ASSIGNMENT

CourseCode	**:**	**MAM-051**
Course Title	**:**	**Fundamentals of Agriculture**
Assignment Code	**:**	**MAM-051/2026**
Coverage	**:**	**All Blocks**

Note:

- Attempt any **FIVE**questions and submit this assignment to the Coordinatorof your studycentre. Each answer may contain approx. 500 words.
- Evaluation of the assignment follows the letter grading system. Grade A, B, C, D, or E will be awarded in order of performance of learners based on highest (A grade) to lowest (E grade). For details, go through the MBAABM programme guide.

1) Explain the agricultural development in India before and after Independence, highlighting the major challenges and achievements.

2) Discuss Integrated Plant Nutrition Management (IPNM). Describe its major components and discuss how IPNM helps in sustaining soil fertility and enhancing crop productivity over the long term.

3) Describe various water conservation practices followed in agriculture. And explain how these measures contribute to sustainable farming and long-term resource management.

4) Define Participatory Irrigation Management (PIM). Discuss its objectives, guiding principles, and advantages in the efficient use and management of agricultural water resources.

5) What are pest epidemics in agriculture? Explain their effects on human health and the environment.

6) Describe the complete package of practices for wheat cultivation, covering climatic requirements, land preparation, methods of sowing, nutrient management, cropping systems, pest and disease control, harvesting, and threshing operations.

7) Discuss the importance of fruits, highlighting their nutritive value and health benefits.

8) Explain the importance of apiculture and beekeeping as an agricultural enterprise, highlighting its role in crop pollination, rural livelihoods, and income generation.

1) Explain the agricultural development in India before and after Independence, highlighting the major challenges and achievements.

Answer:

Agriculture has always been central to India's economy and rural life, but its nature changed greatly across the pre- and post-Independence periods. Before Independence, farming was mainly traditional, low-input and highly dependent on the monsoon. After Independence, agricultural policy gradually shifted toward land reform, irrigation, improved seed, fertilizers, research, price support and modern technology, leading to major gains in food production.

Agricultural development before Independence

In the pre-Independence period, agriculture supported most of the population, yet productivity remained low. Traditional tools, limited irrigation, poor access to institutional credit and weak scientific support restricted output. Land revenue arrangements such as Zamindari, Ryotwari and Mahalwari shaped rural agriculture. In many areas, cultivators faced high rents or revenue demands and insecure tenure, so they had little incentive or capacity to invest in land improvement. Commercialization also encouraged the cultivation of export-oriented crops in some regions, while food security remained fragile and famines exposed the weaknesses of the system.

At the same time, some institutional foundations for modern agriculture were created. A Department of Agriculture was established at the national level in 1871, agricultural education facilities developed in places such as Coimbatore and Pune, and the Famine Commission was appointed after the severe famine of 1876-77. The Imperial Agricultural Research Institute was established at Pusa in 1905, agricultural colleges expanded, and the Department of Food was created in 1942. Programmes such as the Grow More Food Campaign and measures relating to fertilizer production and food policy also appeared before Independence. These were useful beginnings, but they did not remove the basic problems of low productivity, poverty, insecure tenancy and dependence on rainfall.

Agricultural development after Independence

At Independence, India faced serious food shortages. The first major response was institutional reform. Land reforms aimed to abolish intermediaries, regulate tenancy, provide security to actual cultivators, consolidate fragmented holdings and impose ceilings on large holdings. Planned development also expanded major and minor irrigation, rural infrastructure, agricultural credit, cooperatives, research and extension services.