

Agriculture During the Mughal Period

(Discussion with special reference to the use of technology)

Md Javed Ali

Assistant Professor
Department of History, Former Teacher- in-Charge,
Birsha Munda Memorial College,
Pirrah, Haludkanali, Bankura, 722140, WB

Abstract:

India is an agricultural country. Since ancient times, agriculture has played a major role in the progress of the country. On the other hand, the practice of science and technology in India also has a long history. Advances in science and technology often lead to progress in agriculture. Even during the Mughal period, India made progress in agriculture through the use of technology. Babur, Akbar, Shahjahan, etc. played an important role in this matter. In order to advance agriculture and increase yield, improved types of ploughs were introduced several times during the Mughal period. Not only this, but during this period, artificial reservoirs were constructed for farming, an advanced irrigation system was implemented, and advanced machinery was used for farming. It is possible that technology was used in all of these. Therefore, it can be said that just as other factors were responsible for the progress of agriculture in the Mughal period, similarly, the application of technology also played an important role.

Keywords: Agriculture, Technology, Persian Wheel, Sakiya.

Introduction:

India is primarily an agricultural country. Most of the people in the country depend on agriculture. Agriculture has been the mainstay of India's rural economy since ancient times; therefore, agriculture plays an important role in the economic progress of the country. The same applies to ancient, medieval, and even modern India, and present-day India stands second in terms of agricultural production. According to the 2007 report, the contribution of agriculture, the timber industry, etc. to the country's GDP is 16.6 percent, and about 52 percent of India's total labor force is employed in this sector. So we can see that from ancient times to modern times, agriculture in India has played a leading role in the country's economic progress. But not only in agriculture but also in terms of science and technology, India has had a reputation since ancient times. Ancient India, including the Harappan Civilization and the Gupta Age, was very advanced in terms of science and technology. Although its promotion and expansion could not be possible. Medieval India also had great progress in science and technology, and with this progress in science and technology, there was progress in agriculture. This was the case in medieval India as well, especially during the Mughal period. Since the topic of this paper is the Mughal period, we will discuss the role of technology in agriculture and its expansion during the Mughal period.

Aim of the research paper:

We know that the progress of any country is linked to the progress of science and technology. Just as the progress of science and technology can give superiority to any country, any city in the court of the world, similarly, the progress of science and technology plays an important role in the economic progress of any country. The expansion of agriculture, the increase in soil fertility, and the increase in yield play an important role in economic progress. The same was believed in the Mughal period of medieval India. In this era also, we will see that agriculture has expanded a lot, and science and technology have played an important role in this progress. This article has been written to reflect this.

A brief introduction to the Mughal period:

The period from 1206 to 1526 AD in the Indian subcontinent is known as the Sultanate period. In 1526, Zahiruddin Muhammad Babur established the Mughal Empire by defeating Ibrahim Lodi at the First Battle of Panipat, and the influence of the Mughal rulers continued until the establishment of the British Empire in India. Some notable Mughal rulers are Zahiruddin Muhammad Babur (1526–1530), Humayun (1530–1540), Akbar (1556–1605), Jahangir (1605–1627), Shah Jahan (1628–1658), Aurangzeb (1658–1707), Bahadur Shah II (1837–1857), etc. Some notable books to know about this era are Tuzuk-e-Babri, Tuzuk-e-Jahangiri, Humayunnama, Ain-e-Akbari, Akbarnama, Muntakhab-ul-Tarikh, Padshah-Nama, etc. Akbar was the best ruler of the Mughal Empire. After Humayun's death, Akbar ascended the throne in 1556. It was during his time that Todormal introduced a new revenue system in 1582, and from this time on, three types of revenue systems were introduced. The Mughal emperor Shah Jahan had an important contribution in terms of architectural sculpture. On the other hand, during the time of Emperor Aurangzeb, the Mughal Empire expanded far and wide, and after his death, this great empire gradually started to decline.

Condition of agriculture and farmers:

During the Sultanate era, the Sultan himself was at the top of the governance system, who himself held a small amount of land and managed the agricultural system. Along with this, land was distributed under the Iqtedari system. There was not much progress in agriculture during the Sultanate period, and not much is known about it. However, from the sixteenth century on, the situation began to change. At this time, Indian farmers did not hesitate to grow new crops. Even during the Mughal period, agriculture was the primary means of livelihood for most people and the main source of government revenue. Rice, wheat, silk, cotton, sugarcane, oilseeds, etc. were widely cultivated. Books like Babarnama, Humayunnama, Ain-e-Akbari, etc. show in detail the agricultural work of the Mughal period. Apart from this, lessons can also be learned from the accounts of various foreign tourists. It was during this period that foreign traders imported tobacco and maize into India, and later extensive cultivation of tobacco and maize began. Irfan Habib believes that maize may have come to India after 1600 AD via the Mediterranean region. Habib thinks that the common name of maize in India was 'Makai'. References to the cultivation of maize in western India and the Deccan are found in official records from the seventeenth century. Not only this, but it was during this Mughal period that Indians came to know about cashew and pineapple.

However, during the Mughal period, the main controller of agriculture and the revenue system was the zamindari class. The Zamindari class captured the enjoyment of the land in a hereditary manner. The zamindars were the link between the ryots and the government. But at this time, there were different sections of the landlord class. Rai, Rana, Raja, etc. were included in the first class, Malguzari in the second class, and Zamindars of the third class were called Khidmati Zamindar. His surnames were Deshmukh, Chaudhary, Kanungo, etc. Thus, it is seen that the zamindars played an important role in the economy of the Mughal period, especially in agriculture. Another class of revenue collectors known as Jagirdars was introduced during the Mughal period. However, they were not entitled to hereditary tenure. They could also be changed at any time according to the wishes of the emperor. On the other hand, various contemporary sources, including the Ain-i-Akbari, suggest that the basis of the Mughal agricultural system was the peasantry, or ryot. The farmers did not have any right to sell or mortgage the land, due to which they often had to face a lot of trouble. Irfan Habib has described in detail the reasons for the plight of the farmers during the Mughal period.

Technology in the Mughal Age:

It is generally believed that medieval India did not make much progress in the practice of science and technology. But it cannot be denied that the technique was not used at all. Because there was no barrier to the adoption of ancient Indian and foreign technology. Technology implementers at this time typically worked in two ways. A group of artisans independently produced essential commodities for urban and rural people. In other systems, artisans made essential goods in factories and were entrusted with the task of procuring machinery. Progress in shipbuilding in India can be seen since the 16th century. It was during this period that European merchants made radical changes in shipbuilding. As a result, there was a change in shipbuilding in which Eastern and Western naval technologies were mixed, and the two technologies influenced each other. Many times, traders and sailors used to change their ships after seeing Indian ships. And repairing these boats required advancements in technology. The situation changed further in the seventeenth century. High-ranking Mughal officials built a large navy in Bengal with the help of the Dutch and the British. During the Mughal period, ships named Pusta, Ballia and Bepari were made in Bengal. On the other hand, the use of technology also started during the war. Babur, the founder of the Mughal Empire, started the use of cannon in the first battle of Panipat in 1526 AD. Babur used three types of firearms, namely the kuzan, the firandi, and the zorbazan. Later, during the period of Akbar, there were many uses for firearms. This period also has many examples of boat bridge construction. Many boat bridges were constructed during the reigns of Babur, Humayun, Akbar, etc. One such bridge built during Humayun's reign is known as 'Jasar-e-Rawan'. The technology was also used in the construction of wooden and stone bridges. François Bernier mentions countless such examples in his account. However, during the Mughal period, various patterns of architecture and sculpture publicly reflected the progress of science and technology. Great importance has been given to the use of science and technology in the construction of palaces, mosques, gardens, etc. Various contemporary accounts suggest that Akbar built a type of mobile home for outdoor living, and that technique was employed here as well. Examples of this are also found in Aine Akbari. Apart from this, the Mughals gave great importance to the progress of the paper industry, the silk industry, the wool industry, etc.

Use of technology in agriculture during the Mughal period:

Although the Mughal period did not make much progress in the field of science and technology, there was a lot of use of technology in agriculture. Various types of machinery were used in farming, and Indian farmers were also very interested in the use of this machinery. Francis Buchanan talks about drill sowing in agriculture. Many believe that this drill sowing technique was invented in India. Buchanan had seen examples of this particular type of technique during his travels in the Bhagalpur region. Other types of technology were also being used in agriculture at this time. But not only agricultural machinery, irrigation was given great importance for the improvement of agriculture, and there are examples of the use of technology in this irrigation system as well. In all the regions of India where there was little or no rain, there was a shortage of water for agriculture. Hence, the need arose for the construction of large artificial reservoirs. Many examples of this type of artificial reservoir construction can be found in Babarnama texts. Babur's autobiography shows that the agricultural land of Punjab was irrigated with 'Persian Wheel'. ShahJahan had cut a 150-mile long canal named 'Nahar-e-Faiz' from the Yamuna river. Farming was done by taking water from this canal with the help of machines. In the beginning of the 16th century, Babur wrote about the use of 'sakiya' in India in his autobiography. In this method,

several pitchers tied to ropes were used to draw water from reservoirs to the fields. Many people, including Babur, have claimed that the Sakia and the Persian wheel are identical. But Irfan Habib feels that the Sakiya and the Persian wheel are of different natures.. Detailed information about Persian wheel is available in the Babarnama book. In the Mughal period, farming was done on a large scale in northwestern India with this machine. In addition to the Persian wheel, another irrigation system called 'Charas' was also used during the Mughal period. Therefore, it can be said that during the period under consideration, there was considerable use of technology in agriculture.

Conclusion:

Under such circumstances, it can be said that the Mughal period was not only famous for the expansion of the empire. Agriculture is an important factor among the various reasons for the fame of this empire. Agricultural development depends on the fertility of the soil, the irrigation system, the quality of seeds, the transport system, etc. Not only this, but the use of agricultural tools and machinery also helps the farmers in their work. The benefits of this type of material and machinery were available to the farmers of the Mughal period. Of course, many of these ingredients and tools were used in ancient India as well. But it must also be said that many new machines were invented and some techniques were imported from foreign countries, which helped in the improvement of agriculture. However, at times the law and order of the country, especially the anarchy caused by the invasion of foreigners, caused a lot of damage to agriculture. Apart from this, floods and droughts also damaged agriculture from time to time, and in this case even the use of technology did not improve agriculture much. However, it cannot be denied that technology developed during the Mughal period, and agriculture also progressed with the application of that technology. Historian W. Moreland also writes that from the time of Akbar until the 20th century, there was a steady increase in agricultural production. Therefore, in the context of agriculture, it can be said that though medieval India, especially Mughal India, did not make much progress in the practice of science, it did make progress in the application of technology.

References:

1. Bosu,Aparajita.Bharote Biggan-Projukti,Moddhojoger Ses Porber Itihas,1206-1833,Ditio Khondo,K.P .Bagchi And Company,Kolkata,2019.
2. Sarkar,J.N,History of Aurangazib(5Vols)Culcutta,1912-14.
3. Ray,Aniruddha,Modhyokalin Bharot,Nogoraon Orthoniti Rajniti,Poschim Bongo Itihas Songsod,kol.
4. Habib,Irfan,The Agrarian System of Mughal India,1556-1707,Oxford University Press,1999.
5. Habib,Irfan(Sompadito),Modhyokalin Bharot,Prothom Khondo,Kolkata,1990.
6. Majumder,R.C,History of Medieval Bengal,Cal,1973.

The logo for IJRTI (International Journal for Research Trends and Innovation) is a large, light blue watermark in the background. It features a stylized wheel or gear with a central vertical element and a horizontal bar across the middle. The letters 'IJRTI' are prominently displayed in white on a grey rectangular background within the center of the logo.

IJRTI