

**Crops Exam**  
**2024 Ag Bowl Scholarship Invitational**  
**(50 Questions)**



1. What forms near the tip of an ear of corn?
  - a. Husk
  - b. Tassel
  - c. Black Layer
  - d. Cotyledon
  
2. What is the hair on a plant stem called?
  - a. Pubescence
  - b. Silks
  - c. Fibers
  - d. All of the above
  
3. Which of the following crops is not a pulse crop?
  - a. Sugar beets
  - b. Alfalfa
  - c. Wheat
  - d. Corn
  
4. Alfalfa has what kind of inflorescence?
  - a. Raceme
  - b. Tuber
  - c. Bulb
  - d. Cotyledon
  
5. What stage(s) represent the grain filling period in corn?
  - a. R3, R4, R5
  - b. Ve, V1
  - c. R1
  - d. Ve, R1
  
6. Auto toxicity in alfalfa production is the results of toxins from \_\_\_\_\_?
  - a. Diseases
  - b. The plant itself
  - c. Nutrient deficiencies
  - d. Insects

**AG BOWL**  
**SCHOLARSHIP**  
**INVITATIONAL**

7. Corn growth peaks at what temperature?
- 73 degrees F.
  - 90 degrees F.
  - 86 degrees F.
  - 82 degrees F.
8. \_\_\_\_\_ increases the risk of nitrate toxicity in corn silage?
- Extreme heat
  - Drought
  - Aphids
  - Flooding
9. What determines when a corn plant goes from being in “v” stages to “R” stages?
- The silks are visible outside the husks.
  - When the first ear has formed
  - When the tassel emerges
  - When the plant has more than four leaves
10. What is the opening in the upper or lower surface of the leaf?
- Rhizome
  - Stoma
  - Hilum
  - None of the above
11. What is the point of attachment of the seed to the legume pod?
- Stem
  - Stamen
  - Pistol
  - Hilum
12. The inner part of the collar that has a membrane, and protects the sheath from foreign substances is called what.
- Sheet
  - Crown
  - Starch
  - Vein

13. Portion of the plant that attaches the leaflet to the main stem
- Petiole
  - Veins
  - pistol
  - Silk
14. What happens to corn and alfalfa when the Ph of the soil gets too high?
- Plant growth stunts
  - Higher probability for pest infestations
  - Low water intake
  - A deficiency of micronutrients
15. Upright leaves on a corn plant can reduce barrenness by...
- 20%
  - 30%
  - 40%
  - 50%
16. Which of the following is a perennial?
- Soybeans
  - Sugar beets
  - Corn
  - Alfalfa
17. What is the most widely grown corn type?
- Flour
  - Flint
  - Dent
  - Pod
18. Which of the following corn types have little to no starch?
- Popcorn
  - Pod
  - Sweet
  - Flint

19. What is the leading use for corn?
- Human consumption
  - Livestock feed
  - Dog food
  - Natural Fertilizers
20. The \_\_\_\_\_ is the area of the United States where corn acreage and production are concentrated.
- Corn Belt
  - Great Plains
  - Buffalo Ridge
  - Corn Alley
21. A fuel made from corn and wheat that is used like gasoline and is a renewable resource.
- Biofuel
  - Diesel
  - Ethanol
  - Natural gas
22. What is the primary use for alfalfa?
- Cover crops
  - Cattle feed
  - Cattle bedding
  - Sheep feed
23. What soil pH would alfalfa grow the best in?
- 5.8
  - 3.8
  - 4.8
  - 6.8
24. What is the most reliable method to preventing nutrient deficiencies in alfalfa?
- Sampling and analysis of baled hay
  - Rotation with a nitrogen-fixing soybean crop
  - Recognition of visual deficiency symptoms on growing plants
  - A combination of soil and plant tissue analysis

25. Which nutrient does alfalfa need the most in annual fertilization programs?
- Sulfur
  - Nitrogen
  - Phosphorus
  - Potassium
26. Which is not true about phosphate and potash applications to alfalfa?
- Applications made before harvest on standing wet foliage can damage alfalfa.
  - Applications after first harvest and before new growth can help second and third cut yields.
  - All of these answers are true.
  - Applications in early September can enhance winter hardiness.
27. Which nutrient deficiency in alfalfa does application of dolomitic limestone alleviate?
- Magnesium
  - Boron
  - Iron
  - Zinc
28. What is the male part of the corn plant and is responsible for pollinating the silks?
- Ear
  - Tassel
  - Stalk
  - Kernel
29. A common companion crop to alfalfa is:
- Wheat
  - Sorghum
  - Oats
  - Clover
30. What percentage of the corn belt is planted with corn and soybeans?
- 100%
  - 95%
  - 80%
  - 90%

31. Alfalfa stem tissue is raised above the soil surface during germination by the elongation of the:
- Cotyledon
  - Hypocotyl
  - Roots
  - Cell walls
32. Low temps at night and short days may decrease forage yield, but increase:
- Crown and root storage
  - GDD's
  - Rhizomes
  - All of the above
33. What type of livestock benefit the most from alfalfa supplementation?
- Horses
  - Sheep
  - Cattle
  - Pigs
34. What is the term for the symbiotic relationship between alfalfa and nitrogen-fixing bacteria?
- Mycorrhizae
  - Rhizosphere
  - Nodule association
  - Legume nodulation
35. What is the primary use of alfalfa?
- Cover crops
  - Biofuel production
  - Livestock feed
  - Textile industry
36. What is the significance of the "Three Sisters" planting method involving corn?
- Crop rotation
  - Companion planting
  - Hydroponics
  - Intercropping

37. What is the primary use of corn husks in some culinary traditions?
- Presentation
  - Wrapping food
  - Flavor additive
  - None of the above
38. What is the purpose of applying fertilizer to corn fields?
- Larger yields
  - Nutrient enrichment
  - Water conservation
  - Preventative for soil erosion
39. What is the primary pollination method for corn?
- Birds
  - Bee's
  - Wind
  - Other insects
40. What vitamin is most abundant in corn?
- Vitamin K
  - Vitamin A
  - Vitamin D
  - Vitamin E
41. What is the process of drying and storing corn for future use?
- Silaging
  - Curing
  - Fermentation
  - Grinding
42. What is the name of the fungus that causes corn smut?
- Botrytis
  - White mold
  - Ustilago
  - Fusarium

43. What is the term for cutting and drying alfalfa for forage
- Mowing
  - Haymaking
  - Harvesting
  - Baling
44. What is the most common type of pollination method for alfalfa?
- Wind
  - Insects
  - Birds
  - Self-pollination
45. What is the average lifespan for an alfalfa plant?
- 10-12 years
  - 3-5 years
  - 1-2 years
  - 6-8 years
46. Which climate is most suitable for alfalfa production?
- Tropical
  - Mediterranean
  - Temperate
  - All climates
47. Which of the following diseases common to alfalfa?
- Powdery mildew
  - Downy mildew
  - Verticillium wilt
  - Potassium deficiency
48. What is the primary factor affecting the quality of alfalfa hay?
- Soil moisture
  - Pest infestation
  - Harvest timing
  - High temperatures



49. What is the primary use of alfalfa sprouts in culinary dishes?
- a. Salads
  - b. Garnish
  - c. Flavor enhancers
  - d. Soup base
50. What is the primary method of alfalfa propagation?
- a. Seeds
  - b. Tubers
  - c. Bulbs
  - d. Cuttings