CULTIVATION OF INDIGO IN MEDIEVAL INDIA

Dr. Vivek Singh,
Assistant Professor, Indore Institute of Law, Indore

Abstract: A blue natural dyestuff is obtained from the various species of Indigofera. It does not exist ready formed, but is produced during fermentation from another agent existing in the plant. A dye can generally be described as a coloured substance that has an affinity to the substrate to which it is being applied. The dye is usually used as an aqueous solution and may require a mordant to improve the fastness of the dye on the fibre. Indigo dyeing and the use to produce patterns on the cloths have been known for centuries. Indigo dye is an important dyestuff to whiten cotton clothes. The colour Indigo has held a significant place in History for thousands of years throughout painting on cloths, paper, murals, walls, rocks etc. Indigo has verily held a sustained presence and identity in the history of enterprise, economics and politics of India. Indigo Cultivation was forcefully done by British Planters in India in 18th Century, thus Indigo trade of India is more valuable for all existing companies of Europe in India. Indigo plantation rivalry was seen during from the times of Akbar among European companies to seize the trade.

Keywords: Indigo, Indigofera, Indigo plantation, Medieval India, British Indigo trade, Dutch, Portugese indigo trade

The chief provinces engaged in Indigo’s cultivation were Subah’s of Lahore, Agra, Multan, Allahabad, Ajmere, Malwa, Oudh, Gujrat and Delhi. There is sufficient evidence to show that when European traders first began to purchase and export the dye, it was produced in the western India (Sarkej), Northern India (Agra) and mostly shipped from Surat. It was carried to Lisbon by the Portuguese and further sold to dyers in Holland. But, with the formation of the Dutch and the English East India companies, there began a rivalry for the monopoly of its trade. Indigo was used both for internal and external consumption. It was used to dye various kinds of cloth. But it was also used to dye the skin and hair in the country of Burma. The Indigo refuse (beet) was often used as manure by cultivators. The Indigo yielding plant (especially the leaf) is rich in nitrogen and also contains a comparatively large amount of mineral water, while its ash contains a rather high percentage of magnesia. The Mughal emperors maintained their own karkhanas or factories for cotton and silks. The popularity of Indigo due to the heavy purchases made by the English and the Dutch after their arrival in India, probably led the Emperor, Shahjahan, to declare it as a monopoly item. Tavernier remarked, “Indigo comes from different localities of the empire of the great Mughal, and in these different localities is of various qualities, which increase or diminish its price.” Though there were numerous varieties of Indigo but the Dutch and the English recognised just two varieties Biana and Sarkhej. The best and the richest Indigo was known as Agra Indigo, which was produced in the towns known as Biana, Panchoona, Bisur and Khanwa, all near Agra. It was the main export centre, where the English and the Dutch had established their factories. William Finch has again described the three varieties of Indigo prepared in Biana. The first year’s crop was known as note (naudha, young plant), the second year’s crop was jat, sprouting from the roots and was considered the best. The third year’s crop was khunti and was the worst of the three. About preparing the best Indigo, Finch remarked, “four things are required—pure grain, a violent color, its gloss in the sunne, and it that it be dry and light so that swimming in the water or burning in the fire, it cast forth a pure light violet vapor leaving a few ashes.” Biana was two days journey from Agra. It was the chief centre of Indigo trade. The best and the richest quality was found in Biana.

When an English merchant went into the villages near Agra to buy Indigo in the year 1614, we are told that he followed the customs of the country and distributed advances, to be adjusted when the Indigo should be ready for delivery; and about the same time another merchant, writing from Ahmedabad, advised that capital must be provided for daily purchases of Indigo from the country people, “who are

2 Ibid., pp. 78, 106, 108; Pramod Sangar article “ The Wonder that was Indigo”, The Tribune, Saturday, June 10, 2000
3 Pramod Sangar article “ The Wonder that was Indigo”, The Tribune, Saturday, June 10, 2000; Fazal, Abul Allami, Ain- I- Akbari, Vol. III, New Delhi, pp. 90, 91, 122
4 Fazal, Abul Allami, Ain- I- Akbari., Vol. III, New Delhi, pp. 79 – 81, 99 ; The Tribune, Saturday, June 10, 2000
5 Ibid., pp. 111
6 Ibid., pp. 93, 122
7 Ibid., pp. 83, 102
8 Pramod Sangar article “ The Wonder that was Indigo”, The Tribune, Saturday, June 10, 2000 ;
9 Ibid. ; Fazal, Abul Allami, Ain- I- Akbari, Vol. III, New Delhi, pp. 86, 115, 117,
10 Shrivastava, A.L. The Mughal Empire,(1526-1803), Shiva Lal Agarwala & co., Agra, 1975, pp. 229
11 The Tribune, Saturday, June 10, 2000
12 Fitch, Ralph, Early Travels in India (1583-1619 A.D), edited by Foster, William, New Delhi, 1968, pp. 40.
13 Pramod Sangar article “ The Wonder that was Indigo”, The Tribune, Saturday, June 10, 2000
14 Tavernier, J.B. Travels in India, (tr.) Ball,V. revised by Crooke,W. London, 1925, pp. 63
15 Pramod Sangar article “ The Wonder that was Indigo”, The Tribune, Saturday, June 10, 2000
17 Withington, Nicholas, The Early Travels in India (1583-1619 A.D), edited by Foster, William, New Delhi, 1968, pp. 190.
18 Finch, William, Early Travels in India (1583-1619 A.D), edited by Foster, William, New Delhi, 1968, pp. 151 ; Pramod Sangar article “ The Wonder that was Indigo”, The Tribune, Saturday, June 10, 2000
constrained to sell to engrossers at very low prices for want of money to supply the needful.” In sixteenth century too, lot of people worked as landless labourers who worked on Indigo farms. In Sixteenth century too, a little amount of Indigo was cultivated Bihar.

The Indigo grew on small bushes and its seed was like that of cabbage. After it was cut down, it remained in heaps for half a year and then it was beaten up. Tavernier, while delineating about the Indigo-making in Ahmadabad, gave a word of caution to those who were engaged in Indigo industry. The Indigo makers had to be very careful while sifting Indigo as they would keep before this faces a cloth so that their ”nostrils be well stopped”. Moreover, the sifters had to drink milk every hour as a preservative against the dust in Indigo. Tavernier further remarked, “I have indeed on more than one occasion observed that if an egg is placed in the morning near one of these sifters, in the evening, when one of breaks the egg, it is altogether blue inside, so penetrating is the dust of Indigo”. The methods of making, Indigo practised at Biana, the main centre of production in northern India, and are substantially the same as those which were followed when the modern industry was at the height, though there have been various changes in organization.

The Biana Indigo, in spite of its high price and the distance it had to be brought was much preferred to that of Sarkhej and in 1624 A.D, the company ordered that ”no less than two-third of the Indigo shipped should be of former type.” The ideal season for buying Indigo was October-November. Another interesting aspect of the trade was that the English factors had started buying Indigo prior to the ‘Indigo season’ out of the fear that Moor and Armenian merchants might buy it for sending it to the Middle East. Moreover, the English had to hurry their purchase for the reason that the brokers were not able to keep it with them for a long time. Another important variety was available from Sarkhej. It was situated 5 miles from Ahmadabad. The town, though not populous, was considered ideal for the production of Indigo due to the ”fatness of soil”. Here Indigo was prepared by water while in other parts by fire. It was the cheapest and the best to be found in India. ”The article produced at Sarkhej was made in the form of cakes and was flat as distinguished from the variety produced in Biana which was purer and was round from the fact that it was made in balls.” A Dutch factor, Phillip Baldaues, has given a detailed account of the making of Sarkhej Indigo. He says that the Indigo shrub had small twigs, like those of black berry. It grew for three years after its first sowing. The first year, the leaves were plucked when the plant reached a foot’s height. The leaves thus plucked were dried in the sun for 24 hours and later put into barrels full of salt water. The water was continuously and vigorously stirred for four or five days till it thickened and the Indigo settled at the bottom. The sediment was then separated from the water and was spread on the ground to dry. Indigo was regarded well if it was light and gave a feeling of dryness when pressed between fingers. It floated on water, and when thrown upon coals, it gave violet-coloured smoke. It left little ash behind.

In 1618 A.D, the Governor of Ahmedabad demanded a bribe of Rs 1 lakh to allow free trade in the commodity. Another variety of Indigo was available at Niriand (Nariad) in Gujrat.

During the reign of Akbar, our country has an active and considerable foreign trade with many countries of Asia and Europe. Akbar took keen interest in the foreign sea-borne trade and did all that was possible in that age, to foster the economic prosperity of the country. The chief exports were textiles, especially various kinds of cotton fabrics, pepper, Indigo, opium and various kinds of drugs and miscellaneous goods. Among the exports, textiles and Indigo were the most important. Indigo, on the other hand, was carried by land from Agra to the Cambay ports or across the frontier to Persia, the export value of the commodity being exceptionally high in proportion to its bulk.

The most important change is agricultural rather than industrial. The crop used to remain in the ground for three years, yielding annual cuttings, of which the second gave the best dye. With the extension of irrigation, a gradual change took place in agricultural practice until the crop became seasonal.
Medieval ports used for Indigo trade

A superficial study of the contemporary authorities is apt to produce the impression that at the close of the sixteenth century India was characterized by widespread and diversified manufacturing activity. In some respects this impression is misleading, the routes followed by travellers were comparatively few, and there are large tracts of territory of which we possess no account, so that we are entitled to infer only that industries had developed along certain main lines of transport, such as the Ganges and the Indus, or the roads from Agra to Lahore and to the west coast. Further analysis shows that along these routes industries were to a large extent localized in a comparatively small number of towns and cities, and the frequently repeated descriptions of the activities of centres like Ahmedabad or Lahore are apt to be applied to a much larger area than is warranted by the facts. Making every allowance for these sources of error, it is still to my mind indisputable that in the matter of industry India was more advanced relatively to Western Europe than she is to-day; the recurring superlatives of travellers may fairly be allowed to possess so much of positive value, when supported by the concrete facts which their statements disclose.31

The first of these classes comprises the different industries by which agricultural produce is worked up for consumption: In the aggregate there are of great industrial importance, seeing that they transform a large part of the raw material yielded by the land, whether grain, oil-seeds or sugar, fibres, drugs or dye-stuffs, and it is unfortunate for our present purpose that in Akbar's time, as at the present day, they commonly, received less than their due share of attention compared with the more noticeable productions of artisans employed on other, kinds of raw material. The list of imported luxury goods for India is longer: all kinds of precious stones, costly textiles such as silk, velvets, and brocades, spices. Perfumes and drugs of all descriptions. The miscellaneous articles usually described as China goods, European wines, African slaves, and practically anything that could be called a rarity or novelty whatever the country of its origin. In payment for these imports India sent out her various textile fabrics, pepper, and a few minor spices, certain, dyes of which Indigo was the most important, opium and other drugs, and a variety of other articles of less account.32

The means of transport show a change not less marked than that which has occurred in the commodities transported. On land there were of course no railways, and there were no concrete roads; there were the river routes in the north, and, apart from them, goods were transported, mainly on pack animals, to the nearest point at which water-carriage became available.33 On the sea there were numerous small ships and a few of larger size, but none comparable in capacity with even an ordinary cargo boat of the present day. Whether small or great, the sea-going vessels depended solely on the winds, and not merely their speed, but their direction, was governed by forces entirely beyond human control.

Sea Bourne trade

The position in regard to Indian commerce is entirely different, and in order to realize its nature and volume in the time of Akbar, the revolution is all the more remarkable for the reason that the general course of trade had remained substantially unchanged for at any rate more than a thousand years. In the sixteenth century India, taken as a whole, exercised an effective demand for certain limited classes of foreign goods, and she was able to pay for them by exporting a variety of her own products.

In regard to the organization of sea-borne trade, the sixteenth century was a period of unstable equilibrium, and in order to understand the conditions prevailing at its close it is necessary to go back to the year 1498, when Vasco de Gamma sailed round the Cape of Good Hope. He found the Indian Seas from Madagascar to the Straits of Malacca practically in possession of the Moslem merchants, who owned and managed most of the ships and also took an important share in the trade on land.34 Traders of other classes could hire space on these ships for cargo, and could travel with their goods, but they had practically no influence on the shippers other than what was derived from their demand for cargo-space, except in the cases where they owned ships for themselves. The Moslems controlled practically all the ships on the Malabar coast, the great majority of those plying from the Gulf of Cambay, and a large share, of those on the Coromandel coast and in the waters of Bengal.35 Whatever number might be owned by Bengali, or Gujarati merchants, the predominance of the Moslem interest is beyond dispute, and the result is seen in the remarkable uniformity which prevailed in nautical matters right round the shores of the Indian Ocean.36 The Moslems had spread along these shores as merchants, not as conquerors, and they accommodated themselves readily to the conditions of the localities where profitable -trade was to be had.

Its essential feature was the concentration of business on the west coast of India, particularly at the Malabar ports of which Calicut was then the most important. The produce of the Far East was not as a rule carried direct to the Persian Gulf or the Red Sea, a process which involved a long and sometimes dangerous voyage; the ships from Pegu and Malacca came to Calicut or some neighbouring port, where cargoes for the further voyage were made up, consisting partly of Indian goods which had been brought down the coast., and in the same way goods brought from the Red Sea were landed there for distribution in various directions. Malabar was thus the entry point for almost the whole trade of the Indian seas, and was a commercial centre of the first importance.37

This situation was transformed by the appearance of the Portuguese in Indian waters. The Arabs did not take their ships round the Cape of Good Hope, and were thus limited to two sea-routes for the trade with Europe, one through the Red Sea, the other through the Persian Gulf, both of which were subject to interference from the policy of other countries. Goods sent by the Persian Gulf had to be carried overland through Syria, and at the end of the fifteenth century this route was practically closed by the Turks.38 On the other route goods had

31 Foster William, edited Early Travels in India, Delhi, 1968, pp. 150-158,179, 190, 206-208, 222-23
32 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.185
33 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.185
34 Ibid., pp.186
35 Withington, Nicholas , Early Travels in India (1583-1619 A.D), edited by Foster, William, New Delhi, 1968, pp. 190; Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.186
36 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.186
37 Ibid., pp.187
38 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp. 187
to be taken across Egypt: this line remained open, but the transit dues charged by the Egyptian Government were exceedingly heavy and involved high European prices for Asiatic goods.

The principal Indian Sea ports.

In general the chief outlets for the produce of the country were:

1. The Cambay ports,
2. Bengal,
3. Coromandel coast, and
4. Malabar coast with its valuable speciality, pepper.
5. Goa as the great centre of collection and distribution in connection with the trade with distant countries. The next step is to review the position in the foreign seaports with which this trade was carried on.

The actual position of Indian sea-borne commerce at this period can be described most clearly by taking each port, or group of ports, in turn, and indicating the relations which it maintained with other portions of the sea-board. Starting from tile north-west of India, it is evident from the lie of the country that there must always have been a seaport somewhere near the mouth of the Indus, but the location has varied with changes in the river's course, and perhaps with other causes of, whose nature we are ignorant. The name of this harbour was Lahari Bandar, and it was situated on one of the mouths of the river, in direct communication by water with Thatta, Multan, and Lahore.

Lower Sind (Thatta) had recently come under Akbar's rule, and Portuguese trading representatives were established in friendly relations with the Mogul officials at the port. The exports consisted of cotton goods, Indigo, and a variety of country produce, carried either westwards to Persia and Arabia, or southwards along the coast of India. Indigo was widely traded on these ports and exported to Arab and western countries. The port was awkwardly situated with regard to the monsoons; and while it was visited occasionally by ships on the Ormuz route, most of its traffic appears to have been conducted by coasting boats to Persia and to the Gulf of Cambay.

Passing southwards from Sind, we come to the group of Cambay ports which, taken collectively, were at this period the most important in India. Surat, Broach, and Cambay itself were the largest, but several others were open; all were under the more or less effective rule of the Mogul Empire, and while the Portuguese traded with them extensively, they were not established in force within the Gulf, but dominated its shipping from their fortified posts at Daman and Diu. Diu is situated at the southern point of Kathiwar, Daman faces it on the mainland, and holding these two posts in strength the Portuguese could maintain an effective watch over the shipping which entered the Gulf, and could enforce their system of licences without reference to the Mogul authorities on land. Provided with licences, or occasionally defying the Portuguese, ships from this coast sailed west and south, carrying on trade with Arabia, Africa, and the Straits of Malaccas: they exported to these markets large quantities of textiles and miscellaneous merchandise, and brought back metals, spices, and luxury goods of all descriptions.

The Gulf ports, and, particularly Surat, were the starting-point of the pilgrim route to the holy places of Arabia, and large numbers of travellers from India made this journey every year; it is probably the many of them carried goods for sale in order to meet the expenses of the later stages of the pilgrimage, and in any case the traffic in passengers and merchandise was closely interconnected. Gogha is another important port of Gujarat. The principal outlets for foreign sea-borne trade were Cambay, Surat and Broach in Gujarat, Lahori Bandar in Sindh, Bassein, Chaul, Dabul (modern Bhabol) in the Ratnagiri district, Goa and Bhathkal, Calicut and Cochin in Malabar and Negapatam, Musulipatam and some other ports on the east coast. The State charged low customs duties. At Surat 3.5 per cent duty was charged on all exports and imports of goods and 2 per cent on gold and silver. The balance of trade invariably was in our favour.

The Gulf had at this time no direct trade with Europe. The Portuguese loaded their homeward fleet at Goa or further south, and Cambay goods for Portugal, together with provisions and other merchandise for the whole west coast, were carried down to Goa in fleets of "frigates," small coasting A fleet of these frigates, which was known as the kafila (caravan), might consist of as many as 300 boats, and usually two or three fleets sailed in each year: they were escorted by fighting vessels, but this precaution did not always ensure safety, for the "pirates" watched eagerly for this opportunity, and were occasionally able to destroy or capture a substantial number. The kafila was a prize worth fighting for. The cargoes included large quantities of piece-goods, Indigo, and various other articles for foreign markets, besides wheat and other provisions, and most of the necessaries and comforts required by the Portuguese population.

Going south from the Gulf of Cambay next was Bombay, but at this period the name was almost unknown to European writers, and the harbour was of no commercial importance.

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39 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.199
40 Withington, Nicholas , Early Travels in India (1583-1619 A.D), edited by Foster, William, New Delhi, 1968, pp. 190
41 Moreland, W.H. India at the death of Akbar, An economic Survey, New Delhi, 1962, pp.191
42 Ibid., pp.192
43 Kondo, Osamu, article “Japan and the Indian ocean at the times of Mughal Empire, with special reference to Gujarat” in The Indian ocean edited by Satish Chandra, New Delhi, pp. 180
44 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.192
45 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.192
47 Kondo, Osamu, article “Japan and the Indian ocean at the times of Mughal Empire, with special reference to Gujarat” in The Indian ocean edited by Satish Chandra, New Delhi, pp. 179
48 Shrivastava, A.L. The Mughal Empire,(1526-1803), Agra, 1975, pp. 229
49 Ibid., pp.229
50 Ibid., pp.229
51 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.193
52 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.193
Next, Ports were Goa and Bhatkal. Before its conquest by the Portuguese, Goa had belonged to the Deccan, while Bhatkal had served Vijayanagar, and had consequently enjoyed a very considerable trade; the Portuguese, however, obtained by treaties and other means a practical monopoly of the Vijayanagar trade, and Bhatkal appears to have declined, as we hear little about it at the end of the century. Goa, on the other hand, was a port of the first importance, and as an entry point, occupied, along with Cochin, to a great extent the place formerly held by Caticut.53 Local exports were not great, but produce from a large part of India and from some adjoining countries was brought here to be made up into cargoes for distant destinations, or to be distributed along the west coast, and foreign imports were in like manner distributed from this centre over almost the whole coast-line of Western India. The foreign trade of Goa and Cochin (for, as we shall see, the two ports were worked on a single system) followed four main lines— to the Far East, Persia and Arabia, Africa and Europe. The first destination of the East-bound ships was Malacca, the Moslem town in the Straits which had been one of the earliest acquisitions of the Portuguese. The ships carried textiles and other Indian merchandise like Indigo to this market, and loaded for the return with spices, gold, and miscellaneous articles usually described as China goods— porcelain, lacquered ware, camphor, and various drugs and perfumes. Spices were the primary object of this branch of commerce.54 Trade to Persia and Arabia centred in Ormuz, which— was held in strength by the Portuguese, and where all goods were transferred to smaller vessels for the voyage up the Persian Gulf.55 The principal ports— Aden, Mocha, and, Jidda had come under the power of the Turks.56 The Indian ports facing Ceylon were apparently of little importance, and the first noticeable place on the east coast is Negapatam, where the Portuguese had a representative, but did not claim to exercise political authority. This port and others carried on in the aggregate a substantial volume of trade; they exported piece-goods to the Straits.57 Farther north again is Masulipatam, at this time the chief port of the kingdom of Golconda; it was an important place in 1590 A.D., trading with Pegu and Malacca as well as with other parts of India, and its commerce was shortly to be extended largely by the establishment of a Dutch agency, which developed a valuable business, importing spices, nictalts, and luxury goods, and loading textiles for the Far East.58

North of Masulipatam there is a long stretch of coast on which we read of no important trade, and then we come to the harbours of Bengal have three principal ports for trading namely— Sitsaon— Hooghly, Sripur, and Chittagong.59 Hooghly (or Satsgaon, which was close to it) as the Small Port, and of Chittagong as the Great Port.60

Apart from it ports of Satsgaon, Sripur, were also important.61 The main lines of trade ran to Malacca and Achin, to Bengal, and to the Red Sea. Malacca and Achin supplied spices to China through Coromandel Coast, but there was also a direct connection with goods. India furnished textiles, dyed yarns (with Indigo), and some drugs, particularly opium to China.62 The trade from the North was valuable rather than extensive; merchants from Cairo, Constantinople, and various places in the Levant brought fine stuffs of wool or silk, and some metals, particularly coined gold and silver, but the volume of shipping was not great, and the season of trading was narrowly determined by the prevailing winds. Indian ships were more numerous; they brought a variety of piece-goods, as well as Indigo and miscellaneous produce from India, and spices and other merchandise from farther east, while in addition they carried what was for the period a very large number of passengers, on their way to the sacred places in Arabia.63 The opposite coast of the Red Sea contributed gold, ivory, and slaves, the Abyssinians in particular being in much demand, while Arabia itself furnished the market with horses, coffee, madder (Indigo), and certain drugs and perfumes.64 India and the countries farther east sent textile goods, spices, and other commodities in demand in Persia.

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53 Ibid., pp.194
54 Moreland, W.H. India at the death of Akbar, An economic Survey, New Delhi, 1962, pp.195
55 Ibid., pp.195
56 Ibid., pp.196
57 Ibid., pp.197
59 Ibid., pp.198
61 Ibid., pp229
62 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp.199
63 Ibid., pp. 205
64 Moreland, W.H. India at the death of Akbar, An economic survey, New Delhi, 1962, pp. 204