

Ancient Agriculture System in India

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ABSTRACT

India's economy is heavily reliant on agriculture. As early as 9000 BC, the Indian agriculture system was established. By 9000 BC, vegetation and animals were reportedly domesticated on the subcontinent. It has long been assumed that agricultural prosperity is essential to national prosperity since it significantly boosts the productivity and stability of the nation's economy. However, because to advancements in agricultural system technology during the past fifty years, the concept of agriculture has undergone significant transformation. The understanding it provides into human cultural processes, the locations of early centers of economic and intellectual advancement, and the dissemination of influences as measured by the proliferation of useful plants make the history of agriculture a very interesting topic. The goal of the study is to comprehend human history as well as the state of farming and agriculture in the contemporary day, which includes us personally.

Keywords: Farmer, Agriculture, Plant Domestication, Agricultural Reforms, and IPR.

INTRODUCTION

India's economy is heavily reliant on agriculture. As early as 9000 BC, the Indian agriculture system was established. By 9000 BC, the prominent crops that were domesticated in the subcontinent were wheat, barley, and jujube. During this time, techniques for the settled mode of production in agriculture were developed. It has long been assumed that agricultural prosperity is essential to national prosperity since it significantly boosts the productivity and stability of the nation's economy. Roughly 58 percent of India's working population is employed in agriculture, which contributes roughly 18% of the country's GDP and is the main source of income for rural communities. The Gross Domestic Product (GDP), which includes forestry, fishery, and agriculture, is one of the greatest contributors.

Ancient Indian Agriculture System in Indus Valley Civilization

The pre-Harappan civilization made significant technological advancements, such as the invention of the plough, on which the Indus Valley civilization depended. Peas, sesame, and dates were all crops grown in the Indus Valley. The Indus Valley Civilization also raised rice. Rainfall harvesting was the primary agricultural practiced by the Indus civilization. Due to discovery, it was revealed that the Indus civilization had a number of sizable reservoirs to provide the demands of the city throughout the dry season. Mixed farming served as the economic cornerstone of the Indus Valley. By roughly 4500 BC, irrigation had been created in the Indus Valley Civilization. The Indus civilization expanded in size and affluence as a result of this irrigational technique. The Indus Valley Civilization created sophisticated irrigation and water storage facilities, including 3000 BC artificial reservoirs at Griner and a 2600 BC canal irrigation system.

Ancient Indian Agriculture in Vedic Period

Wide-ranging cereal, vegetable, and fruit cultivation was widespread, and animal husbandry played a significant role in sustaining their way of life. There was a notion that farmers who were connected to nature must also be very close to God. The value of seeds was emphasized, a particular cropping order was advised, and the practice of preparing manure using cow dung for irrigation was widespread at the time.

Ancient Indian Agriculture in Mauryan Empire

For agricultural purposes, the Mauryan Empire (322–185 BCE) classified soils and recorded meteorological data. In addition, the Maurya's provided horse-drawn chariots, which were faster than the earlier bullock carts, and built and maintained dams. In his book Indica, the Greek envoy Megatheres (300 BC) gives a firsthand account of Indian agriculture at the period.

Ancient South Indian Agriculture

In ancient India, the South Indian agricultural scene was equally vibrant. The people of the south grew a broad variety of crops, including jackfruit, coconut, palm, areca, and plantain trees, as well as rice, sugarcane, millets, black pepper,

different cereals, coconuts, beans, cotton, and tamarind and sandalwood. To maintain agriculture in South India, regular plugging, maturing, weeding, irrigation, and crop protection were used. During this time, water storage techniques were developed. One of the earliest water-regulation structures in the world that is still in use is the Kallanai dam, which was built on the Kaveri River in the first and second centuries AD.

Ancient Indian Agriculture in Chola Period

The agrarian civilization in South India during the Chola Empire (875–1279) demonstrates that individual parcels of land with their own irrigation systems gradually replaced common land tenure. The Cholas also had officials who were in charge of managing the water distribution system, particularly the tank-and-channel networks that distributed water to the drier areas. There may have been fewer dry cultivated areas as a result of the rise in individual farming dispositions.

The Indian Economy in the Pre-British Period

In pre-British period consisted of isolated and self-sustaining villages on the one hand, and towns, which were the seats of administration, pilgrimage, commerce and handicrafts, on the other. Means of transport and communication were highly underdeveloped and so the size of the market was very small. To understand the agriculture system in pre-British India, it is essential to study the structure and character of the village community, the character of internal and foreign trade, the state of the means of transport and communications.

Agriculture System during the British Period

Two periods of British rule can be distinguished: the East India Company's rule, which lasted from 1757 to 1858, and the British Government's rule, which lasted from 1858 to 1947. The process of establishing British control itself took more than a century and was laborious and delayed. The Battle of Plassey in 1757 marked the beginning of the British conquest, which was only fully accomplished in 1858. England was going through a period of changing production methods at the time, which revolutionized industry. The British conquest caused the village community to disintegrate in part due to the implementation of a new land revenue system and in part due to the process of commercializing agriculture. The new land system and commercial agriculture resulted in massive exploitation of the Indian peasantry, which led to periodic famines throughout the nation. The British had no desire to see India developed in the traditional sense. The development of railways, the extension of irrigation, the expansion of education, and the establishment of revenue settlements were all started with the one, overarching objective of hastening India's economic exodus. The institution of local government is one of the key contributions of the Anglo-Saxon era. The bulk of people during this time lived in small villages, with agriculture serving as their primary industry. Each village served as a township and as a local governing body.

Agriculture during Period of (1793-1850)

The development of a new land system in India is one of the major effects of British rule. The East India Company's directors were focused on securing the most money feasible in the early years of their control. This program was characterized by unreasonable demands from farmers who were unaware that the British were killing the goose that laid the golden egg in the process. However, land revenue was a key source of funding for Company administration in India as well as for ensuring that the Company directors in England received yearly returns from their conquest of India that were higher and higher. In 1793, the British instituted land settlement in order to stabilize agriculture.

Permanent settlement was implemented in Bengal and the surrounding regions. The agreement upgraded revenue collectors to private landlord status. It permanently fixed land revenue. The zamindar was compelled to deposit increased land earnings to the state under the Zamindari system. Later, the British expanded the settlement to other states and appointed zamindars there as well, but they switched to a "temporary settlement" system that allowed for the reassessment of land revenue after a period of time that varied between 25 and 40 years depending on the state. Large portions of Bombay and Madras were covered by a new and entirely separate land system, which was later expanded to north-eastern and north-western India. Each peasant who owned a land piece was recognized as the land lord under this system, known as the ryotwari settlement, and was held directly accountable to the state for the annual payment of land revenue. It should be noted that the set land rentals in both situations were excessive, and both systems played a key role in the eradication of the natural village community built on custom and tradition.

Commercialization of Agriculture in Period (1850-1947)

The growth of commercialization in Indian agriculture between 1850 and 1947 is another notable development. Agriculture that is commercialized produces goods for market rather than for personal consumption. Every stage of the country's economic development has seen some agricultural output generated for the market. So, what made commercial agriculture different from regular sales of marketable surplus? It was a planned strategy developed in response to pressure from British industries. England had finished its Industrial Revolution by the middle of the nineteenth century. For the British industries, there was a huge need for raw materials, particularly cotton, jute, sugarcane, and groundnuts. The peasants were persuaded

to switch from food crops to commercial crops since the former paid more than the latter by providing a higher bait of market price. As a result, the peasants switched to industrial crops, and in some regions, the push for commercial agriculture grew so powerful that the peasants began purchasing food from the mandis for their needs at home. This resulted in a decrease in food production, and as a result, this time period is characterized by the worst famine in India's economic history. Commercial agriculture was partly a response to the state's growing need for land revenue as well as the landowners' exorbitant rent demands on the peasantry.

The Industrial Revolution made commercial agriculture necessary, and from 1850, the establishment of an intricate railway network in India accelerated this process. Indian agriculture started to produce for international markets as a result of railway connections between the interior of the nation and urban marketing hubs, ports, and harbors. For export to England, huge amounts of wheat from Punjab, jute from Bengal, and cotton from Bombay poured in. The same railways that transported commercial crops from different regions of the nation also brought back to India manufactured goods made elsewhere. In order to strengthen commercial agriculture on the one hand and increase competition between machine-made items and Indian handicrafts on the other, links and trains connecting the country's hinterland with commercial and trading cities were crucial. These causes caused Indian industry to collapse.

New Land Systems In order to assign responsibility for land revenue, the British established a class of landlords, but they left the process of rent fixation up to the free market mechanism. Rents skyrocketed due to the rising demand for land from an expanding agricultural population. This procedure turned the land into a desirable capital asset. The money lending classes therefore had a strong urge to buy land. The value of the security provided by the land, which peasants could borrow against, increased as land values increased. As a result, the Indian peasantry's agricultural debt increased and they were continually exposed to risk. The money lending classes' exorbitant interest rates rendered it impossible for the peasants to pay back their obligations. Lands gradually shifted to the classes that lend money.

The process of the cultivating classes becoming impoverished was accelerated by the money lenders' eviction of the peasantry. As a result, ownership and cultivation were split by the new land relations, which saw the emergence of a class of landowners and a class of cultivators (either on a tenancy basis or for a daily wage). The landowners wanted to collect exorbitant rents while giving the growers a pittance. Due to the growers' obligation to pay a significant share of their harvest in rent and interest to lenders, the investment in land declined substantially. This resulted in an inherent depressant in Indian agriculture. As a result, the new agrarian relations were riddled with obstacles, which slowed the growth of agriculture.

Agriculture System in Modern India

Compared to other developing nations, agriculture has not grown much in the 20th century. However, the agriculture industry has seen a number of significant changes over this time. India had to deal with a significant food scarcity on the verge of independence. The output of food grains had suffered greatly as a result of the division. The population's minimal needs could not be met by agricultural production, thus food grains had to be imported from outside. As a result, agricultural growth was given top priority in order to achieve food grain self-sufficiency and feed the vast numbers of people. Everything else can wait, but not agriculture, as Pandit Jawahar Lal Nehru succinctly put it after Independence. This viewpoint was reflected in a number of public policies and investment choices, particularly with regard to irrigation, fertilizers, production, land reforms, and community development. The systematic deployment of more advanced agricultural technologies for crop production led to the Green Revolution in India. The true technological advance in agriculture was brought about by the introduction of hybrid and high yielding seed varieties. This invention was made at a crucial time when India was reeling from the 1965–1966 and 1966–1967 droughts.

Mechanization of agriculture, the use of high yielding cultivars, and widespread application of fertilizers and pesticides in irrigated areas all contributed to the introduction of new agricultural technologies including biotechnology and the "green revolution." Clearly, the Green Revolution had a positive effect on the nation's agricultural sector. Records-breaking output was achieved as a result of the initiatives and incentives offered to encourage agricultural prosperity through innovative agricultural technologies. However, since the "Green Revolution" began, there have been many developments in agriculture that have an effect on both the environment and civilization. By encouraging the monoculture of wheat and rice on a restricted and foreign genetic base, the Green Revolution has decreased genetic diversity. The following are the "green revolution's" main effects; • Overgrazing, mono cropping, shifting cultivation, and converting forest area to arable land.

As a result of the green revolution and the adoption of HYV (high yielding varieties), the use of pesticides has dramatically increased. These harmful substances enter the bodies of humans and livestock through the food chain and pose a number of health risks. The already existing issue of water logging in coastal areas is made worse by increased irrigation for farming systems centered on rice.

In its early years, the Green Revolution of the 1960s increased the amount of arable land that could be farmed and increased the production of cereals per hectare. The total factor productivity in Indian agriculture has been steadily declining since there hasn't been a consistent follow-up to the Green Revolution and because there hasn't been a significant technological advancement in Indian agriculture during the Post-Green Revolution Era. If the heartland of the Green Revolution is not preserved through sufficient assistance for conservation farming and green agriculture, India would not be able to maintain a stable food security system.

CONCLUSION

Like the majority of the developing world, India as a whole has abundant indigenous genetic resources. The author noted that while the adoption of modern technology enhanced the agriculture sector, the rights of the farming community are not adequately recognized. Most rural residents lack access to their basic rights, including those to land or property, water, labor, markets, education, information, and modern technology. Due to the error in monoculture farming and the adoption of new technologies like biotechnology, traditional plant types and wild species are irrevocably disappearing, and the process has led to the extinction of farming know-how.

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