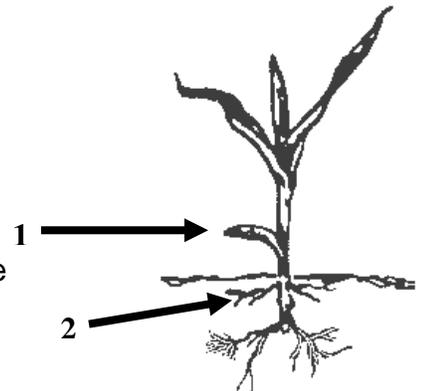


2006 Crop Production Exam

County Contest



1. Of the following, you would expect soil erosion rates to be the smallest on a _____ rotation.
 - A. corn-corn
 - B. corn-soybean-wheat
 - C. soybean-soybean
 - D. corn-soybean-wheat-alfalfa hay
2. You plan to plant corn, in which rotation listed above will you need to apply the least nitrogen.
 - A. corn-corn
 - B. corn-soybean-wheat
 - C. soybean-soybean
 - D. corn-soybean-wheat-alfalfa hay
3. Which of the following soybean relative maturity groups will flower first in central Illinois, Indiana, and Ohio?
 - A. Group 2
 - B. Group 3
 - C. Group 4
 - D. all groups flower the same
4. A hectare is an example of a(n) _____ measurement.
 - A. area
 - B. volume
 - C. length
 - D. width
 - E. height
5. Which below will remove the most nitrogen in the harvested portion?
 - A. grain sorghum (lbs/cwt)
 - B. wheat (lbs/bu)
 - C. corn for silage (lbs/wet ton)
 - D. corn grain (lbs/bu)
 - E. soybeans (lbs/bu)
6. A legume flower always has _____ sepals and _____ petals.
 - A. 4,4
 - B. 5,5
 - C. 6,4
 - D. 7,4
 - E. it varies
7. The corn plant to the right is at what growth stage?
 - A. V4
 - B. VE
 - C. V2
 - D. R1
8. The anatomical structure labeled 1 is _____.
 - A. plumule
 - B. coleoptile
 - C. nodal root
 - D. 1st leaf
 - E. radicle
9. The anatomical structure labeled 2 is _____.
 - A. plumule
 - B. coleoptile
 - C. nodal root
 - D. 1st leaf
 - E. radicle
10. Corn is a grass and is a _____ and has a _____ root system.
 - A. dicot, tap
 - B. monocot, fibrous
 - C. dicot, fibrous
 - D. monocot, tap
11. A hybrid's normal GDD is 2700, rain has delayed planting until May 29 so you would expect the GDD for maturity to be which below?
 - A. unchanged
 - B. 2890
 - C. 2510
 - D. 3010
 - E. 2450
12. You would scout corn for which problem in early June?
 - A. ear rot
 - B. fall army worm
 - C. stalk rots
 - D. seed corn maggot



13. The protective outer covering of a grain kernel is the
 A. pericarp B. endosperm C. skin D. coleoptile
14. Conservation tillage is defined as any tillage system, which leaves at least _____ crop residue on the soil surface after _____.
 A. 30%, harvest B. 40%, harvest C. 30%, planting D. 40%, planting
15. Which of the following nutrients has limited availability in soils with a pH in the range of 5.5-6.0?
 A. potassium B. iron C. manganese D. phosphorus
16. A sprayer that you bought at an auction has a tank 4 feet in diameter and is 6 feet long. The sprayer's tank capacity is approximately _____ gallons.
 A. 550 B. 650 C. 750 D. 850 E. 950
17. You and a neighbor want to buy a farm of 520 hectares in Brazil, how many acres is this farm?
 A. about 2000 acres B. about 520 acres C. about 1285 acres D. about 260 acres
18. During spring tillage before planting soybeans you notice white U-shaped grubs with a raster seen at the right. Which action should you take?
 A. If more than 2 grubs/cubic foot don't plant soybeans
 B. Plant soybeans grubs are harmless to roots
 C. Don't plant soybeans root pruning will give yield loss



19. How many 10" corn plants should you sample for tissue analysis of potassium?
 A. 10-20 B. 20-30 C. 40-50 D. 50-100

Answer questions 20-23 with this information. You have a dark colored silt loam field where you are planning your next crop of soybeans that hopefully produce 50 bu/A. The preceding crop was corn. Soil test results showed the following: P_2O_5 – 10 ppm P, K_2O – 75 ppmK, Mg - 120 lb/A, buffer pH of 6.8 and CEC – 20. You desire adequate soil test levels.

20. You should place _____ lb. of phosphorus per acre on this area according to the above Bray P_1 test.
 A. 0 B. 35 C. 40 D. 55 E. 65
21. You should place _____ lb. of potassium per acre on this area of the field for build-up to occur over 3-5 years.
 A. 0 B. 45 C. 90 D. 190 E. 290
22. A minimum of _____ percent of the potassium fertilizer should be banded given this situation.
 A. 10 B. 25 C. 50 D. 75 E. 90
23. Lime is needed on this field.
 A. True B. False

24. What would be the estimated yield per acre of soybean having a row width of 7 inches and 2.5 plants per foot of row if each plant averaged 22 pods?
A. 45 bu/acre B. 50 bu/acre C. 55 bu/acre D. 60 bu/acre E. 65 bu/acre
25. A bushel is a measure of
A. area B. weight C. volume D. density
26. Which of the following corn relative maturity groups are most likely to yield the least and have a minimal growing degree day requirement?
A. early B. medium C. full D. it does not matter
27. A typical Indiana forage yield on a productive alfalfa field would be _____ tons/acre/year.
A. 1 B. 4.5 C. 15 D. 25.5 E 100
28. When planting seed from your bin (i.e. wheat or soybeans) you notice that the seed is small. This means you have _____ seeds per pound and will use a _____ seeding rate in comparison to large seed.
A. fewer, higher B. fewer, lower C. more, higher D. more, lower
29. Herbicides are
A. chemicals that may control or kill plants, animals, bacteria or anything that is considered an undesirable pest
B. a group of chemicals that control or kill plants like weeds in crop fields or lawns
C. a chemical group that control fungus organisms and are commonly used for seed treatment when planting corn
D. chemicals that kill all bacteria that are harmful in crop fields and crop storage areas like grain bins
E. a group of chemicals targeting animals like ground hogs or wood chucks that forage on soybeans
30. If you had a pigweed infestation of 1 plant per 10 ft of row your soybean yield reduction is estimated to be:
A. 70% B. 60%. C. 50% D. 40% E. 30%
31. Which insect's life cycle is best described as an incomplete metamorphosis?
A. European corn borer B. black cutworm C. fall armyworm D. grasshopper
32. Of the following types of plants, which is most likely to propagate using stolons, rhizomes, or creeping roots?
A. winter annuals B. biennials C. perennials D. summer annuals
33. You are an extension agent in your home county and farmer Jake calls with a weed problem. You determine that the weed is a grass type and has a round sheath with clasping auricles and a membranous ligule. What is the weed?
A. barnyardgrass B. johnsongrass C. quackgrass D. witchgrass E. shattercane

