

**Department of Extension Education and Communication management, ANDUAT,
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Course No. **HECM-121 3 (3+0)**

Course Title: **Women in Agriculture**

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INTRODUCTION

Agriculture is the backbone of the Indian economy. The geographical position of our country has been very congenial to agricultural activities. The physical factors existing in India, that is, her climate, her soil and her relief have become very helpful for the cultivation of so many crops here. So from long past the Indians have taken agriculture as their basic means of livelihood.

Agriculture typology

According to the report of the World Commission on Environment and Development (1987) there are three basic types of agriculture. These are:

- Industrial agriculture
- Green Revolution agriculture
- Resource poor agriculture

Industrial agriculture has large farming units, is highly capitalized and relies on large inputs and subsidies. It is found mainly in the developed world or in specialized enclaves in the developing countries. Green Revolution agriculture is found in well-endowed areas of the developing world and in areas either irrigated or with reliable rainfall. It includes large and small farms and uses high-yielding varieties with complementary inputs. The third type of agriculture is associated with unfavourable or difficult areas that are mainly rainfed, often undulating and with fragile or problem soils.

HISTORY OF INDIAN AGRICULTURE

Indian agriculture has long, old and beyond memory history which begins the Indus valley civilization. One of the most old water regulating structure in the world is Grand Anicut dam on river Kaveri (1st-2nd Century CE). Indian agriculture began by 9000 BCE as a result of early cultivation of plants, and domestication of crops and animals. Settled life soon followed with implements and techniques being developed for agriculture. Double

monsoons led to two harvests being reaped in one year. Indian products soon reached the world via existing trading networks and foreign crops were introduced to India. Plants and animals—considered essential to their survival by the Indians—came to be worshiped and venerated. The middle ages saw irrigation channels reach a new level of sophistication in India and Indian crops affecting the economies of other regions of the world under Islamic patronage. Land and water management systems were developed with an aim of providing uniform growth. Despite some stagnation during the later modern era the independent Republic of India was able to develop a comprehensive agricultural program.

Early History

Wheat, barley and jujube were domesticated in the Indian subcontinent by 9000 BCE. Domestication of sheep and goat soon followed. This period also saw the first domestication of the elephant. Barley and wheat cultivation—along with the domestication of cattle, primarily sheep and goat—was visible in Mehrgarh by 8000-6000 BCE. The Indus cotton industry was well developed and some methods used in cotton spinning and fabrication continued to be practiced till the modern Industrialization of India. A variety of tropical fruit such as mango and muskmelon are native to the Indian subcontinent. The Indians also domesticated hemp, which they used for a number of applications including making narcotics, fiber, and oil. The farmers of the Indus Valley grew peas, sesame, and dates.

Vedic period – Post Maha Janapadas period (1500 BCE – 200 CE)

In India, both wheat and barley are held to be *Rabi* (winter) crops and—like other parts of the world—would have largely depended on winter monsoons before the irrigation became widespread. The growth of the *Kharif* crops would have probably suffered as a result of excessive moisture. Jute was first cultivated in India, where it was used to make ropes and cordage. Some animals—thought by the Indians as being vital to their survival—came to be worshiped. Trees were also domesticated, worshiped, and venerated—*Pipal* and *Banyan* in particular. Others came to be known for their medicinal uses and found mention in the holistic medical system *Ayurveda*.

In the later Vedic texts (c. 1000–500 BC), there are repeated references to iron. Cultivation of a wide range of cereals, vegetables, and fruits is described. Meat and milk products were part of the diet; animal husbandry was important. The soil was plowed several times. Seeds were broadcast. Fallowing and a certain sequence of cropping were recommended. Cow dung provided the manure. Irrigation was practiced. The Mauryan Empire (322–185 BCE) categorized soils and made meteorological observations for

agricultural use. Other Mauryan facilitation included construction and maintenance of dams, and provision of horse-drawn chariots—quicker than traditional bullock carts.

Early Common Era – High Middle Ages (200–1200 CE)

The Tamil people cultivated a wide range of crops such as rice, sugarcane, millets, black pepper, various grains, coconuts, beans, cotton, plantain, tamarind and sandalwood. Jackfruit, coconut, palm, areca and plantain trees were also known. Systematic ploughing, manuring, weeding, irrigation and crop protection was practiced for sustained agriculture. Water storage systems were designed during this period. Kallanai (1st-2nd century CE), a dam built on river Kaveri during this period, is considered the as one of the oldest water-regulation structures in the world still in use. Spice trade involving spices native to India—including cinnamon and black pepper—gained momentum as India starts shipping spices to the Mediterranean. Roman trade with India

Late Middle Ages – Early Modern Era (1200–1757 CE)

The construction of water works and aspects of water technology in India is described in Arabic and Persian works. The diffusion of Indian and Persian irrigation technologies gave rise to an irrigation system which brought about economic growth and growth of material culture. Agricultural 'zones' were broadly divided into those producing rice, wheat or millets. Rice production continued to dominate Gujarat and wheat dominated north and central India. The Encyclopedia Britannica details the many crops introduced to India during this period of extensive global discourse: Introduced by the Portuguese, cultivation of tobacco spread rapidly. The Malabār Coast was the home of spices, especially black pepper, that had stimulated the first European adventures in the East. Coffee had been imported from Abyssinia and became a popular beverage in aristocratic circles by the end of the century. Tea, which was to become the common man's drink and a major export, was yet undiscovered, though it was growing wild in the hills of Assam. Vegetables were cultivated mainly in the vicinity of towns. New species of fruit, such as the pineapple, papaya, and cashew nut, also were introduced by the Portuguese. The quality of mango and citrus fruits was greatly improved.

Colonial British Era (1757–1947 CE)

In 1857 a Rampur canal on river Sutlej was constructed and a number of irrigation canals are located on the Sutlej river. Few Indian commercial crops—such as Cotton, indigo, opium, and rice—made it to the global market under the British Raj in India. The second half of the 19th century saw some increase in land under cultivation and agricultural production expanded at an average rate of about 1 percent per year by the later 19th century. Due to

extensive irrigation by canal networks Punjab, Narmada valley, and Andhra Pradesh became centers of agrarian reforms. There was influence of the world wars on the Indian agricultural system. There were significant regional and intercrop differences, however, nonfood crops doing better than food crops. Among food crops, by far the most important source of stagnation was rice. Bengal had below-average growth rates in both food and nonfood crop output, whereas Punjab and Madras were the least stagnant regions.

Republic of India (1947 CE onwards)

Bhakra Dam (completed 1963) is the largest dam in India. Special programs were undertaken to improve food and cash crops supply. The Grow More Food Campaign (1940s) and the Integrated Production Programme (1950s) focused on food and cash crops supply respectively. Five-year plans of India—oriented towards agricultural development—soon followed. Land reclamation, land development, mechanization, electrification, use of chemicals—fertilizers in particular, and development of agriculture oriented 'package approach' of taking a set of actions instead of promoting single aspect soon followed under government supervision. The many 'production revolutions' initiated from 1960s onwards included Green Revolution in India, Yellow Revolution (oilseed: 1986-1990), Operation Flood (dairy: 1970-1996), and Blue Revolution (fishing: 1973-2002) etc. Following the economic reforms of 1991, significant growth was registered in the agricultural sector, which was by now benefiting from the earlier reforms and the newer innovations of Agro-processing and Biotechnology.

Due to the growth and prosperity that followed India's economic reforms a strong middle class emerged as the main consumer of fruits, dairy, fish, meat and vegetables—a marked shift from the earlier staple based consumption. Since 1991, changing consumption patterns led to a 'revolution' in 'high value' agriculture while the need for cereals is experienced a decline.

Since independence, India has become one of the largest producers of wheat, edible oil, potato, spices, rubber, tea, fishing, fruits, and vegetables in the world. The Ministry of agriculture oversees activities relating to agriculture in India. Various institutions for agriculture related research in India were organized under the Indian Council of Agricultural Research (est. 1929). Other organizations such as the National Dairy Development Board (est. 1965), and National Bank for Agriculture and Rural Development (est. 1982) aided the formation of cooperatives and improved financing.