

CHAPTER II.

SOURCES OF WEALTH.

Agriculture—Seasons—Chief agricultural products—Export crops—Mineral resources (coal, salt, gold, etc.)—Industrial resources—Growth of cotton and jute mills.

Agriculture.—The chief source of wealth in India is agriculture. The great export staples, on which India's whole trade depends, are mainly agricultural. The area of the British provinces in the last non-famine year, 1898-99, was distributed as follows :

	Acres.
Net area sown with crops	196,488,000
Cultivable waste	106,293,000
Forests	64,754,000
Fallow	41,200,000
Uncultivable	136,567,000
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	545,302,000

In most provinces more than one crop a year can be obtained from the fields, so that roughly 25 per cent. may be added to the crop area given above. An extraordinary diversity of physical conditions enables India to produce almost any known crop.

Seasons.—The hot, rainy, and cold seasons have each characteristic crops, so that the cultivator has usually two, and sometimes three, harvests a year. In the regions having two periods of rainfall (the Punjab, North-Western Provinces, Eastern Rajputana, and Madras) there are two well-marked crops—the spring or *rabi* crop, and the autumn or *kharif* crop. In Bengal, oilseeds, pulses, etc., are reaped in the spring, early rice crops in September, and the main rice harvest in November and December.

Chief Agricultural Products.—These may be thus classified :

(a) *Food Crops*: Rice, wheat, millets, gram and other pulses, barley, maize, sugar, spices, etc.

(b) *Oilseeds*: Linseed, rape and mustard, sesamum (til or gingelly), castor, poppy, cotton, groundnut, etc.

(c) *Fibres*: Cotton, jute, hemp, silk, wool, etc.

(d) *Dyes*: Indigo, etc.

(e) *Drugs and Narcotics*: Opium, tea, coffee, tobacco, chinchona, Indian hemp, etc.

(f) *Miscellaneous Forest Products*: Caoutchouc, lac, teak, cutch, cocoanuts, betel-nuts, myrabolams, etc.

Export Crops.—The exportation of millets, pulses, barley and maize is unimportant, and rice and wheat are the only export food grains demanding special notice. Rice is produced more or less in all provinces, but exported mainly from Burma and Bengal. Burma rice has a thick, coarse grain, and much of it is shipped as cargo rice, having one part in five of paddy or unhusked rice, mainly for starch or distillation. Bengal rice is superior, but the quantity exported is much smaller than that of Burmese. The chief wheat areas are in the Punjab, the North-Western Provinces and Oudh, the Central Provinces, and Bombay. Wheat is reaped in Upper India in April and May. In the rich black cotton soil of the Deccan the cultivator may choose between cotton, wheat, and linseed, according to the varying prospects of foreign markets. Although the area under non-food crops is small relatively to that under food crops, yet normally it yields the greatest portion of the exports. Oilseeds are important crops throughout India. Bengal exports linseed, and Madras exports sesamum in large quantities. Linseed and sesamum are very widely cultivated in the Central Provinces. Sesamum and castor are cultivated mainly in warm moist regions, while rape and mustard are produced in the drier and colder tracts. Bombay and Karachi send large quantities of oilseeds abroad. Of the fibre crops, cotton is the most important. It is grown largely in Gujarat and Kathiawar, which yield some of the best of the longer stapled cottons in India (Dholleras). Bombay, Berar, the Central Provinces, and Madras are the chief cotton-producers among British provinces. The cotton areas of Western, Central, and Northern India each yield a characteristic group of cottons, varying greatly in quantity, quality, strength, and

length of staple. Early cottons (represented by the 'Bengals,' the Oomras of Berar, Khandesh, etc., and the Hinganghats of the Central Provinces, etc.) mostly come into market from October to January, while the late cottons (including Surats and Dholleras) are usually marketed from February to April. The Indian cottons are generally short-stapled, and attempts to acclimatize Egyptian and American varieties have not met with great success. The cotton is for the most part ginned and pressed up-country. Jute, the next most important fibre, is produced in the swampy delta tracts of North and East Bengal, and no other area in the world can compete in this cheap fibre. Jute is bought up at small river marts by natives, who convey it to wholesale merchants at larger trade centres, whence it is shipped by river craft to Calcutta. The chief centres of tea cultivation are Assam and Darjiling (Bengal), while coffee cultivation, which makes little progress, is confined to Madras and Coorg. Indigo, which is declining, is grown mainly in Bengal and Madras, the Bengal (Behar) being far superior. Opium is cultivated and manufactured in two areas—in the Ganges Valley round Patna and Benares, and in the Native State of Malwa, in Central India. Tobacco is widely grown, and the soil and climate favour it, but the quality is mostly not very good, so that little is exported. Lac, for gums and dyes, is the secretion of an insect abounding on certain jungle-trees in Chutia Nagpur (Bengal), etc. It is exported from Calcutta. Teak, a leading product of Burma, is the best-known export timber, but the sal and deodar are also important woods. India is unsurpassed in opium, jute, tea, coffee, and indigo, but some of her other agricultural produce is comparatively inferior, especially cotton, tobacco, and sugar.

Since 1870 Government has made systematic efforts to foster and develop agriculture by distributing information as to crops, working experimental farms, trying new staples, introducing new appliances, organizing schools, and improving the breeds of cattle.

Mineral Resources.—Considering its vast area, India is not very rich in minerals. Coal, iron, and salt are widely distributed, but not easily accessible. The production of coal on a commercial scale cannot well extend beyond certain well-defined areas. Many coalfields, however, are as yet not fully explored, and only a small part of the known coal area is at present worked. The chief fields are in Bengal—viz., Raniganj and Barakar, covering

500 square miles, the Karharbara (Giridhi), covering eight square miles, the Jherria and Bokaro fields, west of Raniganj, covering 420 square miles, and the North Karanpura, covering 472 square miles, with others less important. In Assam the chief coal-field is at Makum, in the Lakhimpur district. In Central India the most important field, and the only one systematically worked, is that of Umaria in Rewa. In the Central Provinces are the mines of Warora and Mohpani. In Southern India the chief mine is the Singareni, in Hyderabad. In Madras coal is found in the Godavari Valley. In fact, generally speaking, the Indian coalfields lie mainly between the Ganges and the Godavari, in the broad centre of the peninsula. At present the only important mining centre is in Bengal, which yields over four-fifths of India's total output. The chief coalfields worked in this province are the Raniganj, Jherria, and Giridhi, all served by the East Indian Railway, and within 200 miles of Calcutta. In 1900 there were altogether 287 mines at work in India, and the total production of coal was over 6,000,000 tons. Bengal coal is the best, and much of it is excellent. The chief drawback of Indian coal is the large amount of ash. The demand for Indian coal for railways and factories and for steamers' bunkers has greatly increased, and an export trade to Ceylon and the Straits is fast developing.

Iron is found in close proximity to coal at Raniganj in Bengal, where alone it is produced on a large scale. Large deposits of ore are also found near Salem in Madras, and in the vicinity of the Warora coalfield. Lack of limestone within easy range for smelting is a drawback. The iron industry is hardly at all developed in India. The production and utilization of the iron ores require the application of much capital. Deficient enterprise, the initial expense, want of fuel, and imperfect transport facilities, have been the chief difficulties hitherto.

Enormous quantities of salt are found in the Salt Range and the Kohat district of the Punjab. It is also obtained from inland lakes and wells, and by evaporation from the sea. Saltpetre is found in Behar, and after refinement is exported from Calcutta.

Gold is produced mainly in four tracts in Mysore (a Native State), and the yield, which has steadily increased for several years, is now over 500,000 ounces. No other tracts at present appear likely to yield gold in remunerative quantities.

THE TRADE OF BRITISH INDIA

Petroleum is chiefly obtained from the Yenangyaung district of Burma. Assam also has a small output of the oil. Other minerals are comparatively unimportant. Copper in the form of copper pyrites occurs in many parts, especially from Darjiling west to Kumaon, but attempts to exploit it have not been very successful. Tin occurs in promising quantities only in the Mergui district of Lower Burma. Manganese ore is being worked with good results for exportation at Vizagapatam in Madras. Upper Burma produces jade-stone and rubies. Bengal and Madras export small quantities of mica.

The following table shows the output of the chief minerals (so far as ascertainable) during the last five years, in tons of 2,240 pounds :

	1896.	1897.	1898.	1899.	1900.
COAL :	Tons.	Tons.	Tons.	Tons.	Tons.
Bengal	3,038,000	3,142,000	3,622,000	3,883,000	4,978,000
Hyderabad ...	263,000	366,000	395,000	401,000	469,000
Central Provinces	141,000	132,000	150,000	157,000	173,000
Assam	177,000	186,000	200,000	226,000	217,000
Other Provinces	231,000	240,000	237,000	426,000	282,000
	3,850,000	4,066,000	4,604,000	5,093,000	6,119,000
SALT :					
Madras	349,000	242,000	252,000	269,000	322,000
Bombay and Sind	353,000	406,000	356,000	380,000	471,000
Northern India...	253,000	200,000	360,000	249,000	191,000
Other Provinces	25,000	29,000	18,000	32,000	21,000
	980,000	877,000	986,000	930,000	1,005,000
IRON :					
All Provinces ...	10,000	43,000	50,000	62,000	63,000
MANGANESE ORE :					
Madras	57,000	74,000	60,000	87,000	101,000
GOLD :	Ounces.	Ounces.	Ounces.	Ounces.	Ounces.
Mysore	322,000	389,000	413,000	446,000	510,000
Elsewhere ...	2,000	2,000	6,000	10,000	3,000
	324,000	391,000	419,000	456,000	513,000
PETROLEUM :	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.
Burma	14,816,000	18,905,000	18,424,000	32,310,000	36,974,000
Assam	239,000	222,000	548,000	623,000	753,000
Punjab	2,000	2,000	—	1,000	2,000
	15,057,000	19,129,000	18,972,000	32,934,000	37,729,000

The output of saltpetre is not given, as accurate figures cannot be obtained.

Industrial Resources.—This large subject requires notice chiefly in relation to the production of commodities for export. The cotton industry is the most important factory industry. About 73 per cent. of the spinning-mills are in Bombay, but such mills are extending rapidly in other provinces. Probably one-half of India's production of raw cotton is consumed in her own mills. The yarn turned out by these mills is partly used at home, but chiefly exported to China. It consists mainly of coarse counts below 20s. Piece goods are woven on an increasing scale. Jute-mills, mainly located in and around Calcutta, are also rapidly growing, and increasing quantities of gunny bags and cloth are produced for home consumption and exportation. Leather goods, shawls, jewellery, brass and copper ware, wood-carving, tanned and dressed hides and skins, and carved ivory are among the manufactured products which affect the export trade, but these are far less important than cotton and jute manufactures. The following table shows the progress of the latter in recent years :

	1896-7.	1897-8.	1898-9.	1899-00.	1900-1.
COTTON-MILLS :					
Number	154	163	175	186	190
Looms	37,300	36,900	37,300	38,500	40,500
Spindles	3,976,000	4,211,000	4,455,000	4,730,000	4,933,000
Yarn produced (million lbs.)	419·2	453·7	502·6	501·7	342·8
Woven goods produced (million lbs.)	81·4	88·0	98·7	95·3	95·8
JUTE-MILLS :					
Number	30	33	32	33	35
Looms	12,300	12,700	13,300	14,000	15,200
Spindles	255,000	271,000	277,000	293,000	315,000

It should be noted that for several years the cotton-mill industry has been adversely affected by plague and famine, and that the great decline in the output of yarn in 1900-1 was due partly to these causes, partly to the scarcity and dearness of raw cotton resulting from the failure of crops, and partly to troubles in China, the great market for Indian yarn.

Among other industries rice-mills and saw-mills, mostly in Burma, woollen-mills, paper-mills, and breweries may be mentioned. Steam-power is employed in tea gardens and indigo factories.