



Agriculture Development in Haryana

(From Earliest Times to 1200 AD)

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Abstract

Man depends on nature in many ways, greatly impacting his life and activities. Knowledge of history and geography is essential for the study of the history of any region. Since the formation of the state of Haryana, many scholars interested in its history and culture have been working on some aspects. Agriculture has played an important role in man's economic activities since the beginning. Apart from these material considerations, agriculture provides a lifestyle based on human values of cooperation and labour. Geographical factors play a major role in shaping the economic prosperity of a region, but real economic prosperity requires human participation. Natural resources should be exploited only when they can yield results. Nature plans on a large scale, but man is the medium through which civilization progresses. Agriculture is very closely linked to the prosperity and progress of the nation. Therefore, agriculture and farming professions should be respected for the prosperity of the country.

Keywords: Agriculture, Mehargarh, Harappan, Alluvial, Plough, Harvested, Crops, Trade, Feudal.

Historian like a scientist tries to present the true picture of the past by examining all the important available materials like literary sources, archaeological sources and accounts of foreigners which are important for creating history. Agriculture has played a major role in the Indian economy since the beginning. Apart from these material considerations, agriculture provides a way of life based on the human values of cooperation and labour. Agriculture has always been the basis of India's vibrant culture and civilization. The prosperity and progress of the nation are very closely linked to agriculture. Out of the four purusharthas i.e. 'Dharma', 'Artha', 'Karma', 'Moshā', 'Dharma' has been considered the most important, but the economic aspect was never neglected in the history of ancient India. According to Kautilya, a person cannot efficiently discharge his religious duties without money. It is clear from the Periplus of the Erythraean Sea (1st century AD) and Ptolemy's description (2nd century AD) that Indian traders used to go not only to western countries but also to the Malay Peninsula and the islands of Java and Sumatra. Contemporary Buddhist texts give a long list of trading centres in the Far East, which largely agrees with Ptolemy. This trade continued even in the Gupta period. Thus, it is evident that the Indians paid due attention to mobilising the economic resources available in the country.¹

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Geographical factors play a major role in shaping the economic prosperity of a region, but real economic prosperity requires human involvement. Natural resources should be exploited only when they can yield results. Nature plans on a large scale, but man is the medium through which civilization progresses. Similarly, the natural conditions of Haryana provided the key to the spiritual upliftment and material advancement of the people. Like other parts of India, the state gave full support and encouragement to agriculturists, artisans and traders in ancient times. This article discusses aspects of economic life in Haryana at different stages such as agriculture and animal husbandry.

Proto-historic period:

The beginning of agriculture in human history was a revolutionary event in human history. Agriculture which began during the Neolithic period of man's existence on earth was initially only for subsistence, but man's need for more agricultural production with the increase in population made it necessary to bring more land under cultivation, which necessitated the use of animal power in agriculture. The origin of agriculture was a widespread process. Agriculture or plant husbandry in the Indian subcontinent began during the Neolithic period, as is attested by archaeological data from Mehargarh 8th-7th millennium B.C.² Because of this, archaeologists assume that farming in this area started about 7000 BC, indicating that India's agricultural history began in the Neolithic Period. It also began in Baluchistan around 7000 BCE so Balochistan was the birthplace of agriculture, which later spread to parts of the Indus and Sarasvati River basins. On the basis of archaeological remains obtained from the excavated Harappan sites in Haryana, the soil types have been divided into three categories: wet, moist and dry. The wet category includes the fertile area near the river and in the form of silt deposited by floods on both the banks of the river. The second category is the moist area, which is far away from the river banks and in this area cultivation is done through artificial irrigation. It is a part of the alluvial plain. The water level in this area is comparatively higher than the dry area. Wheat, vegetables, sugarcane and gram are the main crops that can be grown on such soil as evidenced in Kunal, Banawali, Balu etc. Evidence of rice has been found from Harappan sites in Kunal, Banawali, Balu and Girwad in Haryana.

The evidence has been observed in the form of floor clods, mud plaster, pottery fragments and hearths. The arid range includes part of southern and south-western Haryana. It is an alluvial region but is also covered with dunes. The rainfall in this region is barely 25 cm annually. The main cultivated crops of this region are jowar, bajra, wheat, barley, guar, mustard etc. Evidence from excavations at Siswal, Banawali and Mitathal shows the earliest phase of the proto-history of the Haryana region. This phase is also called early Harappan. The discovery of a saddle mill used for grinding corn in this phase shows that cereal cultivation was practised in this region.³

The basic economy of the Harappans in this region was agriculture, and there is evidence of considerable diversity in the crops available. Some agro-pastoral people knew how to plough. The Harappans were advanced farmers, as evidenced by the discoveries of granaries in several urban sites such as Harappa, Mohenjodaro and Lothal. Rakhigarhi, one of the largest sites in Haryana, has also yielded remains of a granary for storing surplus produce. The Harappans used a variety of tools and implements for their agricultural activities. However, a terracotta model of a plough and yoke has been found at Banawali in the Fatehabad district of Haryana.⁴ Other implements are a hoe, ploughshare, pivot wheels, bullock cart, saddle-mill, sickle, axe etc. The Harappan cropping pattern was observed at Kalibangan, where a ploughed field came to light during excavation. Plough marks indicate that a mixed cropping system existed in the Harappan period. Rainwater, being a gift of nature, is an ideal source of irrigation.⁵ Archaeological evidence of canals in the early and mature Harappan period has been found in Haryana. Some scholars have studied the archaeological-botanical remains from several sites. Remains of oval ovens, burnt grains and grinding stones as well as copper fish hooks and bone heads from the later phase of the Harappan culture at Daulatpur indicate that the people were met by hunting and fishing.

Vedic Period:

During the second millennium B.C., a large wave of iron-using Aryans entered India from the northwest to the east. Scholars believe that the main occupation of the Rigvedic Aryans was animal husbandry. Agriculture was not so important to them. However, agriculture became

more important in the later Vedic period. It seems that by the end of the Rigvedic period, they knew all agricultural processes. The first and tenth ‘mandalas’ of the Rigveda mention the clearing of forests, ploughing of fields, sowing seeds, harvesting of maize and separating maize from chaff.⁶ The mention of artificial waterways like ‘Kutya’ and ‘Khanitrima-apa’ shows that the use of irrigation was known. References to agriculture in various forms are found in the Rigveda. Agriculture was mainly dependent on the grace of Priyajaya (Indra), the god of rain. There are also references to expert skills in crop growing.

Agriculture was advanced during this time, according to evidence found in later Vedic literature. The Atharva Veda mentions the ploughing of fields by six or twelve oxen. It also mentions the use of manure in agriculture ‘The Yajur Veda reveals that barley was sown in winter and harvested in summer and rice was sown in the rainy season and harvested in autumn. It also mentions that two crops were grown every year. The ShatapathaBrahmana mentions all the processes of agriculture such as ploughing of fields, sowing seeds, harvesting of crops and separating maize from chaff. The Mahabharata mentions that the soil produced succulent grains, rains were timely and trees were ‘laden with fruits’. It also mentions that after establishing the city of Indraprastha the Pandavas made the country rich in livestock and grains.

The Rigveda mentions two words, ‘Yava’(barley) and ‘Dhanya’. The Atharvaveda mentions barley, ‘Vrihi’ rice, sesame, sugarcane and a wild variety of rice called ‘Shyamak’.⁷ Wheat is mentioned in all the ‘Samhitas’ except the Rigveda. The Yajurveda mentions five varieties of rice, Mahavrihi, Krishnavrihi, Shuklavrihi, Sadhana and Haryana. The Mahavrihi variety was considered the best. Asudhana ripened in a very short time and Hayana (red) took a full year to ripen. Among the oilseeds, sesame and mustard are mentioned in the literature of this period. It is known from the Rigveda that the fields were irrigated by water drawn from wells and the Atharvaveda states that canals were dug for irrigation.

Excavation evidence also shows that agriculture was the main occupation. They cultivated barley, wheat and rice, as evidenced by findings from Hastinapur and Atranjikhera in Uttar Pradesh.⁸ The discovery of agricultural equipment like iron sickles, axes and millstones also proves that the main occupation of the Rigvedic people was animal husbandry. For this reason,

oxen were used for ploughing the fields. This land of the Kauravas reached the pinnacle of glory during the Mahabharata period. There is mention of Rohitaka (Rohtak), a region rich in horses, cattle, and crops, during Nakula's western expedition. Excavations carried out at different levels of Bhagwanpura (District Kurukshetra) have yielded bones of different types of animals like oxen, sheep, goats, rams, dogs and horses, indicating their livestock and animal wealth.⁹

Early Historic Period:

The Early Historic Period is characterised by the use of Northern Black Polished Ware (NBP), the introduction of coins, the general use of iron, the growth of trade and the rise and development of large territorial states. The destruction of Hastinapur by the erosion of the Ganges reduced the political importance of Haryana, prompting its people to migrate to the eastern parts of India. By the 6th century BCE, the kingdom of the Kurus, which had a strong empire in the later Vedic period, had weakened. It is generally believed that before about 300 BCE, no significant change can be detected in the economic character of the people based on archaeological excavations because, by this time, brick structures, ring wells, coins, terracotta and iron implements were not found, though semi-precious stone beads, glass and occasionally ivory objects are found. The comparative lack of agricultural implements in archaeological excavations does not mean that these were not in use in the age of the Buddha. The iron sickle found from the PGW levels at Khokrakot (Rohtak) itself is strong evidence that iron tools were used for agriculture or forest clearing at least from the 7th to the 6th century BCE.¹⁰ King Koravya (in Buddha's time, the king of the Kurus was called Koravya) lived in the famous town of Thullakottila, identified with Dhankot in Gurgaon district.¹¹ The Kuru king, along with his family members and his chief officials, ruled the Kurudhamma, which laid down five rules for ethical conduct and which were supposed to bring immense prosperity to the people.

The Macedonian army under Alexander, however, intended to advance into the Gangetic valley. The Greek¹² historian Arrian says, "It is reported that the country beyond the Hyphas (Beas) was extremely fertile, and that: the inhabitants were good agriculturists, valiant in war, and living under an excellent system of government, for the hordes were ruled by an aristocracy

which exercised its authority with justice and moderation. It is also reported that the people had a greater number of elephants than other Indians and were of superior size and courage.”

This reference is clearly to the people of eastern Punjab and Haryana who are famous for their physical strength and strong agricultural economy. With time, by about 400-300 BCE, the economic condition of the people began to show a remarkable change. Long distance trade on a substantial basis, the system of coins and artistic objects reveal the advanced economic status of the people.

In the Mauryan period, at the time of the rise of republics (Agrasas, Yaudheyas and Adumbaras) in Haryana, urban development was through agriculture. Thus agricultural prosperity in Haryana was based on spirituality. With the decline of the Kurus, many other tribes came to the Saraswati valley. Among these, the Abhiras, Yaudheyas and Arjunyana states are particularly noteworthy. The meeting and mixing of all these tribes of different origins and premises made the people of Haryana strong agriculturists. The legend ‘YaudheyanamBahudhanayaka’ appearing on the coins of the Yaudheyas shows that they maintained their republican character (Yaudheyanam is used in a collective sense and the legend Bahudhanayaka indicates being rich in grains). The secret of their power was their military strength (the depiction of Kartikeya, the commander of the Deva army on the coins points to this) and their agricultural efficiency. Kautilya identified the three main occupations of the Vaishyas as agriculture, trade, and animal husbandry. In the time of Manu, agriculture was the most important occupation of the Vaishyas, followed by animal husbandry. Ashoka greatly encouraged the planting of banyan and mango trees.¹³ The Mauryas not only established new rural settlements but also rehabilitated dilapidated settlements to obtain the maximum possible surplus from the countryside, which was necessary to support a large number of cities during this period. Also, an important development in agriculture was the introduction of paddy plantations. Today it is well known that rice was the staple grain of northern Haryana, particularly the region of Kurukshetra, although the peasants also grew barley, pulses, millets, cotton and sugarcane.¹⁴

The early Buddhist texts reveal that the Jatakas dug canals for irrigation and that people constructed canals and tanks on a cooperative basis. Kautilya has stated that a good

administration is one in which the peasants are not entirely dependent on rainwater for irrigation.¹⁵ Paying tribute to the Yaudheyas, Somadeva has written that the abundance of irrigation works freed them from the uncertainty of rainfall. Their well-irrigated fields of black soil, in which eighteen categories of people lived, remained lush green with crops and gardens. They yielded such a good harvest that the farmers were not able to store it properly.¹⁶ The above references show that agriculture played a very important role in the economic life of the people of the early historic period.

During the early centuries of the Christian era, the Haryana region was quite prosperous. The prosperity of the Kushan power was not only due to their trade with Sindh and Punjab (comprising today's Haryana) but also due to agriculture. The archaeological sites excavated in the region have given us information about the use of agricultural implements. During the Mauryan and Kushan period, people started using lentils to feed their horses. The archaeological excavations carried out at Haat in Jind district have given us evidence of agricultural implements made of iron such as sickles, scythes, ploughs, axes, etc.¹⁷ Even the coins of the historic period have depictions of bulls. The bull is not only the vehicle of Lord Shiva but also a symbol of agriculture.

Historical Period:

With the rise of Samudragupta the dominance of the Yaudheyas in Haryana came to an end, as is evident from the Prayag Prashasti wherein Prayag followed the strict orders of Samudragupta, paid all kinds of taxes, obeyed his orders and paid him homage.¹⁸ According to R. C. Majumdar, the Samudragupta kingdom may have included the area east of Lahore and Karnal as well as Punjab in the west. The discovery of some Gupta coins from Haryana supports this to some extent. The discovery of the so-called Kota coins from Haryana possibly indicates that a feudatory of the Kota family was appointed over Haryana, but after a short period in the second half of the sixth century, the region was plundered by some foreign invaders known as the Hunas. The Hun inscriptions and coins show that their empire included Kashmir, Punjab and parts of Haryana, Rajasthan, Gujarat, Madhya Pradesh and Uttar Pradesh.¹⁹ In this period of

struggle for political power in North India, a new dynasty established by the Pushpabhutis emerged in Haryana, which was then known as 'SrikanthJanapada'.

The early rulers of this dynasty probably worked under the Guptas, but with changing circumstances, they also showed their loyalty to the Huns, who were gaining dominance in the region. After the defeat of the Huns, the Pushpabhutis must have established their independent principality. This shows that after going through the struggle for political power in Haryana, the Pushpabhutis emerged politically very strong. During the reign of Harshvardhan (he was an Indian emperor who ruled North India from 606-647 AD), the Haryana region known as ShrikanthJanapada was witnessing one of its glorious eras. It became the centre of economic prosperity, culture, art education and royal powers. Harshvardhan's court poet Banabhatta and the Chinese traveller Huan Tsang have given detailed descriptions of its diverse life and agricultural development. Bāna's 'Harshacharita' is the only detailed source of information about the economic life of the people of Haryana during the rule of Pushpabhuti (7th century AD). According to Bāna, the secret of the prosperity of this region was the fertility of its soil, the abundance of crops and vegetation, the richness of livestock and above all the hospitality and generosity of its people. 'Harshacharita' writes that the entire area was abuzz with ploughed land and the crops were watered by wells and carts.²⁰ The fields were filled with high heaps of crops, in which wheat, paddy, moong, urad and sugarcane were waving.

Early Medieval Period:

Even in the early medieval period, we find some references to agricultural implements. A beautiful, life-size statue of Balarama (the elder brother of Krishna) and is generally regarded as an incarnation of Shesha) holding a plough has been found from AsthalBoharMazra in Rohtak district of Haryana. This plough seems very close to the plough of today. Haryana region remained prosperous and famous till the 10th century due to development in the agricultural sector. Somdev Shastri wrote in his Yashashilak Champu that the region of the Yaudheyas was an ornament on the earth. Their villages were full of livestock such as cows, buffaloes, goats, sheep, camels and horses.²¹ The abundance of irrigation works freed its people from the uncertainties of rain. The well-irrigated fields of black soil were laden with crops and orchards.

The decline of urban centres, which began after the fall of the Kushans in North India and the Yaudheyas in Haryana, reached its peak in the early medieval period. The events that took place here in the early medieval period must have had an impact on the economic character of the region. The period from the death of Harsha to the establishment of Muslim rule is characterised by the rise of regional states and the growth of feudalism.²² R.S. Sharma²³ shows not only the political disintegration and administrative decentralisation brought about by chieftains and chieftains but also the emergence of a social system in which the propertied class usurped the surplus produce of the peasants by exercising superior authority over their lands and persons. This observation of the scholar is fully applicable to the pre-Muslim medieval period, which can be called the classical age of feudalism in India, in which “the entire political structure was based on land grants under which the beneficiaries, both secular and religious, developed a vested interest in the protection of the feudal principalities, not only against equal rivals but also against the revolts of the peasants.

Based on some epigraphic evidence, it seems that Pinjore, Sirsa, Hansi, Thanesar and Gurgaon were the main administrative units possibly with the capital at Delhi (Dillika). To administer and fortify these cities, officials were appointed either by the central authority like Prathalaras and Chauhans or by local officials who possibly had some feudatory status. The names of some officials like RajaputraSallakshanapaladwa, Kithana, Durana and Virchandra are known from inscriptions as well as literary sources. The genealogy referred to in the PehowaParasasti of Mahendrapala shows that a Tomara king ruled the Haryana region as a feudatory of the Paratihars. The genealogy starts with Raja Jaulu who achieved prosperity by looking after the king's affairs. His successor Jajjuk was followed by his son BhunathGoga and his two half-brothers Puranraj and Devaraja who were feudatories of PrathalaraMahendrapala. A Persian inscription refers to Isjandiar as the governor of Hansi. Firishta refers to DepalHari as the governor of Sonipat, while a local Jat chieftain named Jatwana was the ruler of the 'Bangar' region. 'Bangar' refers to the southern and south-western part of Haryana which includes present-day Sirsa, Fatehabad, Hissar and Bhiwani. Prithvirajavijaya mentions Nagarjuna as the ruler of Gurgaon.²⁴

This feudal structure of administration continued for some time even after the establishment of Muslim rule over the region. The only evidence of the practice of land grants in Haryana is the 24th line of Mahendrapala's Pehowa Parasasti, which mentions that three villages named Yakshpalaka, Gejra and Patala were assigned to a Vishnu temple. This evidence proves that the transfer of royal income derived from trade and commerce to religious beneficiaries was prevalent in the Haryana region even during the early medieval period.²⁵ During the period from the late tenth century to the early eleventh century, the Tomars and Chauhans issued a large number of coins, resulting in the growth of trade and commerce. Although the number of coins discovered from the Haryana region is very small, there is evidence that suggests that coins were used extensively in Punjab and the northwestern regions. Thus, the widespread use of currency promoted trade and commerce, which suggests that the tendencies of feudalism began to weaken after the 10th century. Agriculture played a major role in shaping the economic structure of the people of Haryana in the early medieval period.

Based on contemporary and near-contemporary sources, a comprehensive list of the region's agricultural products can be compiled. A study of the sources reveals that the crops of Haryana during the period under review were, on the whole, not very different from those grown in the modern period. According to Whitehead, the area around Sirsa was very rich in sugarcane production at the time of Sultan Masud's invasion in 1033 A.D. The Sultan is said to have instructed his armies to fill the moat with sugarcane and then attack the fort.²⁶ Ibn Battuta also mentions that Sarasati (modern Sirsa) produced a large quantity of fine rice in great demand in Delhi. It was also exported to Delhi. This change in the character of Haryana also brought to light the theory of demand and supply and it also changed its agricultural products according to the market demand.

Although agriculture in India was largely dependent on the monsoon, artificial means of irrigation were also known. The earliest reference to the construction of a pond by an outsider in Haryana is recorded in the Kharosthi inscription of Karnal. It shows that the construction of ponds was given great importance in the region from the early centuries of the Christian era. The Tosham inscription also mentions the construction of two reservoirs by an acharya named Somatrata. At Siwan village (Kurukshetra district), there was an ancient pond made of brick

walls. Cunningham also mentions such ponds at places like Kapalmochan and Pehowa during his visit to the region. A reservoir at SurajKund was built in the 10th century by King Surajpal of the Tomar dynasty, the existence of which is based on bardic tradition.²⁷ Wapsis (step wells) of the tenth and eleventh centuries still exist in good numbers in the areas around Delhi. Another irrigation technique called Ghatika (water wheel) is a wheel that has been mentioned by Bana in the Haryana region. It appears to be an advanced technique of irrigation. Therefore, sources indicate that the main occupation of most people in Haryana during the early medieval period was agriculture and animal husbandry.

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