

## **Stages of agriculture development - Era of civilization- Importance of Neolithic civilization**

### **Stages of agriculture development**

#### **12000 to 9500 years ago**

- Hunters and food-gathers stage existed.
- Stone implements (microliths) were seen throughout the Indian subcontinent.
- Domestication of dog occurred in Iraq.
- Earliest agriculture was by vegetative propagation (e.g., bananas, sugarcane, yam, sago, palms, and ginger).

#### **9500 to 7500 years ago**

- Wild ancestors of wheat and barley, goat, sheep, pig, and cattle were found.

#### **7500 to 5000 years ago**

- Significant features were invention of plough, irrigated farming, use of wheel, and metallurgy and in Egypt, seed dibbling said to be practiced.

#### **5000 to 4000 years ago**

- Harappan culture is characterized by cultivation of wheat, barley and cotton; plough agriculture and bullocks for draught. Indus Valley is the home of cotton.
- Wheeled carts were commonly used in the Indus valley.
- Harappans not only grew cotton but also devised methods for ginning / spinning / weaving.

#### **4000 to 2000 years ago**

- In North Arcot, bone / stone tools were found.
- In Nevasa (Maharashtra), copper and polished stone axes were used. First evidence of the presence of silk was found at this location.
- At Navdatoli on Narmada river (Narmada, Madhya Pradesh), sickles set with stone teeth were used for cutting crop stalks. Crops grown were wheat, linseed, lentil, urd (black gram), mung bean, and khesari.
- In Eastern India, rice, bananas, and sugarcane were cultivated.

#### **2000-1500 years ago**

- Tank irrigation was developed and practiced widely.

- Greek and Romans had trade with South India; pepper, cloth, and sandal wood were imported by Romans.
- Chola King Karikala (190 AD) defeated Cheras and Pandyas, invaded Srilanka, captured 12000 men and used them as slaves to construct an embankment along the Cauvery, 160km along, to protect land from floods. He has built numerous irrigation tanks and promoted agriculture by clearing forests.

### **1500-1000 years ago**

#### **The Kanauj Empire of Harshavardhana (606-647 AD)**

- Cereals such as wheat, rice and millets, and fruits were extensively grown. A 60-day variety and fragrant varieties of rice are mentioned.
- Ginger, mustard, melons, pumpkin, onion, and garlic are also mentioned.
- Persian wheel was used in Thanesar (Haryana).

#### **The kingdoms of South India**

- The kingdoms were of the Chalukyas (Badami), Rashtrakutas (Latur), Pallavas (Kanchi), Pandyas, Hoysals (Helebid), and Kakatiyas (Warangal).
- Cholas ushered in a glorious phase in South Indian in the 10<sup>th</sup> century AD.
- New irrigation systems for agriculture were developed- chain tanks in Andhra in the 9<sup>th</sup> century; and 6.4 km Kaveripak bund.
- Cholas maintained links with China, Myanmar, and Campodia.
- The tank supervision committee (Eri-variya) looked after the maintenance of a village and regulated the water supply.

### **1000-700 years ago**

- Arab conquest of Sind was during 711-712 AD; Md bin Qaism defeated Dahir, the Hindu king of Sind. Arabs were experts in gardening.
- 1290- 1320AD (Reign of Khiljis): Alauddin Khilji destroyed the agricultural prosperity of a major part of India. He believed in keeping the farmers poor.

#### **Era of civilization**

It is supposed that man was evolved on earth about 1.7 million years ago. This man was evolved from the monkey who started to move by standing erect on his feet. Such man has been called *Homo erectus* (or) Java man (or) Peking man. Later on Java man transformed into Cro-Magnon and Cro-Magnon into modern man. The modern man is

zoologically known as *Homo sapiens* (Homo - Continuous, Sapiens - learning habit). A primitive form of *Homo sapiens*, called Neanderthal man (*Homo sapiens neanderthalensis*), was common in Europe and Asia. After the last glacial period (about 10,000 years ago), modern *Homo sapien sapiens*, began to spread all over the globe.

In the beginning such man had been spending his life wildy, but during the period 8700-7700 BC, they started to pet sheep and goat, although the first pet animal was dog, which was used for hunting. The history of agriculture and civilization go hand in hand as the food production made it possible for primitive man to settle down in selected areas leading to formation of society and initiation of civilization. The development of civilization and agriculture had passed through several stages. Archeologist initially classified the stages as stone age, Bronze and Iron age. Subsequently the scholars spilt up the stone age into Paleolithic period (old stone age), Neolithic age (New stone age) and Mesolithic age (Middle stone age).

Each of three ages, saw distinct improvements. The man fashioned and improved tools out of stones, bones, woods etc. to help them in day-to-day life. They started growing food crops and domesticated animals like cow, sheep, goat, dog etc.

#### **I. The Stone Age culture : (2,50,000 Bc to 3500 BC)**

The stone age is divided into three periods

- A. Palaeolithic period (old stone age)
- B. Mesolithic period (middle stone age)
- C. Neolithic period (new stone age)

#### **A. Paleolithic age : Hunters and food gatherers (2,50,000 to 10,000 BC)**

This period is characterized by the food gatherers and hunters. The stone age man started making stone tools and crude choppers. The chipped stone tools and chopped pebbles were used for hinting, cutting and other purposes. He had no knowledge on cultivation and house building.

The Palaeolithic age in India is divided into three phases according to the nature of stone tools used by the people and according the nature of climate

- a) Early or lower palaeolithic (2,50,000 to 1,00,000 BC)
- b) Middle palaeolithic (1,00,000 to 40,000 BC)

c) Upper palaeolithic (40,000 to 10,000 BC)

### **B. Mesolithic period : Hunters and Herders (10,000 to 3,700 BC)**

The transitional period between the end of the Paleolithic and beginning of the Neolithic is called Mesolithic. It began about 10000BC and ended with the rise of agriculture. This period is characterized by tiny stone implements called microliths. The Mesolithic people lived on hunting, fishing and good-gathering. At later stages, they also domesticated animals. The domestication of the dog was the major achievement of the Mesolithic hunter.

### **C. Neolithic Age : Food producers (The beginning of Agriculture)**

The Neolithic age began between 9000 to 7500 BC. Neolithic revolution occurred in Western Asia between 9500 and 8500 years ago mainly in the **Fertile Crescent** (hilly regions embracing Israel, Jordan, Turkey, Iran, Caspian basin and adjoining Iranian plateau). Neolithic revolution brought a major change in the techniques of food production which gave man control over his environment and saved him from the precarious existence of mere hunting and gathering of wild berries and roots. For the first time, he lived in **settled villages** and apart from security from hunger he had leisure time to think and contemplate.

### **The main features of Neolithic culture in India**

1. Neolithic culture denotes a stage in economic and technological development in India
2. Use of polished stone axes for cleaning the bushes
3. Hand made pottery for storing food grains
4. Invented textile, weaving and basketry
5. Cultivation of rice, banana sequence and yams in eastern parts of India
6. Cultivation of millets and pulses in south India
7. Discovery of silk

## **II. Bronze Age (Chalcolithic culture) (3000-1700 BC):**

The end of the Neolithic period saw the use of metal. The metal to be used first was copper. The term Chalcolithic (stone – copper phase) is applied to communities using stone implements along with copper and bronze. In more advanced communities,

the proportion of copper and bronze implements is higher than that of stones. The chalcolithic revolution began in Mesopotamia in the fourth millennium B.C. from this area it spread to Egypt, and Indus valley.

**The significant features are**

1. Invention of plough
2. Agriculture shifted from hilly area to lower river valley
3. Flood water were stored for irrigation and canals were dug
4. Irrigated farming started in this period
5. Sowing of seed by dibbling with a pointed stick
6. Use of wheel.
7. Salinity problem and water logging were noticed due to canal irrigation.

**III. The Iron Age**

The Iron phase in India started after the advent of Aryans. Aryan land was called *Saptasindhava* i.e. the land of seven rivers (Sutlej, Beas, Ravi, Chenab, Jhelum, Sindhu and Saraswati). Aryans settle along the rivers.

The salient features of iron age are

- The harvesting tool used was **sickle**.
- The crops grown were mainly sesame and sugarcane.
- Iron plough, shear, axe, sickles and hoes were used
- The domestic animals were sheep, goats, dogs, mule, tortoise, cattle breeds and elephants.