

Fundamental Agricultural Science

Agriculture · Answer Key · 10 Questions

1. Which process involves the conversion of atmospheric nitrogen into ammonia by bacteria found in the root nodules of legumes?

- A) Nitrification
- B) Denitrification
- C) Nitrogen fixation**
- D) Ammonification

2. What is the primary function of the 'stoma' (plural: stomata) found on the underside of plant leaves?

- A) Photosynthesis
- B) Gas exchange**
- C) Water storage
- D) Glucose production

3. Which crop, known for its high caloric density, triggered a massive demographic shift in 18th-century Europe due to its ability to yield more food per acre than grain?

- A) Maize
- B) Potato**
- C) Sugar beet
- D) Soybean

4. In soil science, which component is considered the 'humus' fraction that significantly increases the cation exchange capacity of the soil?

- A) Silt
- B) Clay
- C) Organic matter**
- D) Sand

5. The Green Revolution, led by Norman Borlaug in the mid-20th century, primarily focused on the development of high-yielding varieties of which two crops?

- A) Wheat and Rice**
- B) Maize and Sorghum
- C) Barley and Oats
- D) Cassava and Potato

6. What is the technical term for the practice of growing two or more crops in proximity to one another to maximize land use and soil health?

- A) Monoculture
- B) Poly-cropping
- C) Intercropping**
- D) Fallow rotation

7. Which macronutrient is primarily responsible for leaf growth and provides the green color in plants through chlorophyll production?

- A) Phosphorus
- B) Potassium
- C) Nitrogen**
- D) Calcium

8. What is the specific botanical classification of the fruit produced by the 'Oryza sativa' plant?

- A) Berry
- B) Drupe
- C) Caryopsis**
- D) Pome

9. Which ancient agricultural technique, still used today, involves cutting down and burning existing vegetation to create a field for temporary cultivation?

- A) Terracing
- B) Slash-and-burn**
- C) Drip irrigation
- D) Hydroponics

10. Which element is essential for plant respiration and is absorbed by roots as a byproduct of the Krebs cycle, but is primarily required as a gas in the leaves?

- A) Oxygen**
- B) Hydrogen
- C) Carbon
- D) Iron