

MODULE 2

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UNIT 1 HISTORY OF AGRICULTURE

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1.0 INTRODUCTION

Agriculture originated in the pre-historic times. Before agriculture, people lived on hunter-gatherer cultures, i.e. by hunting wild animals and gathering edible plants. The herds were plentiful and edible plants grew luxuriantly in the environment. However, with the migration of the herds in the wild man was forced to follow them about and in the process, found out a new variety of edible plants to supplement their diet. Several decades of random and systematic transformations of these primitive practices have resulted in complex, more sustaining and efficient modern sedentary (settled) systems of food, feed and fibre production for the ever-increasing population of man world-wide.

2.0 OBJECTIVES

By the end of this study unit, you should be able to:

- understand the origin(s) of agriculture
- trace the evolution of modern-day sedentary agricultural practices
- appreciate the need to adapt traditional farming techniques in order to improve agricultural productivity.

3.0 MAIN CONTENT

3.1 Origin of Agriculture

3.1.1 Ancient Origins

3.1.1.1 Traditional Agriculture

Agriculture was developed independently by geographically distinct populations. Archeological evidence showed that animal domestication (mainly dogs used as hunting aids) started thousands of years before 7000 B.C., which marked the beginning of agriculture. Further evidence indicates that the keeping of sheep and wild ox and wheat cultivation were practised in 9800 B.C. in Kurdistan. However, intensive food gathering involving permanent settlements and extensive use of existing plants appeared to have started in the Near East around 9000-7000 B.C. Thus, although farmers sporadically used wild cereals earlier, systematic agriculture was first practised in Southwest Asia in the Fertile Crescent (present-day Southern Iraq and Syria). There are several archeological theories of the beginning of seed sowing. However, one theory suggests a correlation between seed spill during a migration and sudden abundance of the plant and the evolution of the knowledge of seed storage and subsequent re-seeding for future food supplies. There is confirmation that agriculture-oriented farmers started the selection and cultivation of food plants with desired characteristics around 9500 B.C. The eight “founder” crops of agriculture were emmer, einkorn wheat, hulled barley, peas, lentils, bitter vetch, chick peas and flax.

3.1.1.2 Small-Scale Agriculture

This practice reached Egypt in 7000 B.C., from where it then spread to the Indian subcontinent with wheat and barley cultivation and followed

thereafter, by mid-scale farming on the banks of the Nile River in 6000 B.C. At this latter time, rice became the primary crop in the Far East as mung, soy, azuki and taro in China and Indonesia. In addition, highly organized net fishing of rivers, lakes and ocean shores in these areas provided considerable volumes of essential protein complements of carbohydrates.

3.1.1.3 Large-Scale Agriculture

Intensive cultivation of land, monocropping, organised irrigation and use of a specialized labour force was developed by the Sumerians in the Persian Gulf around 5000 B.C. In this civilization, the townships provided central services of seed storage that the villages could not handle. Similarly, the large-scale use of animals for food/fibre and as beasts of burden evolved with the domestication of wild aurochs and mouflon into cattle and sheep, respectively. Thus, the shepherd became an essential complementary provider of food and fibre for sedentary and semi-nomadic societies. Other crops such as maize, manioc (cassava) and arrowroot were first domesticated in the Americas around 5000 B.C. while the potato, tomato, pepper, squash, beans, Canna, tobacco, etc developed in the New World. Also, extensive terracing of steep hillsides was developed in the Andean South America. In later years, the Greeks and Romans made few fundamentally new advances based on techniques pioneered by the Sumerians. The Greeks and Macedonians became dominant agrarian societies for years, in spite of the limitation of poor soils for agriculture. The cultivation of crops for trade was emphasized by the Romans.

3.2 Agriculture in the Middle Ages

Further agricultural advances were made with the development and dissemination of agricultural technologies including irrigation system based on hydraulic and hydrostatic principles, use of machines (e.g. norias), water raising machines, dams and reservoirs by the Muslim farmers of North Africa and Near East. They wrote Farming manuals, which were suitable to specific locations and instrumental to the wider adoption of crops as sugar-cane, rice, citrus fruit, apricots, cotton, artichokes, aubergines and saffron. The Muslim farmers also introduced crops such as lemons, oranges, cotton, almonds, figs and bananas to Spain.

3.3 Present-Day Agriculture

The vast improvement in agricultural efficiency in modern times arose from the invention of a three-fold system of crop rotation during the Middle Ages and the importation of Chinese-made mouldboard plough.

After 1492, further development occurred in agriculture through global trade (exchange) of previously local crops (tomato, maize, potato, cacao, tobacco, coffee) between the New and Old Worlds. Several varieties of wheat and spice were also exchanged between the two worlds. With respect to animal trade, the most significant exportation was that of the horse (including donkeys and ponies) from the Old World to the New World, essentially as beasts of burden. By the early 1980s, the improvement in agricultural techniques (primitive genetic engineering in the 1950s), implements, seed stocks and cultivars led to considerable improvement in yield per unit land over the level recorded in the Middle Ages. In particular, agricultural mechanisation (especially tractorisation) improved rapidly between the late 19th and 20th centuries (e.g. mechanical tomato harvesters in early 1960s in the USA) allowed farming activities to be carried out more speedily and on an incredibly large scale. This culminated in tremendously high farming efficiencies in nations such as USA, Argentina, Germany and Israel, and associated super-optimal high-quality produce per unit land.

4.0 CONCLUSION

In this unit, you have learned that:

- i. agriculture evolved in the pre-historic times and developed in phases (traditional, small-scale, large-scale), and
- ii. modern-day agriculture has its origin in the Middle Ages.

5.0 SUMMARY

Agriculture evolved with the Pre-historic man but has followed complex phases of development to the present-day sedentary form, involving mechanization and improved agricultural practices for sustainable food and fibre production for man.

6.0 TUTOR-MARKED ASSIGNMENT

1. What were the two components of intensive food gathering by the Early man?
2. Classify the phases of the historical development of agriculture.
3. State the highlights of the development of present-day agriculture.

7.0 REFERENCES/FURTHER READINGS

History of Agriculture. *Encyclopaedia Britannica*. <http://www.Britannica.com/eb/article-910607/history-of-agriculture>

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