

Advanced Agricultural Science

Agriculture · Answer Key · 8 Questions

1. Which specific botanical family does the crop 'Quinoa' (*Chenopodium quinoa*) belong to?

A) Amaranthaceae

B) Poaceae

C) Fabaceae

D) Solanaceae

2. In soil science, what is the term for the process where nutrient-rich water leaches away from the soil, often due to excessive rain or irrigation?

A) Salinization

B) Eluviation

C) Calcification

D) Podzolization

3. The 'Green Revolution', spearheaded by Norman Borlaug, focused primarily on the development of high-yielding varieties of which cereal crop?

A) Rice

B) Maize

C) Wheat

D) Barley

4. What is the primary function of the 'CIMMYT' organization, located in Mexico, in the context of global agriculture?

A) Organic certification

B) Seed bank and cereal improvement

C) Irrigation technology

D) Livestock breeding

5. Which form of nitrogen fixation occurs naturally in the root nodules of leguminous plants through a symbiotic relationship with *Rhizobia* bacteria?

A) Biological nitrogen fixation

B) Atmospheric nitrogen fixation

C) Industrial nitrogen fixation

D) Chemical nitrogen fixation

6. What defines the 'C4' photosynthetic pathway in certain plants like sugarcane and maize, distinguishing them from C3 plants?

- A) Higher cold tolerance
- B) Greater water use efficiency in high temperatures**
- C) Lower light requirement
- D) Reduced need for carbon dioxide

7. In horticulture, what does the term 'scarification' refer to when preparing seeds for germination?

- A) Adding chemical fertilizers
- B) Removing the outer seed coat to break dormancy**
- C) Cold stratification
- D) Drying the seeds in sunlight

8. Which historical agricultural method involves the controlled burning of vegetation to clear land for planting, often leading to temporary soil nutrient enrichment?

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