Peanut Production Exam Fall 2020

1. What was the approximate yield per acre in North Carolina in 1909?
   A. Greater than 5000 pounds/acre
   B. Between 3000 and 4000 pounds/acre
   C. Between 1000 and 2000 pounds/acre
   D. Less than 1000 pounds/acre
   E. None of the above
   F. All of the above

2. What is the approximate yield per acre in North Carolina in 1964?
   A. Greater than 5000 pounds/acre
   B. Between 3000 and 4000 pounds/acre
   C. Between 1500 and 2500 pounds/acre
   D. Less than 1000 pounds/acre
   E. None of the above
   F. All of the above

3. What is the approximate yield per acre in North Carolina in 2014?
   A. Greater than 5000 pounds/acre
   B. Between 3000 and 4000 pounds/acre
   C. Between 1000 and 2000 pounds/acre
   D. Less than 1000 pounds/acre
   E. None of the above
   F. All of the above

4. What country has the greatest land area planted to peanuts?
   A. China
   B. Argentina
   C. United States
   D. India
   E. Nigeria

5. What country has the highest yield per unit area?
   A. China
   B. Argentina
   C. United States
   D. India
   E. Nigeria

6. What are the four major market types of peanuts?
   A. Runner, Spanish, Bailey, Virginia
   B. Runner, Spanish, Sullivan, Valencia
   C. Runner, Spanish, Virginia, Valencia
   D. None of the above

7. Which of the following botanical classifications include both runner and Virginia market types?
   A. Spanish
   B. Valencia
   C. Virginia
   D. None of the above

8. Where is the center of origin for peanuts?
   A. China
   B. Australia
   C. The Great Rift Valley in Africa
   D. South America

9. Why is the center of origin important?
   A. It is not
   B. The highest yielding varieties can be purchased from there
   C. Peanut breeders can use plant material from this area to improve disease resistance in cultivated peanuts
   D. All four market types are grown in this area

10. Which of the following are one of the 6 keys to current success relative to peanut production in North Carolina?
    A. Short rotations
    B. Peanuts are grown on finer-textured soils with high water holding capacity
    C. Improved varieties
    D. High priced plant production products
    E. None of the above
    F. All of the above

11. Which state in the US plants the most acres of peanuts?
    A. Florida
    B. Alabama
    C. North Carolina
    D. Texas
    E. None of the above

12. What is the most popular market type grown in North Carolina?
    A. Valencia
    B. Runner
    C. Spanish
    D. Virginia
    E. None of the above

13. Which of the following grades for milled peanuts for a Virginia market types competes directly with runner market types?
    A. Jumbo Virginia in shell
    B. Fancy Virginia in shell
    C. No. 2 Virginia shelled kernels
    D. Extra large Virginia kernels
    E. None of the above
    F. All of the above

14. What was the price per ton for a Virginia market type in 2017?
    A. 425
    B. 475
    C. 525
    D. 575

15. What was the gross return per acre on peanuts in the budget for Virginia Conventional Till Peanuts, 2020
    A. 800
    B. 860
    C. 920
    D. 1000

16. What was the total variable cost per acre in the same budget?
    A. 600.25
    B. 706.09
    C. 172.76
    D. 878.85
    E. 41.15

17. What was the net return to land, risk, and management from this budget?
    A. 920.00
    B. 213.91
    C. 172.76
    D. 41.15

18. Which of the following is not included in this budget?
    A. Sprays for Sclerotinia blight
    B. Proline for CBR
    C. Fumigation
    D. Government payments
    E. Land rent
    F. All of the above
    G. None of the above

19. If my realistic yield potential is 4500 pounds per acre, the peanut price is $470 per ton, and my total production cost is $950 per acre, what is my net return in $/acre?
    A. 375
    B. 208
    C. 108
    D. 58

20. Which of the following are important considerations when people develop rotation sequences?
    A. Capital investment
    B. Third party access
    C. Only so much “good” land
    D. Economics effects of the cropping system
    E. Biological effects of the cropping system
    F. None of the above
    G. All of the above

21. In the data set example showing the importance of crop rotation on peanut yield, which of the following statements are not accurate?
    A. The lowest yield was observed for continuous peanuts
    B. Having fewer years of peanuts in the rotation increased peanut yield
    C. Soybeans did not have a negative impact on peanut yield
    D. The yield difference observed when peanut was grown in 2 of 10 years versus when peanuts were grown during 3 of the 10 years was 890 pounds per acre

22. Which of the following best describes how favorable a rotation crops are relative to maintaining or increasing peanut yields relative to disease and nematodes?
    A. Corn is more favorable than Soybean
    B. Cotton is less favorable than Soybean
    C. Tobacco is more favorable than Milo
    D. Wheat is less favorable than Soybean

23. What was the percentage of peanuts planted in reduced tillage systems in 2019?
    A. 12
    B. 23
    C. 31
    D. 41

24. Which of the following carries the greatest risk for yields in reduced tillage being lower than yields in conventional tillage?
    A. No till in flat ground on a Goldsboro soil
    B. No till in flat ground on a Norfolk soil
    C. Strip till into flat ground on a Craven soil
    D. Strip till into stale seedbeds on a Goldsboro soil

25. What is the major reason why reduced tillage systems are not adopted at higher levels in North Carolina?
    A. Peanut soils are typically not well drained
    B. Equipment for establishing adequate peanut stands is not available
    C. Digging losses can be greater in reduced tillage systems compared with conventional tillage
    D. Fungicides are not available to control soil-borne pathogens

26. The recommended planting date for peanut in North Carolina is:
    A. Sometime in the month of May
    B. Sometime in the month of June
    C. Prior to May 1
    D. Between May 25 and June 25

27. The optimum plant population in number of plants per foot of row is:
    A. 3
    B. 5
    C. 7
    D. 9
    E. 12

28. The primary row spacing in inches for peanuts in North Carolina is:
    A. 15
    B. 30
    C. 36
    D. 48

29. Variety selection is based on which of the following criteria:
    A. Yield
    B. Quality
    C. Market demand
    D. Disease reaction
    E. None of the above
    F. All of the above

30. Approximately how many years does it take from the time a cross is made from two parents in a breeding program until the variety is readily available for farmers?
    A. 5
    B. 12
    C. 20
    D. 25

31. What is the approximate number of seed per pound for the variety Emery?
    A. 600
    B. 535
    C. 575
    D. 450
    E. None of the above

32. How many more pounds of the variety Sullivan have to be planted compared with the variety Florida 07 to plant 5 seeds per foot?
    A. 4
    B. 8
    C. 12
    D. 16
    E. 20

33. How many more seed per acre are needed to plant 6 seed per foot in 30 inch rows compared with the same in-row seeding rate for 36-inch rows?
    A. 11,616
    B. 14,970
    C. 17,418
    D. 26,464

34. Which of the following growth stages has the highest drought susceptibility?
    A. Germination and Vegetative growth
    B. Germination and Pod development
    C. Germination and Maturation
    D. Pod development and Maturation
    E. Vegetative growth and Pod development

35. What is the recommended depth of planting peanut seed?
    A. 0.5 to 1 inch
    B. 1 to 2 inches
    C. 2 to 3 inches
    D. 3 to 4 inches
    E. Greater than 5 inches

36. What is the optimum soil pH for peanuts?
    A. >6.2
    B. 5.8 to 6.2
    C. 5.3 to 5.7
    D. <5.3

37. What percentage of soil samples collected in North Carolina during 2015-2018 fell into the optimum pH range for peanuts?
    A. 5.6
    B. 19.3
    C. 53.7
    D. 21.4

38. Which of the following application techniques results in the least uniform response to inoculation by peanut in a field that has never had peanuts before that year?
    A. In-furrow granular
    B. In-furrow spray
    C. Peat-based inoculant added to the seed
    D. All 3 application techniques perform the similarly in new ground fields

39. What was the difference in economic return ($ per acre) to inoculation in a new ground field compared with inoculation in a field that had peanuts planted in recent years?
    A. 222
    B. 55
    C. 277
    D. 9
    E. None of the above
40. If the cost of inoculant was $8/acre, what was the return on investment in a new ground field?
    A. 1:1
    B. 40:1
    C. 5:1
    D. 100:1

41. Which of the following are causes of inoculant failure?
    A. Old or mistreated product
    B. Non-uniform application
    C. Poor water quality
    D. Caving in of the planter slit before application but after seed drop
    E. Shallow planting
    F. None of the above
    G. All of the above

42. How much greater is the net return in $ per acre in a new ground field when inoculant is applied compared with ammonium sulfate applied as a rescue treatment?
    A. 333
    B. 251
    C. 82
    D. 62

43. Which two micronutrients are often applied to peanuts after the peanuts have emerged?
    A. Nitrogen and phosphorus
    B. Calcium and potassium
    C. Zinc and Boron
    D. Boron and Manganese
    E. Iron and Molybdenum
    F. None of the above

44. Which of the following nutrients can affect calcium absorption by developing pegs and pods?
    A. Sulfur
    B. Boron
    C. Potassium
    D. Iron
    E. Manganese

45. Which of the following factors affects peanut response to gypsum?
    A. Seed size
    B. Rainfall or irrigation
    C. Soil texture and organic matter
    D. Soil pH
    E. Nutrient balance
    F. All of the above
    G. None of the above

46. What is the rate of USG 500 that should be applied to Virginia market types at flowering?
    A. 600
    B. 1,300
    C. 1,800
    D. 2,000

47. How many gallons per acre of a 12% calcium solution would be needed to apply the same amount of calcium provided by USG 500?
    A. 13
    B. 18
    C. 23
    D. 28

48. At what zinc index level should a person be concerned about zinc toxicity to peanuts?
    A. 100
    B. 250
    C. 400
    D. 550

49. What is the clearest diagnostic for zinc toxicity in peanuts?
    A. Yellow leaves
    B. Short plants
    C. Chlorotic growing points
    D. Split stems

50. How many gallons per acre of an 8% manganese sulfate solution is needed to provide the same amount of elemental manganese as 3.7 pounds per acre of Techmangum?
    A. 2.2
    B. 1.6
    C. 1.2
    D. 0.8

51. What best describes the growth habit of peanuts?
    A. Determinate
    B. Indeterminate
    C. Both determinate and indeterminate
    D. Neither determinate or indeterminate

52. Approximately how many days does it take from planting to R1 or half of the plants in a field with a bloom?
    A. 7
    B. 45
    C. 70
    D. 90
    E. 130

53. Approximately how many days transpire between R1 and R3 (beginning pod)?
    A. 10
    B. 25
    C. 35
    D. None of the above

54. Which of the following sections of a pod are used to determine pod mature and predict when the optimum digging date will occur?
    A. Exocarp
    B. Endocarp
    C. Mesocarp
    D. Boundary space
    E. None of the above
    F. All of the above

55. A pod expressing a rust or orange color has a mass that us what percent of a pod expressing a black color?
    A. 50
    B. 75
    C. 95
    D. 100

56. When peanuts are dug 21 days prior to optimum maturity, what is the percent of maximum yield?
    A. 60
    B. 75
    C. 85
    D. 95

57. When peanuts are dug 7 days prior to optimum maturity, what is the percent of maximum yield?
    A. 60
    B. 80
    C. 94
    D. 99

58. How many days after planting will it generally take peanuts planted June 1 to reach 65% brown/black mesocarp development?
    A. 140
    B. 145
    C. 150
    D. 160

59. If the daily high is 90 F and the daily low is 62, how many heat units were accumulated for peanuts on that day?
    A. 10
    B. 15
    C. 20
    D. 25
    E. None of the above

60. How many acres per day can a farmer dig if the farmer has a six row digger, 10 hours of good digging time and drive 3 mph?
    A. 30
    B. 40
    C. 50
    D. 60

61. Using the following image, when in how many days will this field be at optimum maturity?
    A. 20
    B. 10
    C. 5
    D. Optimum maturity now

62. What is the order of digging for these three fields, from first to last?
    A. 1 then 2 then 3
    B. 2 then 1 then 3
    C. 3 then 1 then 2
    D. 2 then 3 then 1
    E. Does not matter

Field 1.

Field 2.

Field 3.

63. What is the minimum number of hours of good drying conditions that need to transpire between digging and a frost to prevent freeze damage for peanuts?
    A. 24
    B. 48
    C. 72
    D. 96

64. At what percent of peanut leaves expressing visible lesions from leaf spot is the threshold for not applying fungicide?
    A. 10
    B. 20
    C. 30
    D. 40
    E. None of the above

65. At what percent of defoliation should peanuts be dug no matter what the pod maturity happens to be?
    A. 10
    B. 20
    C. 30
    D. 40
    E. None of the above

66. When should prohexadione calcium (tradenames Apogee or Kudos) be applied to manage vine growth?
    A. When vines from adjacent peanuts rows are 6 inches apart
    B. When vines from adjacent peanuts rows have lapped completely for at least 1 week
    C. When 50% of vines from adjacent rows are touching
    D. Thirty days prior to expected digging

67. When the peanut price is $0.25/pound, how many acres does it take to pay for a guidance system at a cost of $23,000?
    A. 254
    B. 203
    C. 169
    D. 145
    E. 127

68. What are the components of the disease triangle?
    A. Favorable environment
    B. Susceptible host
    C. Pathogen present
    D. Sufficient time
    E. All of the above
    F. None of the above
    G. Most of the above

69. When does most of the infection from CBR occur?
    A. Early May
    B. Early June
    C. Early July
    D. Early August
    E. Early September

70. When is southern stem rot a major issue in peanuts?
    A. May-June
    B. June-July
    C. July-August
    D. August-September
    E. September-October

71. When is early leaf spot a major issue in peanuts?
    A. May-July
    B. June-August
    C. June-September
    D. August-October

72. When does the most critical infection from tomato spotted wilt occur relative to peanut health?
    A. May-June
    B. June-July
    C. July-August
    D. August-September
    E. September-October

73. The major components of disease management in peanuts include:'
    A. Fungicides and fumigants
    B. Disease scouting and weather forecasting
    C. Sanitation
    D. Cultivar resistance
    E. Crop rotation
    F. None of the above
    G. All of the above

74. For every year soybeans are included in the rotation sequence prior to peanuts, what percent yield loss for peanuts should be expected?
    A. 2
    B. 4
    C. 6
    D. 8
    E. 10

75. What percent of stand reduction can be expected if peanut seeds are planted without a fungicide seed treatment?
    A. <15
    B. 15-25
    C. 25 to 75
    D. 50 to 90
    E. >90

76. What are the benefits of using weather-based advisories to target fungicide sprays?
    A. The fungicide bill at the end of the season is always lower
    B. The environment benefits because fewer sprays are made in all years
    C. Less disease control through fewer sprays makes peanuts tougher and they always yield higher
    D. In some cases if temperature and humidity do not reach threshold levels for pathogen epidemics, farmers do not need to make an application
    E. Spider mites never become a problem

77. Weather-based advisories use which of the following for farmers to decide when to apply a fungicide?
    A. Heat unit accumulation
    B. Rainfall
    C. Last effective spray date
    D. Daily minimum temperature

78. What is a major concern going forward relative to leaf spot management in peanuts?
    A. Erosion of resistance in peanut varieties to the pathogen due to selection pressure
    B. A shift in pathogens due to selection pressure from varieties
    C. A loss in fungicide efficacy due to selection pressure
    D. Fewer new fungicides with different modes of action being developed for use in peanuts
    E. Farmers not implementing effective resistance management practices, especially late in the season
    F. All of the above
    G. None of the above

79. Which of the following are important nematodes found in peanuts in North Carolina?
    A. Sting and Lesion
    B. Peanut root-knot and Ring
    C. Ring and Sting
    D. Peanut root knot and Lesion
    E. None of the above
    F. All of the above

80. Which of the following is not true about nematodes?
    A. They are microscopic worms
    B. They affect roots, tubers and pods
    C. Require a living host to survive
    D. Crop rotation is an ineffective management practice

81. Peanuts are not negatively affected by which of the following nematodes?
    A. Lesion
    B. Peanut root knot
    C. Ring
    D. Guava root knot
    E. All of these nematodes negatively affect peanuts
    F. None of these nematodes negatively affect peanuts

82. Season-long weed control in peanuts is needed because?
    A. Weeds can affect fungicide deposition in the peanut canopy and subsequent disease control
    B. Peanuts have to be dug and weed root systems can increase digging losses
    C. Peanuts grow relatively low to the ground throughout the season and are not very competitive with weeds
    D. All of the above
    E. None of the above

83. What is the time interval in days between peanut emergence and application when paraquat can be safely applied?
    A. 14
    B. 28
    C. 42
    D. 66
    E. None of the above

84. What are important elements used in managing herbicide resistance in weeds?
    A. Use only postemergence herbicides after weeds have emerged
    B. Let as many weeds emerge and then apply herbicides no matter how big the first weeds emerging become prior to application of herbicide
    C. Use a herbicide program with numerous different herbicide modes of action to minimize selection pressure on the population
    D. Don’t worry about removing the occasional escaped weed in a field

85. Tobacco thrips are an issue in peanuts during what months of the season?
    A. May and June
    B. June and July
    C. July and August
    D. August and September
    E. All of the above

86. Southern corn rootworm causes economic loss by affecting what part of the plant?
    A. Root system
    B. Kernels or seeds
    C. Flowers
    D. Stems
    E. None of the above

87. The economic threshold for insects can best be described as:
    A. Some number above the economic injury level
    B. The same number as the economic injury level
    C. Some number below the economic injury level
    D. Should never be used when deciding when to apply an insecticide

88. Which insecticide is often applied postemergence to peanuts to control thrips?
    A. Dimethoate
    B. Acephate
    C. Carbaryl
    D. Ivermectin
    E. None of the above

89. What arthropod pest is often considered an important secondary pest when insecticides are overused during dry conditions?
    A. Southern corn rootworm
    B. Sclerotinia blight
    C. Spider mites
    D. Tobacco budworm
    E. None of the above

90. What insect serves as the vector for tomato spotted wilt?
    A. Colorado potato beetle
    B. Potato leaf hopper
    C. Thrips
    D. Tobacco budworm
    E. Lady bug
    F. Aphids
    G. None of the above
    H. All of the above

Use the following information to answer questions 91-94 associated with Field 1.

Plating date: May 3
Peanut emergence date: May 10
Variety: Sullivan
In-furrow insecticide: Admire Pro
Tillage system: No till into previous crop stubble in flat ground
Soil series and texture: Norfolk loamy sand
Intensive irrigation
Moderate history of rootworms
Moderately well drained
3-4 plants per foot of row
Scouting date for herbicide application: June 25
Crop that will be planted the following season: Cotton
Weeds present: Common ragweed, Texas panicum, Sicklepod

91. What is the risk of tomato spotted wilt in this field (Field 1)?
    A. None
    B. Low
    C. Moderate
    D. High
    E. None of the above

92. What is the risk of southern corn rootworm in this field (Field 1)?
    A. None
    B. Low
    C. Moderate
    D. High
    E. None of the above

93. What is the risk of peanuts yields being lower in reduced tillage systems compared with conventional tillage systems in this field (Field 1)?
    A. None
    B. Low
    C. Moderate
    D. High
    E. None of the above

94. Given the information provided for this field (Field 1), what is the most effective and legal herbicide program you can use to control these weeds?
    A. Cadre or Impose plus clethodim
    B. Paraquat plus Basagran
    C. Ultra Blazer plus Clethodim
    D. Cobra plus 2,4-DB plus Clethodim
    E. All of the above are equally effective

Use the following information to answer questions 95-98 associated with Field 2.

Plating date: May 28
Peanut emergence date: June 5
Variety: Bailey
In-furrow insecticide: Phorate
Tillage system: Strip till into the previous crop stubble in flat ground
Soil series and texture: Goldsboro loam
Somewhat poorly drained
Periodic irrigation
Moderate history of rootworms
6 plants per foot of row
Scouting date for herbicide application: June 20
Crop that will be planted the following season: Soybeans
Weeds present: Cocklebur, Sicklepod, Crabgrass

95. What is the risk of tomato spotted wilt in this field (Field 2)?
    A. None
    B. Low
    C. Moderate
    D. High
    E. None of the above

96. What is the risk of southern corn rootworm in this field (Field 2)?
    A. None
    B. Low
    C. Moderate
    D. High
    E. None of the above

97. What is the risk of peanuts yields being lower in reduced tillage systems compared with conventional tillage systems in this field (Field 2)?
    A. None
    B. Low
    C. Moderate
    D. High
    E. None of the above

98. Given the information provided for this field (Field 2), what is the most effective and legal herbicide program you can use to control these weeds?
    A. Cadre or Impose plus clethodim
    B. Basagran
    C. Ultra Blazer plus Clethodim
    D. Cobra
    E. All of the above are equally effective

99. Which of the following pests are not included on the Peanut Risk Management Tool?
    A. Thrips
    B. Southern corn rootworm
    C. Leaf spot
    D. Spider mites
    E. Weeds
    F. Sclerotinia Blight
    G. Southern stem rot
    H. Guava root knot nematode

100. A risk index provides what information for practitioners?

    A. A guarantee that a pest will cause economic loss during the season
    B. Should be followed religiously
    C. Gives an estimate of risk to the crop if the pest becomes prevalent using those production and pest management practices
    D. None of the above
    E. All of the above