua* flowers are of importance as being generally used for distilling country liquor.

Mines and minerals Coal

The Hyderabad State is rich in minerals, chief among which may be mentioned the extensive coal-measures of WARANGAL and the gold-mines of LINGSUGUR. The coal-field of Singareni was discovered by Dr. King of the India Geological Survey so far back as 1872. Active operations were, however, delayed till 1886, when the Hyderabad (Deccan) Company obtained a concession and opened the mine at Singareni, which is the only mine profitably worked at present. Four distinct seams have been discovered in the Singareni field. The first varies in thickness from 30 to 50 feet and is composed of alternating layers of coal and carbonaceous shale, the former being of tolerably good quality and supplying a fair steam coal. The second seam, lying about 100 feet below the first consists of shaly coal. Similarly, the third seam, which is about 30 to 40 feet below the second, consists of a hard shaly coal; and as the coal these two contain gives 30 per cent. of ash, they have been abandoned as being of no commercial value. The fourth seam, called the King seam after its discoverer, consists of the most

District, which promises to be remunerative. Excellent limestone is quarried at Shahabad, between the Wadi junction and Gulbarga on the Great Indian Peninsula Railway. These quarries are extensively worked on both sides of the line for a considerable distance. The limestone is of two colours, black and grey, the latter being the more abundant of the two, and taking a polish almost equal to marble. An extensive industry has been carried on, and the stone is not only being widely used for flooring purposes, but is exported outside the State also in large quantities for building purposes. In addition to the minerals already mentioned, red chalk and saline deposits are found.

Arts and manufactures

Cotton-weaving is carried on in almost every taluk; and *saris*, *dhotis*, and coarse cloths called *khadis* are woven by hand in every large village and used largely by the people, who find these, though coarser and unattractive in appearance, more durable than the goods made in mills. *Saris* of silk and other silk stuffs are made in Nalgonda, Raichur, Mahbubnagar (Narayanpet *taluk*), Lingsugur, Aurangabad, Indur, Elgandal and other Districts, some of these being of extra fine quality and very durable, and fetching very high prices. In late years the silk-cloth industry in Nalgonda has improved, where the Salis, a caste of silk-weavers, are doing good work. Their example is being followed by others of their caste in the adjoining Districts. Aurangabad and Paithan have both been noted from olden times for their embroidery and their gold and silver lace-work. *Kamkhrvab*, or cloth woven with silver and gold of superior quality, was once at Paithan; but the manufacture is now practically confined to Aurangabad, where about a dozen looms are at work. Lately, the *himru* industry has considerably increased and patterns have been improved. This

this it is inferred that the band may yet prove profitable. The third band, that of Sagar between Sagar and Surapur, is not of much importance.

Iron

Innumerable deposits of iron ore of varying quality are widely distributed over the lateritic and granitic tracts of the State, while similar deposits have been discovered in the sand stone formations in the Godavari and Wardha valleys. In the tract situated between the Kistna and Tungabhadra rivers hematite occurs in considerable quantities. The rocks of the Kamptee series, which are extensively developed between the Godavari and Wardha valleys, abound in hard ferruginous pebbles and clay iron ores, and are worked in the Chinnur *taluk* of Adilabad District. Jagtial, Nirmal, Warangal, Yelgarab, and other places are noted for their cast-steel cakes or disks, which were once largely exported to distant parts.

Diamonds

From ancient times diamond mines have been worked in the alluvial deposits round about Partyal, near the Kistna, as well as in other localities in the alluvial tract of the same river. The Partyal diamond-bearing layer is about 10 to 16 inches thick, and is concealed by black cotton soil. Trials made in recent years by the Hyderabad (Deccan) Company, involving a considerable outlay, proved unsuccessful; only stones of very small size were found, the gangue having been worked out by the old miners.

Miscellaneous

Among other minerals found in the country may be mentioned mica in Khammamett *taluk* of Warangal; fine specimens of corundum and garnets in the Paloncha *taluk* of the same District; and a small deposit of graphite in the vicinity of Hasanabad in Karimnagar (Elgandal) District. A copper lode has recently been discovered at Chintrala in Nalgonda

Aurangabad and Karimnagar (Elgandal), some specimens showing exceedingly delicate workmanship.

Bidri ware - so named from Bidar town, where it is manufactured- consists of an alloy of zinc, copper, tin, and lead; and after the vessels, &c., are made, the surface is inlaid with silver and sometimes with gold, and finely turned and polished. The articles made are ewers, jugs, wash- hand basins, bedstead legs, *pandans*, betel-nut boxes, *hukkas*, spittoons, cups, and other kinds of vessels. Sometimes sword and dagger handles are also made of *bidri* ware. The work is very neat, delicate, and highly artistic, and the patterns are exceedingly good.

Sword- blades and other weapons were once extensively made at Hyderabad, Wanparti, Gadwal, Kolhapur, Jagdeopur, and other places; but they were not of so good a quality as those imported from Persia, which commanded high prices. The industry is dying out from the circumstances of the age. Inferior smooth- bore muskets were formerly made in the city factory for the use of the police and irregular troops, but the factory has now been abolished. Daggers and knives used by the Arabs and other irregulars were formerly produced at Gadwal, Jagdeopur, and other places near Hyderabad from Nirmal steel, but they are rarely made now.

The factory industries consist of ginning and pressing factories at Aurangabad and Jalna in Aurangabad District, Mazalgaon and Parli in Bhir, Raichur and Yadgir in Raichur, Latur in Osmanabad, Udgir in Bidar, and also in Warangal, Indur, Parbhani, and Nander Districts.

cloth is a mixture of silk and cotton producing different patterns and the new varieties include imitations of Kashmir shawls. The great advantage of this stuff is that it is washable. Other stuffs such as *elaicha* and *mashru* are still made, the demand for these being very great. Muslin of a very fine texture is made in Nander and Amarchinta, but this industry is unfortunately dying out for want of support.

Brocades of coloured silk and gold and silver thread of very fine quality are made at Aurangabad and Vaijapur. *Tasar* silk is largely used for making *scarfs saris*, and other silk fabrics. The *tasar* cocoons are gathered in the jungles of the southern and eastern Districts, the silk is made in exactly the same way as that obtained from cultivated cocoons, and a very durable silk cloth is manufactured from it at Warangal, Mathwada, and Hasanparti in Warangal District, at Narayanpet in Mahbubnagar, and Kosgi in Gulbarga. In the vicinity of the Pakhal Lake this silkworm abounds in the jungles, but the best description of *tasar* silk is manufactured at Narayanpet and at Mahadeopur in Elgandal District.

Warangal was formerly noted for its woollen and silk carpets and rugs, samples of which have been sent to European exhibitions, where they commanded a good sale. The use of aniline dyes, however, has caused much injury to the trade, owing to the fading of the colours. *Shatranjis* of very good quality are made in the Gulbarga and Warangal Central jails, as also at many District head-quarters.

Aurangabad is noted for its silver-ware and silver ornaments. Bedstead legs, spittoons, *pandans*, and other silver articles used in marriages by the wealthy natives are manufactured there in large quantities. Fine filigree and wire-work is done both in

HYDERABAD STATE

There are three spinning and weaving-mills in the State. employing 2, 712 hands: namely, those of the Hyderabad (Deccan) Spinning and Weaving Company, near Hyderabad; the Gulbarga Mahbub Shahi Mills Company, at Gulbarga; and the Aurangabad Spinning and Manufacturing Company, at Aurangabad city. The first of these mills commenced work in 1877, while the others were opened in 1886 and 1889. Together they represent a capital of 31 lakhs. The table on the next page shows the statistics of progress.

Commerce and trade

Regular statistics of trade are not maintained, but general guide to the nature and direction of trade is obtained from the customs and railway returns.

Exports and imports

The principal exports are food-grains, cotton, linseed, sesamum, ground-nuts, castor seed, indigo, oils, timber, cotton cloth, hides, cattle, and coal; while the chief imports are mill-made cloth, yarn, raw silk, salt, refined sugar, dried fruits, betel-nuts, horses, cattle, silver and gold, copper and brass in sheets and utensils, iron, timber, mineral oil, and opium.

	1880-81	1890-91	1900-01
Number of mills	1	3	3
Number of looms	169	443	459
Number of spindles	14, 958	50,713	49, 465
Hands employed	583	2, 236	2, 490

Chief trade centers

The State is divided, for the purpose of levying customs duties on articles entering or leaving the Gulbarga country by the ordinary trade-routes, into nine customs divisions, five of which-Naldurg, Jalna, Lingsugur, Rajura, and Kodar-deal exclusively with road-borne trade, while the remaining four Hyderabad, Secunderabad, Warangal, and Gulbarga - deal with both rail-borne and road-borne traffic.