

## Crops of Medieval India- innovations in Economic Area

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**Abstract:** The medieval Indian period, the phase of Indian rule is known for its economic infrastructure and innovations in the area of agricultural produce. The crops of medieval India formed the major part of the economic setup of the India in those times. The crops included the food crops, non-food crops, fruits, etc. The crops production formed the basis of the export of India and also the increase in the financial assessment. India being an agricultural country since time immemorial the economy naturally depended on the crop production. The medieval rulers in India tried to improve the quality of the crops produce and for this the rulers improved the irrigation facilities. Indian soil in those times were rich in manures and little bit of manuring and tilling enhanced the crop produce. The Mughal rulers tried to improve the means of irrigation, supplying of improved seeds, solving cattle problems, and facilities of transport to increase the crop productivity. The crop production led to the strong establishment of sound land revenue system and thus made the medieval rulers established a strong army and large empires. During the medieval rule in India, our country was introduced to new crops which led to the enhancement of exports and thus it affected the medieval exchequer.

**Keywords:** crops, exports, irrigation facilities, medieval rulers,

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### I. Introduction

The Medieval India had a vast area of land cultivated by peasants residing in this geographical area. The European travellers who came to India in this period describes that the Indian peasants followed similar methods in agricultural production similar to that of their in Europe. The agricultural technology owned up by the peasants in India were no less inferior than the technology used by peasants in other parts of the world. The peasants cultivated the traditional crops but when they were exposed to the new crops they produced it with the same zest and zeal. Abul Fazl says that during Akbar rule, in each locality as many as 41 crops were cultivated in a year.[1] The method of agricultural production since ancient times has not been static and it has changed according to the needs of times. The Tughlaq rulers tried to improve the agricultural production by introducing the irrigation facilities. Firuz Shah Tughlaq by introducing new canals, new fruits and building fruit orchards led to the increase in the fruit production. Similarly, the Mughal rulers also tried to increase the agricultural productivity. The crops its cultivation, assessment and production brought about enhancement in the land revenue.

### II. Methodology

I have based my research on primary and secondary sources to reach to my observations I would especially like to mention here primary sources such as Ain-i-Akbari which was of immense help.

### III. Observations

India being an agricultural country it continued to be so in the medieval period also. The soil of India helped the peasants in growing various types of crops and the agricultural technology, irrigation facilities, manures, seeds helped in introducing new crops also. Various varieties of some crops such as wheat, rice, sugarcane, indigo, etc, were grown which led to profits for the government and its assessment led to the enhanced productivity. In this research paper of mine I would like to find out the varieties of each crop, new crops introduced and similarly its cultivation and its repercussions on the economic set up.

Wheat was one of the primary crops grown during the medieval period. Wheat was mainly grown in the regions of Agra, Allahabad, Oudh, Delhi, Lahore, Multan, Malwa, Ajmer, Kabul and Qandhar Sarkar. Kabul and Qandhar were known for especial varieties of crops. Kabul wheat was black in colour and on the other hand Qandhar wheat was extremely white in colour. Wheat in those days was also was a spring crop. Wheat had the greatest comparative value amongst the foodgrains similar to that of present date. The wheat cultivation was done in the regions having 20-25 cm. of rainfall, a temperature of 40 degrees at the time of sprouting and gradually 60 degrees at the time of ripening. Wheat cannot be grown in the regions of high rainfall. Travenier maintains that the Mughal territories were well manured and the fields well irrigated.....He came across good fields of wheat on his journey from Surat to Agra via Sironj. From Surat to Baroda Wheat was found in plenty.[2] Surjan Rai maintains that rains are the causes of improvement in agriculture, increase in revenue

,cheapness of grains and populated regions'[3]. Sir Thomas Roe who visited India during the reign of Jahangir once met near Berampur 10,000 bullocks loaded with wheat . The province of Thatta also abounded in wheat during the reign of Shahjahan and Aurangzeb . [4] Wheat has the greatest comparative value amongst the foodgrains as at present .

The next important crops of the medieval period was rice. For its successful cultivation plenty of water and high temperature was required. Abul Fazl says " if a single grain of each kind was collected , they would fill the vase. The harvests are always abundant, measurement is not always insisted upon and the revenue demands are determined by the estimates of the crop. The chief varieties are Kur, Shali, .The superior quality i.e., the shali rice ripens quickly, is pleasant to taste and smells fragrantly. It is harvested in Shrawani i.e., July, August , . Munji rice was highly priced. It was chiefly grown in Agra province. In Khandesh fine quality of rice was produced. [5] Bernier has described in his journey from Surat to Agra, Navapura that it grew good rice irrigated from a river near by. The grain of this rice is half of the other quality. It smells as musk and is white and that all the grandees of India eat it and send it to Persia for presentation.,[6] The rice quality of Lahore was even better than that of Bengal. Thatta was also an important centre for rice production. Travenier describes about the growth of rice in southern India . On his way from Surat to Broach , he found rice fields. He met women rice sellers in Ootockmond . He says that an oxen back in Persia they load 300 to 350 lbs of cargo .... Ten to Twelve thousand oxen at a time laden with rice, corn, and salt ...[7] Bernier says that Bengal rice is carried upto Ganges as far as Patna, exported by sea to Masulipatnam and to many other ports of Coramondal . It is also sent to foreign Kingdoms principally to the islands of Ceylon and the Maldives. [8] The Mughal kings tried to regulate the prices of important foodgrains. To control the rise in price of rice Aurangzeb by a definite farman in 1075 H. prohibited the export of rice from the province of Gujarat[9]

Millet was one of the cheapest grains and grew in the regions of poor soil and deficient rainfall. Jowar was grown in the regions of Malwa, Gujarat, Ajmer, Delhi, Lahore, Agra, Allahabad and Multan. Millets were grown in the regions from Surat and Broach. The drier parts of Rajputana , West Punjab and West doab. Jowar were especially grown in the areas of Lahore and Khulasat in Allahabad. In Kotah ( Rajasthan) gram were sold at the rate of Rs. 8 per mani ( one mani was equal to 12 mds. Of 40 seers each) in village Mandania, 5 miles east of the bank of the river Chandoli. [10]

Pulses also formed one of the major parts of the food of the people of Medieval India. Pulses were mostly grown in Bihar, Doab, Allahabad, Oudh, Lahore , Multan and Malwa. A tribe called Manori tribe , was engaged in the transport of pulses in the Deccan. The chief pulses grown were moong, moth, mash etc. in the autumn harvests [11] In medieval times also for the vegetarian people pulses formed a rich source of protein. Their prices in the first years of cultivation were 48 dams per maund in all the provinces. In Agra, the price ranged from 48 to 13 dams per maund of moth; 22-48 for mash and 26 to 48 for mung. [12]

Indigo also called Morinda- tinctoria formed one of the special crops of medieval period. William Finch has described the manufacture of indigo fully. He says it grows upto a yard and its stalk in the third year is no more than a man's thumb. The herb is sown once every three years. In the months of August and September just after the rains, the leaves are cut and gathered , cast into long cisterns , pressed down with stones and left therein with water. In the first year of its growth, the leaves are tender and not having attained perfection , produce heavy reddish ' Neel' .In the second year it is called Cattel ( Khuntizal or Khuntri) . It is blackish " Neel". .....If the rain falls , it looseth its colour and gloss and is called aliad (ala or moist) .....four things are required in the 'neel' a pure grain, a violet colour, its glosse in the sunne and that it be dry and light , so that swimming in the water , or burning in the fire , is cast forth a pure light vapour , leaving a few ashes .[13] The chief provinces engaged in the cultivation were Oudh, Agra, Multan, Malwa, Allahabad, Gujarat, Delhi. The chief regions engaged in the cultivation were Gangetic plain, the Indus plain and Gujarat. Indigo was sent by land from Agra to the Cambay ports or across the Frontier to Persia .Indigo during Akbar time was more costly than wheat. The indigo of Bengal was coming into prominence . The usual weight of a bale was about 220 lbs. for Biana and 150 lbs. for Sarkhej The effect of Dutch and English purchases was to extend the production of indigo. [14] During the reign of Shahjahan in the district of Ahmedabad indigo was produced though in its quality it was inferior. The people called it Cickel The excellence of Khanwa's indigo was due to heavy soil and brackish water , the indigo is easily broken to that of grown in places where water is sweet. ....From Biana indigo is exported to Europe ...round about Biana , there were five important centres each having several villages under it for revenue purposes.... Khanwa was the centre of the following villages: Ibrahimabad, Serco, Patchino, Tzonova, Pinjara, Man Nova. The third centre is Bassenwar, the fourth is Hindaun, the fifth is Tora.[15] Travenier speaks a lot about the produce and experienced that " The man (maund) of Surat which contains 42 seers or 341<sup>1/2</sup> of our pounds in value is valued from Rs. 15/- to Rs. 20/- . They make equally good at Broach . The usual price of sale was Rs. 36/- to Rs. 40/- per maund , the maund containing 60 seers or 51<sup>3/4</sup> of French pounds. ...JHollanders transported Bengal indigo from Masulipatnam .the indigo of Bengal and Brampur was cheaper than Agra indigo by Rs. 24 per maund. [16]During the reign of Aurangzeb indigo was largely exported from Bengal. The cotton clothes were sent from their places of origin

to Central spots for washing such as Agra, Ahmedabad, Masulipattnam and certain places in Bengal , probably Dacca and Qassimbazar.....[17]

Sugarcane was a rich source of sugar in medieval times. It grows well in tropical season requiring abundant heat and exceedingly moist soil. The juice obtained from sugarcane by crushing it in between the heavy rollers and the sugar is then obtained by evaporation and crystallisation. During Akbar rule Bengal was first in sugar production. Abul Fazl says that two kinds of sugarcane ; paunda and ordinary was grown in the regions of Agra, Allahabad, Oudh, Delhi, Lahore, Multan,, Malwa and Ajmer.[18] Sugar in large quantities was supplied to Golconda, Karnaticand also to Arabia and Mesopotamia through the towns of Mokhaand Basra and even Persia., The sugarcane grown in Aurangabad province was so juicy that 5 seers of juice could be formed. India's sugar under the reign of Jahangir was of three types; candy, powered and jiggery as at present. Candy was exported to England by the factory from Surat. The size of the sugar bales was 29 lbs. In 1639 the Dutch merchants exported Bengal sugar from Masullipatan and in the forties the export trade to Batavia was nearly 5 lakhs of pounds. The English company was slow to develop trade from Bengal.

Cotton was in the black soil regions of Malwa plateau and Peninsula India. Cotton grows in subtropical climate with moderate and regular heat , bright sunshine was good but not excessive rainfall , a soil in which lime is present and the soil is saline. The long stapled cotton of North America was introduced during last centuries of British rule. Raw cotton was exported to Persian gulf and Arabia. Khandesh and Berar were the chief centres of cotton. Cotton , an autumn harvest was grown in the provinces of Agra, Allahabad, Oudh, Delhi, Lahore, Multan, and Malwa. The price of cotton was nearly 50 percent higher than that of wheat. Cotton was also exported to Burma, Malacca, Arabia and the east coast of Africa The demand of cotton yarn was increasing day by day. The chief centres were Navapoura, 104 miles from Surat, a great town for weavers . The cities involved in cotton manufactures were Cambay, Broach, Sironj, Calicut, Lahore, Agra and Ahmedabad.

Opium was manufactured from poppy seeds. Its cultivation required finest soil and the fields and proper weeding and watering was also required. The seed was sown in November and harvested in February and March. The poppy heads were cut out and scratched with a sharp instrument and a milky juice exuded which became brown in colour and after constant exposure to the sun and air is carefully collected by the farmer . The important centres of its production was Patna, Bihar, Malwa, Berar, Ghazipur and Khandesh. The Rajputs and Mughals used to eat it as an intoxicant and also used it as medicine. In Agra , Allahabad, and Oudh poppy was priced between 130 to 160 dams per maund in Delhi it was priced between 108 to 140 dams per maund and in Malwa 75 dam s per maund. Opium was exported to Pegu, Java, Malaya peninnisula , China, Persia and Arabia. The Khandesh opium was exported through Surat and Bihar opium through Bengal.

Tobacco was introduced to India during the reign of Akbar by the Portugese. It was first established in Gujarat where the leaf was first obtainable in 1613 . The portugese and the dutch grew it in their colonies . Jahangir prohibited smoking in 1617 A.D. In the later part of Jahangir reign and during the reign of Shahjahan no restriction was imposed and tobacco trade flourished . Aurangzeb by a Farman in the 6<sup>th</sup> year of his reign , dated muharram 22, passed orders for the remissions of all cesses , custom dues on many commodities including tobacco and all the road taxes. [19] Aurangzeb discouraged the production tobacco. Burhanpur and Bengal produced huge quantities of tobacco. Tobacco was exported to Arakan and Pegu.

Spices formed the major part of the crops of the medieval India. Cardamom, ginger, pepper, nutmegs, cloves and cinnamon were the major spices. Cardamom was grown in Bijapur and ginger in the whole of Mughal dominion. Travenier says that cardamom was the favourite spice of the princes and it was priced between 100 to 110 rials. [20] Ginger was brought from Ahmedabad. Pepper was brought from Bijapur Hollanders bought pepper from Malabar Other spices of note during this period are cuminseed, turmeric, coriander, cloves, epathica etc.

Saffron produced in Kashmir was we can say a special crop of medieval period. Abul Fazl says ‘‘ In the beginning of the months of Urdibahist (March and April) the seeds are put into the ground which has been carefully prepared and soft ..... flower appears inb the month of Abhan ..... Plant is above a quarter of a yard long... consists of six petals and stamens. Three of the six petals have a fresh lilac colour... three yellow colour. ‘‘ The lilac (red) colour petals yield saffron and sometimes yellow ones are cunningly mixed up . Before the times of Akbar, forced labour was used and salt was given as wages., A man cleaning two petals was given two pals of salt. ‘‘ [ 21] Pampur, south of Srinagar , in the districts of Maharaj, was famous for saffron cultivation where it was extended for 12 kos. The other place was Paraspur pargana near Indrokol , not far from Kamraj , where the cultivation extended to one kos. The main use of the saffron was in coloring clothes and dishes.

During the medieval period vegetables were also cultivated. Vegetables such as spinach, turnip, kachnar, chaulai, bethuwa, ginger, boi, peas, garlic, onion, carrot, radish, onion, carrot, radish, lettuce, sweet potato, lemon and numerous other varieties. These were grown in Agra, Allahabad, Delhi, Lahore, Malwa, Bengal, Bihar, Multan, Khandesh .Potatoes were introduced by Portugese and spread rapidly prior to that of Jahangir reign.

The Mughal emperors introduced new crops and cultivation. Musk- melon, water melon, apple, grapes, orange, guava, pomegranate, mango, date, fig, apricot, banana, pineapple, pear, various varieties of berries, and ‘ singharas’ were grown in many parts of the country especially in Kashmir, and in the subas of Lahore, Delhi, Agra, Allahabad, Awadh, Bengal, Bihar, Malwa, Multan and Ajmer. Jahangir introduced the cultivation of pineapples and several other varieties of grapes. Guava and Custard apple were introduced by the Portuguese. The honeydew variety of melon was cultivated in the northern plains. Muhammad Rida of Khurasan raised the first crop of melon and was honoured by Shahjahan. Abul Fazl says “ The horticulturists of Iraq and Turan have settled here and the cultivation of trees is in a very flourishing state . Melons, water melons, peaches, almonds, pistachios, pomegranates, etc. are every here to be found Ever since the conquest of Kabul, Qandhar, and Kashmir , loads of fruits are imported ; throughout the whole year the stores of the sellers are full and bazaars are well supplied. Musk melon come into Hindustan in Farwadin ( Feb- March) and are plenty in Urdu- bahisht (March –April) .They are delicious tender, opening, sweet smelling specially the kinds called Nashparti , babashaykhi alshiri, alcha, barg-i- nay etc., .... Good ones are obtained in the Punjab and Bhabar ....various kinds of grapes are to be had in Khurdabad(May ) to Amurdad (July) whilst the markets are stocked with Kashmir grapes during Shar (August – September).”[21] Varieties of fruits like grapes, melons, mangoes, peaches, apricots were grown in the provinces of Allahabad, Malwa and Kabul.

#### **IV. Conclusion**

Jahangir was the Mughal emperor who built gardens in Kashmir and Lahore. Gardens were important part of the monuments of mughal gardens. The flowers grown during the Delhi sultanate period continued to be grown during the mughal period. Babur introduced a quality of rose of Gwalior to be grown in the gardens of Agra . Various types of flowers were grown during the mughal period. So, we find that the medieval era was a period of innovations in the area of crop production and techniques used. The water resources and the added means of irrigation, canals and technological use of implements and modes of irrigation led to the increase in crop production. It formed the basis of the agricultural production and was directly related to the economic infrastructure. The export of crops of high quality was done and it led to the enhancement of the revenue and thus brought a boost to the economic infrastructure of the medieval times.

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