

**CALIFORNIA STATE UNIVERSITY, FRESNO**  
Department of Plant Science, Jordan College of Agriculture Science & Technology  
and  
The FFA Field Day Committee  
**63<sup>rd</sup> ANNUAL COTTON JUDGING CONTEST**  
**November 7, 2020**

**WRITTEN EXAMINATION**

All answers must be indicated on the Google form. All questions pertain to cotton grown in the **San Joaquin Valley (SJV) unless otherwise stated.**

**I.        TRUE-FALSE:**        Indicate whether the statement is true or false by **blocking out the correct answer. Fill in 'A' if the statement is true or 'B' for false.**

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1. Trifluralin, Pendimethalin are post emergent cotton herbicides.
2. Cotton emergence is completed within 5-15 days after planting.
3. The recommended moisture level for ginning cotton is 10 %.
4. The earliest date for planting cotton in SJV is March 15.
5. A germination percentage total of cool and warm germ above 150 is a good seed quality trait.
6. Cotton growth peaks at a tissue temperature of 86<sup>o</sup> F.
7. A GDD forecast of 20 units or higher in the five days after cotton planting is ideal for stand establishment.
8. In soils favoring tall and vigorous plants, a population of 60,000 plants per acre is ideal.
9. Ammonium Sulfate has the highest analysis among Nitrogen containing fertilizers.
10. Large, oval to irregular tan to reddish brown lesions on cotton hypocotyl are caused by Pythium.
11. A single application of Pix is better than multiple low rate applications on cotton grown on 30 inch rows.
12. Cotton is an indeterminate plant.
13. If grown under warm, frost free conditions, cotton plants will stop growing after harvest.
14. Cotton roots and leaves have a functional life of 70-80 days.
15. Nitrogen deficiency symptoms first appear on older leaves of cotton.
16. Soil temperature below 55<sup>o</sup> F will cause chilling injury to cotton seedlings.
17. A soil temperature of 65<sup>o</sup> F is minimum requirement for quick germination and emergence.
18. Cotton roots can grow to a depth of 6 feet or more.
19. Using systemic insecticides as seed treatments is best for overall integrated pest management.

20. Pythium will be aggravated in the absence of seed applied fungicides when seeds are treated with insecticides.
21. Average monthly water use for cotton crop is similar in months of July and August.
22. Paraquat, endothall, and cacodylic acid are used as defoliant in cotton harvest management.
23. HVI stands for Harvest Volume Index.
24. Cotton needs Nitrogen for protein and chlorophyll synthesis.
25. According to USDA, the Pink bollworm has been eradicated from the US cotton belt.
26. The plowdown date for south of Fresno is Dec 20<sup>th</sup>.
27. Alfalfa strips are recommended to be planted in cotton fields to manage Lygus populations.
28. Soil salinity level of 7.7 ds/m or below has no negative impact on cotton yield.
29. Organic manures provide larger quantity of Nitrogen compared to chemical fertilizer.
30. In sandy soils, it is recommended to place a band of Nitrogen fertilizer containing Ammonia within 5 inches from the seed row.

**II. MULTIPLE CHOICE: Block out the letter answer for each question.**

31. Which insect causes early season leaf damage and curling?
 

a. thrips	b. bollworms	c. lygus
d. aphids	e. grasshoppers	
32. 900 juveniles of nematodes per kg of soil can reduce cotton yield by \_\_\_\_ %.
 

a. 10	b. 20	c. 30
d. 40	e. 50	
33. Stunted plants, small darker green leaves with a purple coloration are due to deficiency of:
 

a. Nitrogen	b. Phosphorus	c. Potassium
d. Zinc	e. Sulfur	
34. Little leaf disease is caused due to:
 

a. Too much nitrogen	b. Heat stress	c. Pythium
d. Zinc deficiency	e. none of these	
35. Which transgenic trait has resulted in greatest reduction of pesticide use on cotton worldwide?
 

a. Sulfonylurea (SU)	b. Bromoxynil (BXN)	c. Insect resistance (Bt)
d. Glyphosate (Roundup)	e. None of the above	
36. To get a seeding density of 35000 plants per acre, how many seeds need to be planted per foot of row when cotton is grown on 30" rows?
 

a. 1	b. 1.5	c. 2
d. 2.5	e. 3	
37. The first post plant irrigation of cotton should be scheduled at a leaf water potential of \_\_\_\_ bars measured at midday from uncovered leaves:
 

a. 10	b. 15	c. -40
d. 30	e. -15	

38. Which of the listed conditions promotes effective defoliation?  
 a. low petiole nitrogen levels    b. uniform mature plants    c. day temperatures > 80 F  
 d. low soil moisture    e. all of the above
39. Cotton needs favorable growing conditions for \_\_\_\_\_ days after planting for quick emergence:  
 a. 3    b. 5    c. 7  
 d. 9    e. 2
40. A symptom of heat stress in well watered cotton during July or August is?  
 a. small bolls    b. pollen sterility    c. excessive vegetative growth  
 d. boll shed    e. all of the above
41. Optimum moisture level for storing cotton long-term in modules is .  
 a. < 10 %    b. 13%    c. 15%  
 d. 17%    e. 20 %
42. At square initiation, cotton taproot grows about \_\_\_\_\_ inches per day.  
 a. 1    b. 2    c. 3  
 d. 4    e. 5
43. Cotton needs \_\_\_\_\_ GDDs between first square and open white bloom:  
 a. 400    b. 450    c. 500  
 d. 550    e. 600
44. The optimum planting depth for cotton is about \_\_\_\_\_ inches:  
 a.  $\frac{1}{2}$  to  $\frac{3}{4}$     b. 1 to 1  $\frac{1}{2}$     c.  $\frac{3}{4}$  to 1  $\frac{1}{2}$   
 d. 1 to 3    e. 2 to 3
45. The scientific name for Pima cotton types is:  
 a. *Gossypium hirsutum*    b. *Gossypium barbadense*    c. *Gossypium herbaceum*  
 d. *Gossypium arboreum*    e. None of these
46. The cotton grown in SJV supplies about \_\_\_\_\_ % of world cotton.  
 a. 15    b. 20    c. 25  
 d. 30    e. None of these
47. Which insect causes the most damage to cotton yields?  
 a. Thrips    b. bollworms    c. Lygus  
 d. aphids    e. grasshoppers
48. Which insects are associated with “Sticky” cotton?  
 a. Aphids    b. bollworms    c. Whitefly  
 d. both a and c    e. None of these
49. How many acres are in a section of land?  
 a. 280    b. 420    c. 500  
 d. 640    e. 460
50. The optimum date for completing a preirrigation on a field with sandy loam soil is:  
 a. Feb. 15    b. Feb. 25    c. March 1  
 d. March 15    e. March 30

**Important Note:** Calcot is California’s oldest grower owned cotton marketing cooperative. It offers a \$10,000 scholarship (Calcot-Seitz Scholarship) to high school seniors or college students attending a 4-year college majoring in Agriculture with emphasis on production or Ag Business. Check it out with your teacher.