

5

Agriculture – An Introduction

Lesson Plan

Contents

- ▶ An overview of agriculture and the activities related to it
- ▶ Understanding agriculture as the primary economic activity and its various aspects

Objectives

- ▶ To understand the essential nature of agriculture, its significant aspects
- ▶ To learn about the activities involved in agriculture and their purpose
- ▶ To know about the different types of farming practices
- ▶ To appreciate the need for agriculture in the world

■ Teacher's Aids

- ▶ Globe
- ▶ Pictures, charts, atlas and wall maps
- ▶ Blackboard
- ▶ Internet

■ Tips for Teacher

- ▶ Explain the essential nature of agriculture with regard to the needs of human beings and domestic animals.
- ▶ If any of the students are from a rural background, share their observations with the other students.
- ▶ Explain how, apart from what they will learn in the lesson, there are small farms and orchards growing fruits [dates, coconuts, grapes, watermelons, etc.], vegetables [for sale through mandis and hawkers/vendors], flowers [roses for making *gulkand*, *sherbet*, etc., and for use in religious and non-religious functions].
- ▶ Students should be encouraged to know places, locations and their placement on the maps.

■ Background and Reading

- ▶ Read the lesson aloud and explain, sharing the aids, etc., pausing to examine and explain the data in the boxes.
- ▶ Particularly focus on the various aspects and types of agriculture and their associated activities.

Agriculture and Associated Activities

- ▶ One of the most ancient economic activities of human beings—art and science of producing plants from the soil—provides food, shelter and clothing—early man settled into communities after he began cultivating and growing crops.
- ▶ Some agricultural products not consumed directly—have to be processed—that involves various types of economic activities—three categories:
 - (a) The Primary Activities—extraction and production of resources provided by nature—agriculture, fishing, gathering, lumbering, mining.
 - (b) The Secondary Activities—processing the products of primary activities—baking bread, making cloth, processing vegetables, fruits and meat.
 - (c) The Tertiary Activities—assist primary and secondary activities by providing service, transport, trade, insurance and banking.

Agriculture—The Primary Economic Activity

- ▶ Involves raising crops and rearing livestock—about half of world’s population directly or indirectly involved in agricultural activities—India progressing in manufacturing and service industries, over 65% of population dependent on agriculture.
- ▶ Geographical, cultural and economic factors jointly responsible for growth and development of agriculture anywhere in the world—depends largely on environmental conditions—activity involves ploughing land, sowing seeds, irrigating the field at appropriate times and harvesting the crops—methods have changed with growth and development of science and technology.
- ▶ Geographical factors—suitable land [preferably levelled], fertile soil, proper climatic conditions.
- ▶ Economic factors—availability of enough and cheap workers, adequate transport facilities, sending goods, a suitable market, storage and availability of farm inputs like seeds, fertilisers, machinery, etc.
- ▶ Agriculture can be developed as an industry—involves inputs, operations and outputs—inputs include seeds, fertilisers, irrigation water, machinery and labour—operations: Ploughing, sowing, irrigation, weeding, harvesting—outputs: Crops [food and raw material], livestock, wool, dairy products, meat and poultry products.

Types of Farming

- ▶ Environmental conditions vary from place to place and time to time—farming activity also varies depending on technological development and needs of the people.

► On basis of geographical environment, labour, level of technology, demand for produce, two major categories: Subsistence and Commercial farming:

(a) Subsistence Farming: All produce consumed by farmer, nothing for the commercial market—main features: Small landholdings, high population pressure, crops according to farmer's needs, domesticated animals—rice, wheat, maize, millets, pulses.

Further classified into: intensive subsistence farming, shifting cultivation and nomadic herding.

Intensive Subsistence Farming: Involves cultivation of small landholdings with primitive and simple tools—work done mostly by human workers—hot, humid regions—farmers manage to raise more than one crop in a year from the same field—rice—even wheat, maize, pulses, oil seeds, mostly practised in thickly populated areas, especially monsoon regions of Asia.

Shifting Cultivation: Mostly practised by nomadic, migratory, primitive people—involves rotation of fields [not of crops]—forest of the Amazon Basin, tropical Africa, parts of South-east Asia, and North-eastern India—hot, humid climate—patch of land cleared by cutting and burning trees—ashes mixed with soil—maize, potatoes, yam, cassava—after 2-3 crops land becomes infertile—abandoned and then a new one selected—also called slash—and—burn cultivation—different names in different countries: Jhum [India], Lading [Indonesia], Milp [Central America], Caingin [Philippines], Ray [Vietnam], Roca [Brazil], etc.

Nomadic Herding: Involves movement of herdsmen with animals in search of fodder and water—camels, sheep, goats, yak, etc.—can meet all needs of herders and their families—milk, meat, wool, hides, skin—semi-arid regions of the world: Sahara Desert, Central Asia, some parts of India.

(b) Commercial Farming: Most of the agricultural products are for sale in the market—crops chosen keeping in mind their sale value—farms are very large, more than 1000 hectares, and require a large amount of capital.

Main types of commercial farming: Commercial grain farming or extensive farming; mixed farming; and plantation farming.

Commercial Grain Farming: Mainly production of food grains, like wheat and maize, for commercial purposes—sparsely populated regions of temperate grasslands: Prairies, [N. America]; Pampas [S. America]; Steppes [Europe and Asia]—large landholdings on which most of the farm work is done by machines.

Severe climatic conditions, especially winter, only one crop in one year—yield per unit area is low but per capita yield is very high—in general, cost of production is less—mostly owners are the farmers.

Mixed Farming: Involves raising livestock along with crops and fodder—practised in thickly populated regions—Europe, Eastern USA, Argentina, South-east Australia, New Zealand, South Africa—size of farm moderate and cereal crops and fodder [like alfalfa and lucern] both grown—animal waste used as manure—cattle reared for milk and beef; sheep for wool and mutton—farming methods intensive and efforts made to get high yields of cereal and fodder—sometimes cattle fed on standing crops.

Plantation Agriculture: Raising a single crop like tea, coffee, sugarcane, rubber, cotton, banana, coconuts or spices—farms/plantations very large—most work done on scientific basis and agricultural products partially or fully processed before sending to market for sale—cheap and skilled labour and efficient and adequate network of transport are essential for economic success—most plantations managed like industrial units—mostly in tropical regions: Rubber plantations [Malaysia and Indonesia]; tea plantations [India and Sri Lanka]; coffee plantations [Brazil and Columbia]; sugarcane plantations [Cuba and Java]; and banana plantations [West Indies].

Assessment Corner

Oral Assignment

- A. Ask for answers at random from the students. Confirm the right answers. Let them write down the correct answers if they like in their books.

Written Assignment

- B–F. The teacher has two options—(i) Either do these exercises orally first and then ask the students to write them down. OR (ii) Ask the students to write the answers on their own. Then the teacher can announce the correct answers to the students and they can ask their partners to cross-check them.

In either case, the answers can be written as homework and the teacher can check them in the class.

Think Tank

- G. **HOTS questions:** Discuss the questions in class and let the students write the answers to G and H as homework. Teacher should assess individual work.