

# 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:(p.162 2008, p.101, 2003)

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



5. When soybeans begin to bloom what growing stage is it considered to be at?  
(p111 2008, p.80 2003)
  - 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?(p.48-49 2008, p.31 2003)
- \*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? (p.11, 2008)
- \*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.  
(p.266, 2008 p. 164, 2003)
- 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 late April-June? (both books)
- 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