

Purdue Crops Invitational



2009

2009 Exam

1. Herbicide effectiveness is **not** dependent upon
 - A. soil organic matter content
 - B. soil pH
 - C. application procedure
 - D. using the maximum rate
2. Manure placed on crop fields will
 - A. improve soil structure
 - B. not loosen soil as much as adding sand
 - C. compact the soil but provide plant food
 - D. lower earthworm populations due to high chemical concentrations
3. A typical average corn yield for the entire state of Indiana is _____ bu/A.
 - A. 30-45
 - B. 115-155
 - C. 220-240
 - D. 1000-1250

4. This soybean was damaged by:

- A. Bacteria
- B. Fungus
- C. Insects
- D. Nutrient Deficiency



5. When soybeans begin to bloom what growing stage is it considered to be at?
 - A. V4
 - B. VE
 - C. R5
 - D. R1
6. 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

7. In no-till fields _____ than in conventional (plowed) fields.
- A. earthworm populations (especially night crawlers) tend to be greater
 - B. organic matter content of the soil tends to be lower
 - C. annual weed pressures tend to be greater
 - D. more chemicals are always used
 - E. both A and B
8. Soil temperatures tend to be _____ and soil moistures tend to be _____ in no-till than in conventional tillage systems.
- A. colder, higher
 - B. warmer, lower
 - C. colder, lower
 - D. warmer, higher
9. What determines the time of flowering of soybeans?
- A. temperature
 - B. length of the night
 - C. number of days after planting
 - D. plant height
10. One might switch from a corn-soybean to a corn-soybean-wheat rotation to
- A. reduce nutrient and lime requirements when farm budgets are shrinking and tight
 - B. reduce disease problems such as gray leaf spot in corn, which can survive for 2 but not 3 years
 - C. add more nitrogen fixing species to the rotation
 - D. all of these are reasons for alternating the rotation system on a farm
 - E. none of these are reasons for alternating the rotation system on a farm
11. Western bean cutworm is distinguished from other worms by what?
- A. Its black color
 - B. ability to move fast
 - C. rectangle markings above its head
 - D. it is born from an egg
12. How many "Dry" bu. with a desired moisture of 12% do you have after harvesting 84,000 pounds of corn at 23% moisture?
- A. 1,312.5
 - B. 56,000
 - C. 73,503
 - D. 120,000
13. A black layer at the base of a corn kernel taken from an ear of corn in the field indicates
- A. disease
 - B. drought
 - C. weevil damage
 - D. black-tip of corn
 - E. physiological maturity

14. When diagnosing herbicide injury, it is important to look for:
- A. overlapped rates at the end of the rows
 - B. differential injury across soil types (light soils showing differences from heavy soils)
 - C. drift patterns across a field
 - D. uniformly injured strips caused by application equipment
 - E. All of the above
15. When corn kernels have a pasty consistency, what stage is the corn at?
- A. Dough
 - B. Milk
 - C. R6
 - D. R7
16. Nitrogen fertilization for wheat should be applied
- A. in the fall prior to planting
 - B. as a small portion in the fall and the bulk remaining prior to jointing in spring
 - C. as one spring treatment
 - D. after harvest for the next crop since wheat makes its own nitrogen
17. What insect problem is likely to occur in wheat that is planted too early?
- A. Hessian fly
 - B. grasshoppers
 - C. white grub
 - D. European corn borer
18. Of the following legumes, _____ is best adapted to renovation on pastures.
- A. Sweetclover
 - B. Red clover
 - C. Alsike clover
 - D. White clover
 - E. Alfalfa
19. White grubs issues a problem during:
- A. April-July
 - B. June-July
 - C. April-Mid to late June
 - D. June-August
20. Moldboard plow leaves _____ of residue on the surface of the field.
- A. 0%
 - B. 25-35%
 - C. 35-45%
 - D. 3-5%
21. How many pounds of shelled corn equal one bushel?
- A. 56 lb.
 - B. 115 lb.
 - C. 60 lb.
 - D. 52 lb.

22. Grasses withstand _____ better than legumes in forage fields.
- A. nutrient deficiencies
 - B. diseases
 - C. insect pressure
 - D. drought
 - E. all of these

23. What is this insect that attacks corn during May-July?

- A. Fall armyworm
- B. Black cutworm
- C. Armyworm
- D. Aphid



24. Heaving of alfalfa plants can be reduced by
- A. interseeding Orchardgrass
 - B. improving drainage
 - C. increasing mulch residue levels
 - D. all of the above
 - E. none of the above
25. A(n) _____ is the area between two nodes in corn plants.
- A. week of growth
 - B. internode
 - C. leaf
 - D. root
 - E. caryopsis
26. A leaflet would be characteristic of a _____ plant.
- A. Crownvetch
 - B. Wheat
 - C. Yellow nutsedge
 - D. Kentucky bluegrass
27. The major difference between stems of sedges and grasses is
- A. grass stems do not have internodes
 - B. sedge stems are triangular in cross section
 - C. leaves do not originate from nodes in grass stems
 - D. sedge stems are not green
28. The protective outer covering of a grain kernel is the
- A. pericarp
 - B. endosperm
 - C. skin
 - D. coleoptile

29. How many bushels of corn would you need to fill 12,400 cubic feet?
A. 5000 B. 6000 C. 7500 D. 10,000
30. Soil test shows that the pH is 7.5. The availability of _____ to the plant is much lower?
A. Manganese
B. Boron
C. Calcium
D. Potassium
31. To make a corn replant decision, one item of information needed is after damage plant population. To do this you would
A. count all of the surviving plants in the field and divide by the number of acres in the field
B. measure out an acre of the field and hire some smart 4-H and FFA kids who need \$ for the weekend on one measured acre
C. conduct at least 12 surviving plant counts by using 3 different 0.001 acre row lengths in 4 random areas of the field
D. look across the field using a Munsell color page for a guide to replant: gray-tan chromas indicate replant
32. Soybean plant leaf(ves) at growth stage VC include:
A. multifoliolates
B. unifoliolates
C. trifoliolates
D. B and C
E. none of the above
33. There are _____ acres in a square mile.
A. 640 B. 160 C. 80 D. 40 E. 20
34. A deficiency of _____ may cause lodging (plants falling over) in cornfields.
A. Cl B. K C. N D. P E. Ca
35. What does CEC stand for?
A. Cation exchange capacity
B. Cation extra capacity
C. Cation exchange capability
D. not important
36. 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
37. Wet soils are _____ to warm than dry soils in the spring.

- A. quicker B. slower C. no different
38. 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
39. If a weed population develops a resistance to a herbicide, what is the time frame before the herbicide can be used again to control that specific weed?
A. 1 year B. 5 years C. 10 years D. never
40. What is the recommended nitrogen rate for soybeans?
A. 0 lb./a
B. 25 lb./a
C. 50 lb./a
D. 150 lb./a
E. not enough information given