

# CALIFORNIA STATE UNIVERSITY, FRESNO

Department of Plant Science

And

FFA Field Day Committee

## 56<sup>th</sup> ANNUAL COTTON JUDGING CONTEST (A)

November 9, 2013

### WRITTEN EXAMINATION

All answers must be indicated on the accompanying **SCANTRON ANSWER SHEET** by **completely blocking out the one correct answer using a No. 2 lead pencil**. 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.**
1. In 2013, more Acala cotton was planted than Pima cotton in the San Joaquin Valley.
  2. The 2012-13 lint prices for Acala and Pima cottons were the highest ever recorded in California.
  3. In 1925, California state legislature established a one-variety district composed of all the counties in the San Joaquin Valley.
  4. In 2001, California legislation enacted a law to permit the commercial production of Pima cotton.
  5. March 10<sup>th</sup> is the first legal planting date for Pima but not Acala cottons in the San Joaquin Valley.
  6. USDA official state-by-state look at cotton production estimated 2013 production to be 25 percent less than 2012.
  7. Physiological cut-out is determined by monitoring change in "Nodes above white flower".
  8. *Rhizoctonia* and *Thielaviopsis* are serious late season (August/September) disease problems in California cotton.
  9. Lygus is a mid-season pest causing serious square damage and loss to both Pima and Acala cottons.
  10. The transgenic trait most important for California cotton growers is insect resistance.
  11. A management technique used for scheduling application of harvest aids is "nodes above cracked boll".
  12. A general guideline for nitrogen requirement for cotton is approximately 150 – 160 pounds of N per acre per bale of lint.
  13. The progression of cotton flower petals changing colors from "white or yellow" to "red or purple" normally takes 3 days.
  14. Sticky cotton can be caused by aphids and whiteflies.
  15. Monthly water use (cotton ET) for irrigated cotton is greater in May and June than in July and August.
  16. Of the cotton varieties (Acala or Pima) grown in the San Joaquin Valley none have any level of resistance to Fusarium (IV).
  17. The most economical way to control vegetative growth is with an early boll load.
  18. Cotton lint yields and fiber quality can be affected by potassium deficiency.

19. Roller gins are capable of ginning only Pima cottons.
20. Planting depth of more than 2 inches enhances exposure to seedling disease pathogens and weakens seedlings as they struggle to reach the soil surface.
21. The base temperature for calculating cotton degree days (Heat Units) is 60 degrees F.
22. A mote is an undeveloped ovule that remains as a contaminant in a cotton boll.
23. Cotton yield potential typically increase substantially with planting dates after May 15th.
24. Skillful management, using high yielding varieties, growth regulators, and good pest control with optimal growing weather can reduce the effects of late planting on final yield.
25. Botanically the cotton plant is a perennial shrub that is replanted each year.
26. The mandatory 90-day host free period is used to prevent Boll Weevil establishment.
27. The scientific name for Pima cotton types is *Gossypium barbadense*.
28. The height to node ratio is a plant vigor index used to determine the need to apply harvest aids.
29. Ginning at very low fiber moisture will cause more fiber breakage, reducing HVI uniformity and length values.
30. Fiber from bale grades of 31-3-36 are priced higher than bale grades of 21-2-38.
31. Monsanto's Roundup Flex (RF) gene is available in Acala and Pima varieties.

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

32. Cotton fiber strength is developed between \_\_\_\_\_ days after flowering.
 

a. 10 - 12	c. 20 - 42	e. 60 - 70
b. 18 - 22	d. 45 - 60	
33. The first flowering branch of Acala cottons typically occurs on which main stem node?
 

a. 3 - 4 <sup>th</sup> node	c. 8 - 9 <sup>th</sup> node	e. 10 - 11 <sup>th</sup> node
b. 6 - 7 <sup>th</sup> node	d. 9 - 10 <sup>th</sup> node	
34. Pima cotton is not in "cut-out" until NAWF drops to:
 

a. 3.5 or less	c. 7 - 8	e. 10 - 12
b. 4 - 6	d. 9 - 10	
35. Preplant incorporated herbicide that controls annual grass weeds in cotton is:
 

a. Asana	c. Prowl	e. Post
b. Roundup	d. 2, 4-D	
36. Which transgenic cotton trait has eliminated the most pesticide applications on cotton grown around the world?
 

a. Insect resistance (Bt)	c. Bromoxynil (BXN)	e. None of the above
b. Glyphosate (Roundup)	d. Sulfonylurea (SU)	
37. Cotton planted in 30" rows with 3 plants per foot gives approximately how many plants per acre?
 

a. 27000	c. 52300	e. 80000
b. 38500	d. 69500	
38. When cotton prices moves up 700 points, the price has increased by;
 

a. 1 cent	c. 7 dollars	e. none of the above.
b. 10 cents	d. 7 cents	

39. The average number of Heat Units from planting to emergence:
- a. 50 - 60
  - b. 75 - 100
  - c. 125 - 150
  - d. 150 - 200
  - e. 200 - 250
40. Which of the listed conditions promotes effective defoliation?
- a. low petiole nitrogen levels
  - b. low soil moisture
  - c. uniform mature plants
  - d. day temperatures > 80 F
  - e. all of the above
41. A staple length of 46 is equivalent to an HVI fiber length in inches of:
- a. < 1 inch
  - b. 1.05 - 1.07 inch
  - c. 1.14 - 1.17 inch
  - d. 1.24 - 1.26 inch
  - e. 1.40 - 1.45 inch
42. A symptom of heat stress in well watered cotton during July or August is?
- a. small bolls
  - b. boll shed
  - c. pollen sterility
  - d. excessive vegetative growth
  - e. all of the above
43. Optimum moisture level for storing cotton long-term in modules is \_\_\_\_.
- a. 17 %
  - b. 15%
  - c. 13%
  - d. < 10 %
  - e. none of the above
44. \_\_\_\_\_ is a new and serious vascular disease threatening SJV cotton.
- a. Fusarium (IV)
  - b. Rhizoctonia
  - c. Verticillium
  - d. Thielaviopsis
  - e. Phytophthora
45. Chemical typically applied to help control plant height.
- a. Pix
  - b. Paraquat
  - c. Ginstar
  - d. Prep
  - e. Goal
46. Which of the following are defoliant harvest-aids?
- a. Ginstar and Def
  - b. Lorsban and Sevin
  - c. Temik and Telone
  - d. Prowl and Goal
  - e. all of the above
47. Yarn strength can be affected by \_\_\_\_\_.
- a. fiber length
  - b. fiber strength
  - c. length uniformity
  - d. none of the above
  - e. all of the above
48. For average machine-picked cotton, the first stage of lint cleaning will remove \_\_\_\_\_ lbs of lint and foreign matter from each bale of cotton ginned.
- a. 2 -8
  - b. 8 -12
  - c. 12 -20
  - d. 30-60
  - e. 90 -100
49. Ideal planting conditions based on the 5-day planting forecast for cotton is expected under the following forecast of \_\_\_\_\_ heat units:
- a. < 10
  - b. 10 - 15
  - c. 15 - 20
  - d. >20
  - e. none of the above
50. The majority of California's cotton goes to mills located in:
- a. Eastern United States
  - b. Pacific Rim Countries
  - c. Central Europe
  - d. Italy
  - e. Used in local mills