

State Crops Exam 2011 Key

1. Which of these would not be considered when selecting a wheat variety to grow in Indiana?
  - A. Winter Hardiness
  - B. Rust Resistance
  - \*C. Maturity Group
  - D. Straw Strength
  
2. What type of wheat is grown primarily in Indiana because of Indiana climate and soil types?
  - \*A. Soft Red Winter Wheat
  - B. Hard Red Winter Wheat
  - C. Hard White Wheat
  - D. Durum Wheat
  
3. What is the optimum plant population for Soft Red Winter Wheat?
  - A. 1.8-2 Million plants per acre
  - B. 40-50 plants per square foot
  - C. 1.5-1.8 Million plants per acre
  - \*D. 1.3-1.5 Million plants per acre
  
4. Lime is used \_\_\_\_\_.
  - A. Improve soil structure
  - \*B. as a possible magnesium source
  - C. as an herbicide
  - D. to lower pH
  
5. What crop residue will reduce the rate of soil erosion the most?
  - A. Corn
  - B. Soybean
  - \*C. Wheat
  - D. canola
  
6. Soybean growth and maturation is most affected by
  - \*A. the length of darkness at night
  - B. the angle of the sun
  - C. temperature
  - D. moon intensity
  
7. Corn growth and maturation is most affected by
  - A. day length
  - B. light intensity
  - C. the angle of the sun
  - \*D. temperature

8. In Indiana \_\_\_\_\_ is typically the most logical reason that farm field soils must be limed.
- A. acid rain
  - B. herbicide use
  - \*C. acid soil parent material (shale, glacial till, etc.)
  - D. nitrogen fertilizers
9. A farmer scouts his field and finds five flea beetles per plant. What disease should he be concerned about?
- A. Northern corn leaf blight
  - \*B. Stewarts wilt
  - C. Gray leaf spot
  - D. Anthracnose leaf blight
10. A farmer harvests his soybeans and find the moisture to be at 19.5%. How many pounds will he need to equal a bushel at 13% moisture?
- A. 64.44 lbs
  - B. 58.65 lbs
  - \*C. 64.84 lbs
  - D. 60.35 lbs
11. You have a plot of land that is 250 ft by 560 ft how many acres do you have?
- \*A. 3.2
  - B. 4.5
  - C. 3.0
  - D. 2.9
12. The selectivity of a herbicide is a measure of the
- A. herbicide's ability not to go off target (i.e. no drift, runoff, etc.)
  - B. toxicity to humans
  - C. time it will remain active in the soil
  - \*D. species of weeds it will kill or control
13. A black layer at the base of a corn kernel, taken from an ear of corn, indicates
- A. disease
  - B. drought
  - C. weevil damage
  - D. black-tip of corn
  - \*E. physiological maturity
14. Shrinkage in grain is calculated due to
- A. known percentages of grain eaten by insects over time in stored grain
  - B. drought losses from moisture stressed grain in the field
  - \*C. moisture loss when drying grain to a desired moisture for safe storage
  - D. known percentages of damage that always occur in grain
  - E. all of these factors combined that determine percent shrinkage

15. You have 57800 lbs of corn at 27% moisture and you dry it down to 15% moisture. How many bushels of grain do you have when it is dried?

- \*A. 887
- B. 900
- C. 49643
- D. 785

16. When would you scout for Fall Armyworm?

- A. July- August
- B. May-June
- \*C. July- October
- D. May-July

17. In the spring farmer Joe scouts his fields and finds that in the cold wet soils, his corn plants are stunted and have purpling tips. What may be the problem with his corn?

- A. Stewart wilt
- \*B. Phosphorus deficiency
- C. Nitrogen deficiency
- D. Potassium deficiency

18. Which one of these Nitrogen fertilizers has 46% Nitrogen?

- A. Ammonium sulfate
- B. Anhydrous ammonia
- \*C. Urea
- D. Ammonium Nitrate

19. Farmer Jim's soil test tells him that his soils pH is 8.0, What Nutrient deficiency should he look for next season?

- A. Nitrogen
- B. Magnesium
- C. Potassium
- \*D. Manganese

20. What is the % moisture in corn when it reaches physiological maturity?

- A. 15%
- B. 24%
- \*C. 35%
- D. 45%

21. Which pasture grass is commonly infected with an endophyte?

- A. Orchardgrass
- \*B. Tall fescue
- C. Kentucky bluegrass
- D. Timothy

22. Which method of corn harvest will result in the most potassium removal from the field?

- \*A. harvesting the whole plant
- B. harvesting the grain
- C. harvesting the grain on the ear
- D. all remove the same amount

23. Why would one find a nitrogen deficiency in soybeans?

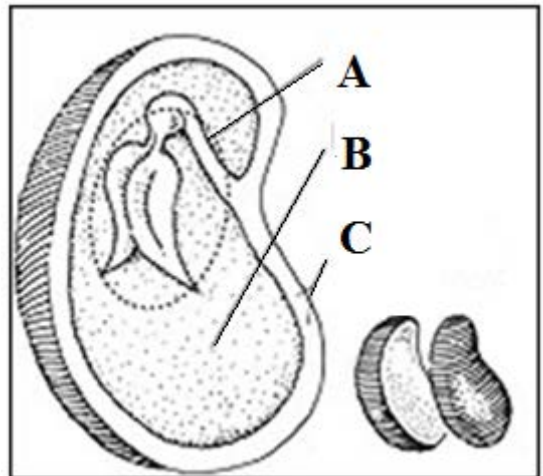
- A. too high of soybean population
- B. no fertilizer used
- C. iron toxicity
- \*D. pH too low for nodulation
- E. herbicide carryover

24. Of the following, which flower structure is not part of the female anatomy?

- \*A. anther
- B. stigma
- C. style
- D. ovary

25. The picture to the right shows a bean seed. What part of the seed is line B pointing at?

- A. Embryo
- B. Seed coat
- \*C. Endosperm
- D. Pericarp



26. What is "line B's" function in the seed?

- A. the living seedling
- \*B. carbohydrate storage used for energy
- C. protects the seed from damage
- D. Keeps the plant from freezing in the winter

27. Which of the following characteristics are not useful in seed identification?

- \*A. tassel size
- B. hilum color
- C. groove size
- D. seed coat color
- E. brush size

28. Soybean varieties are frequently identified by their

- A. seed surface texture
- B. seed size
- \*C. hilum color
- D. tendency to crack

29. An auricle may best be described as
- A. an extension of the primary root system of a grass
  - B. an extension of the secondary root system of a grass
  - C. an extension of the leaf sheath through the collar area of a grass
  - \*D. an extension of the leaf blade around the collar area of a grass
  - E. an extension of the palea of a grass
30. A(n) \_\_\_\_\_ is the area between two nodes in corn plants.
- A. external node
  - \*B. internode
  - C. leaf
  - D. root
31. A kernel of rye, during its development, is enclosed by a
- A. lemma and awn
  - B. lemma and glume
  - \*C. lemma and palea
  - D. lemma and rachis
32. The CEC of Muck and Peat type soils is more dependent on \_\_\_\_\_ compared to other soils.
- \*A. pH
  - B. Clay
  - C. Organic Matter
  - D. Water availability
33. When collecting whole plants to send to the lab for nutrient analysis, you should \_\_\_\_\_.
- A. Pull the plant and place in plastic bag
  - B. Send plants that are already dead
  - C. Place whole plants in plastic bag
  - \*D. Dig plants, then place root and soil in plastic bag
34. Which of the following forages are best adapted to poorly drained soils?
- A. Alfalfa
  - B. Red clover
  - \*C. Alsike clover
  - D. Orchardgrass
35. Which grass is best to plant with Alfalfa in a mix pasture?
- \*A. Orchardgrass
  - B. Tall fescue
  - C. Ryegrass
  - D. Quackgrass
36. The first step in pasture renovation is to
- A. seed with legumes
  - \*B. late summer/early fall overgrazing and soil testing
  - C. fertilizer with N-P-K
  - D. broadcast grass seed throughout the entire pasture

37. If the recommended seeding rate for soft red winter wheat is 13 to 21 seeds per foot within a 7" row, what would happen if the rate was increased to 50 seeds per foot of 7" row?

- A. nothing would occur
- \*B. disease and lodging would increase
- C. increased yield would result with better straw
- D. an increase in the number of tillers would result
- E. there would be more wheat farmers if the secret got out you could do this

38. Phosphorus and potassium for double cropped soybeans following wheat, should be applied

- A. at the time of planting the soybeans
- B. at the jointing stage of the wheat
- \*C. in the fall before the wheat is seeded (when fertilizer is applied to wheat)
- D. after the jointing stage of the wheat

39. The negative charge in soil comes from:

- A. clay, silt
- B. clay, sand
- \*C. clay, organic matter
- D. pH

40. The management practice that increases lodging potential in wheat is

- \*A. applying high rates of nitrogen in the spring
- B. seeding late in the fall
- C. using a contact herbicide for weed control
- D. harvesting earlier than recommended