

Crop Science Reviewer

By Agriculture Review

1. Which physiological process in plants is responsible for the conversion of light energy into chemical energy?

- A. Respiration
- B. Photosynthesis
- C. Transpiration
- D. Glycolysis

2. What is the main purpose of backcross breeding in plant genetics?

- A. To introduce new traits
- B. To enhance hybrid vigor
- C. To recover the original genotype
- D. To increase genetic diversity

3. In seed technology, what does the term "seed priming" refer to?

- A. Enhancing seed storage
- B. Pre-sowing treatment to improve germination
- C. Genetic modification of seeds
- D. Developing disease resistance

4. Which crop production system focuses on minimal soil disturbance and maintaining soil cover?

- A. Conventional tillage
- B. No-till farming
- C. Hydroponics
- D. Monoculture

5. What role does nitrogen play in plant nutrition?

- A. Photosynthesis pigment formation
- B. Energy storage
- C. Protein synthesis
- D. Root growth regulation

6. Which method is used to control pests by introducing natural predators?

- A. Chemical control
- B. Biological control
- C. Mechanical control
- D. Cultural control

7. In post-harvest technology, what is the primary purpose of controlled atmosphere storage?

- A. Enhance ripening
- B. Extend shelf life
- C. Reduce moisture content
- D. Increase flavor

8. Which practice is a key component of sustainable agriculture?

- A. Continuous monocropping
- B. Crop rotation
- C. Heavy pesticide use
- D. Intensive tillage

9. Which is a common consequence of poor weed management in crops?

- A. Increased yield
- B. Enhanced soil fertility
- C. Reduced crop quality
- D. Improved water retention

10. In agroforestry, what is the primary benefit of integrating trees into agricultural landscapes?

- A. Increased pesticide use
- B. Enhanced biodiversity
- C. Reduced soil erosion
- D. Improved crop variety

11. Which tree species in agroforestry systems is known for nitrogen fixation and improving soil fertility?

- A. Acacia
- B. Eucalyptus
- C. Pine
- D. Bamboo

12. How does increasing atmospheric CO₂ directly impact photosynthesis in C₃ plants?

- A. Decreases photosynthetic rate
- B. Increases photosynthetic efficiency
- C. Has no effect
- D. Alters stomatal density

13. Which biotechnology technique involves editing plant genomes at specific locations?

- A. CRISPR-Cas9
- B. RNA interference
- C. Gene silencing
- D. Tissue culture

14. What is the role of agroforestry in carbon sequestration?

- A. Reduces soil carbon content
- B. Increases atmospheric CO₂
- C. Stores carbon in biomass and soil
- D. Releases carbon from roots

15. Which factor is most critical for the success of gene transfer in biotechnology?

- A. Plant species compatibility
- B. Vector selection
- C. Environmental conditions
- D. Soil pH

16. Which climate change adaptation strategy is most effective for rice cultivation in flood-prone areas?

- A. Developing drought-resistant varieties
- B. Implementing submergence-tolerant varieties
- C. Increasing fertilizer use
- D. Altering planting density

17. How does agroforestry contribute to biodiversity conservation?

- A. By reducing habitat complexity
- B. By providing diverse habitats
- C. By promoting monoculture
- D. By increasing pesticide use

18. Which genetic engineering technique is used to create herbicide-resistant crops?

- A. Marker-assisted selection
- B. Transgenic technology
- C. Tissue culture
- D. Hybridization

19. Which practice in agroforestry helps in soil conservation on sloped lands?

- A. Strip cropping
- B. Alley cropping
- C. Windbreaks
- D. Contour plowing

20. What is the primary advantage of using marker-assisted selection in plant breeding?

- A. Faster development of new varieties
- B. Lower cost compared to traditional methods
- C. Simplified field trials
- D. Reduced genetic diversity

21. Which hormone regulates stomatal closure during drought stress in plants?

- A. Auxin
- B. Gibberellin
- C. Cytokinin
- D. Absciscic acid

22. Which genetic principle is applied in the development of hybrid varieties?

- A. Homozygosity
- B. Heterosis
- C. Linkage
- D. Pleiotropy

23. In seed technology, what is the purpose of seed scarification?

- A. To prevent fungal infections
- B. To break seed dormancy
- C. To improve seed color
- D. To enhance seed oil content

24. Which crop production system is characterized by alternating crops in the same field to manage soil fertility?

- A. Intercropping
- B. Crop rotation
- C. Relay cropping
- D. Monocropping

25. How does mycorrhizal association benefit plant nutrition?

- A. Fixes atmospheric nitrogen
- B. Enhances phosphorus uptake
- C. Increases leaf area
- D. Promotes water loss

26. Which pest management strategy involves monitoring pest populations to determine the need for control measures?

- A. Biological control
- B. Chemical control
- C. Integrated pest management
- D. Cultural control

27. Which physiological process is enhanced by the hormone cytokinin in plants?

- A. Leaf senescence
- B. Cell division
- C. Root elongation
- D. Stomatal closure

28. Which breeding method is used to transfer a specific trait from one variety to another?

- A. Crossbreeding
- B. Backcrossing
- C. Mass selection
- D. Mutation breeding

29. What is the function of gibberellins in seed germination?

- A. Inhibits growth
- B. Promotes stem elongation
- C. Induces seed dormancy
- D. Stimulates root formation

30. Which soil nutrient is critical for chlorophyll synthesis in plants?

- A. Calcium
- B. Magnesium
- C. Potassium
- D. Sulfur

31. What is the primary advantage of using certified seeds in agriculture?

- A. Lower cost of production
- B. Higher seed yield
- C. Guaranteed genetic purity
- D. Faster germination

32. Which cropping system involves growing two or more crops simultaneously in the same field?

- A. Monoculture
- B. Intercropping
- C. Crop rotation
- D. Fallowing

33. Which factor most affects nutrient leaching in soil?

- A. Soil pH
- B. Soil texture
- C. Soil organic matter
- D. Soil moisture

34. Which pest management strategy uses pheromones to disrupt pest mating patterns?

- A. Biological control
- B. Chemical control
- C. Cultural control
- D. Mating disruption

35. Which plant hormone is involved in fruit ripening and leaf abscission?

- A. Auxin
- B. Ethylene
- C. Cytokinin
- D. Gibberellin

36. Which plant breeding method involves the selection of superior individuals based on phenotypic performance?

- A. Mass selection
- B. Line breeding
- C. Recurrent selection
- D. Hybridization

37. Which soil amendment is most effective in increasing soil pH?

- A. Lime
- B. Gypsum
- C. Sulfur
- D. Compost

38. Which is a key benefit of using leguminous cover crops in cropping systems?

- A. Reduces soil moisture
- B. Increases nitrogen fixation
- C. Decreases biodiversity
- D. Enhances pest infestation

39. Which practice is crucial in maintaining genetic purity in seed production?

- A. Isolation distance
- B. Seed treatment
- C. Fertilizer application
- D. Harvesting method

40. Which soil component is primarily responsible for cation exchange capacity?

- A. Sand
- B. Silt
- C. Clay
- D. Gravel

41. Which rice variety is specifically bred for resistance to bacterial blight?

- A. IR36
- B. Swarna
- C. Pusa Basmati
- D. Sambha Mahsuri

42. What is the primary advantage of dwarf wheat varieties in modern agriculture?

- A. Increased lodging
- B. Improved drought resistance
- C. Higher yield potential
- D. Enhanced taste

43. Which cattle breed is known for its high milk production in tropical regions?

- A. Jersey
- B. Holstein
- C. Sahiwal
- D. Guernsey

44. What is a significant trait of the Desi cotton variety?

- A. High yield
- B. Pest resistance
- C. Short staple length
- D. High water requirement

45. Which breed of chicken is preferred for egg production?

- A. Rhode Island Red
- B. Leghorn
- C. Plymouth Rock
- D. Sussex

46. Which variety of tomato is known for its long shelf life?

- A. Cherry tomato
- B. Roma
- C. San Marzano
- D. Beefsteak

47. Which wheat variety is commonly used for bread-making due to its high gluten content?

- A. Durum wheat
- B. Hard red wheat
- C. Soft white wheat
- D. Emmer wheat

48. Which aquaculture species is most suitable for polyculture with carp?

- A. Catfish
- B. Tilapia
- C. Trout
- D. Salmon

49. Which practice is critical in maintaining soil structure in sustainable agriculture?

- A. Frequent tillage
- B. Cover cropping
- C. Overgrazing
- D. Monoculture

50. Which biotechnological method is used for rapid multiplication of disease-free plants?

- A. Micropropagation
 - B. Hybridization
 - C. Marker-assisted selection
 - D. Genetic engineering
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Answer Key

1. B	2. C	3. B	4. B	5. C	6. B
7. B	8. B	9. C	10. C	11. A	12. B
13. A	14. C	15. B	16. B	17. B	18. B
19. D	20. A	21. D	22. B	23. B	24. B
25. B	26. C	27. B	28. B	29. B	30. B
31. C	32. B	33. B	34. D	35. B	36. A
37. A	38. B	39. A	40. C	41. A	42. C
43. C	44. C	45. B	46. B	47. B	48. B
		49. B	50. A		

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