

# OREGON DEPARTMENT OF AGRICULTURE

## PESTICIDE

### EXAMINATION OUTLINE

To successfully complete this examination, the applicant will need to be familiar with the topics identified in this outline. The outline is not intended to be used as the sole study material and may not be all inclusive of topics covered in the exam. See the ODA website <http://oregon.gov/ODA/PEST/> or the “Guide to Pesticide-Related Licensing in Oregon” (available on the web or by calling 503-986-4635) for details on recommended study material.

It is advisable to bring a small, hand held calculator to the exam session to assist in performing calculations. This exam has 100 questions. A score of 70% is needed to pass the exam. **Government issued photo identification (such as a driver’s license) will be required when you check in for testing.**

OREGON DEPARTMENT OF AGRICULTURE  
PESTICIDE EXAMINATION OUTLINE  
ORNAMENTAL AND TURF HERBICIDE

- 1) Integrated Pest Management
  - a) Definition of IPM
  - b) Advantages of IPM
  - c) Types of control methods
  - d) Scouting and monitoring
  - e) Economic threshold
  - f) Economic injury level
  - g) Herbicide resistance management
- 2) Weed biology and identification
  - a) Broadleaf weeds
  - b) Grasses
  - c) Life cycles
    - i) Annual
    - ii) Biennial
    - iii) Perennial
  - d) Identification
    - i) Grasses
      - (1) barnyardgrass
      - (2) bluegrass, annual
      - (3) crabgrass, large
      - (4) crabgrass, smooth
      - (5) foxtail, yellow
      - (6) ryegrass, Italian
    - ii) Broadleaves
      - (1) catsear, common
      - (2) chickweed, common
      - (3) chickweed, mouseear
      - (4) clover, white
      - (5) daisy, English
      - (6) dandelion
      - (7) filarees
      - (8) geranium, cutleaf
      - (9) healall (selfheal)
      - (10) henbit
      - (11) knotweed, prostrate
      - (12) mallow, little (cheeseweed)
      - (13) medic, black
      - (14) pimpernel, scarlet
      - (15) plantain, broadleaf
      - (16) plantain, buckhorn
      - (17) purslane, common

- (18) sorrel, red
- (19) spurge, spotted
- (20) woodsorrel, creeping
- (21) yarrow, common
- iii) Sedges
  - (1) nutsedge, purple
  - (2) nutsedge, yellow
- 3) Herbicides
  - a) Selectivity
  - b) Classification
  - c) Modes of action
    - i) Growth regulator
      - (1) Phenoxy acetic acids
        - (a) 2,4-D
        - (b) MCPA
        - (c) MCPP
      - (2) Benzoic acids
        - (a) Banvel
      - (3) Picolinic acids
        - (a) Transline
        - (b) Tordon
    - ii) Amino acid synthesis inhibitors
      - (1) Amino acid derivatives
        - (a) Roundup
    - iii) Lipid inhibitors
      - (1) Cyclohexanediones
        - (a) Poast
      - (2) Aryloxyphenoxypropionates
        - (a) Acclaim
        - (b) Fusillade 2000
    - iv) Seedling growth inhibitors
      - (1) Dinitroanilines
        - (a) Treflan
        - (b) PreM
        - (c) Balan
        - (d) Surflan
      - (2) Acetanilides
        - (a) Pennant
      - (3) Thiocarbamates
        - (a) Eptam
      - (4) Benzamides
        - (a) Gallery
      - (5) Nitriles
        - (a) Casoron, Norosac
    - v) Photosynthesis inhibitors
      - (1) Triazines

- (a) Prometon
  - (2) Phenylureas
    - (a) Tupersan
  - (3) Benzothiadiazoles
    - (a) Basagran
  - vi) Cell membrane disruptors
    - (1) Bipyridilliums
      - (a) Diquat
- d) Formulation types
- e) Adjuvants (what are they used for, types)
- 4) Application methods
  - a) Equipment
    - i) Equipment for dry pesticides
    - ii) Equipment for liquid pesticides
    - iii) Sprayer components
    - iv) Sprayer maintenance
  - b) Application timing
- 5) Calibration and calculations
  - a) Know how to calculate the following based on word problems that provide relevant variables.
    - i) Application rate
    - ii) Sprayer delivery rate
    - iii) Area of a field
    - iv) How much concentrate to dilute into spray tank
    - v) Miscellaneous problems and combinations of the above.
  - b) Best ways to change sprayer output, application rates, etc.
- 6) Label comprehension
  - a) The label is the law
  - b) Parts of the label including:
    - i) Restricted-use vs general-use
    - ii) Precautionary statements
    - iii) First aid
    - iv) Signal words
    - v) Active and other ingredients
    - vi) Directions for use
    - vii) Storage and disposal
    - viii) Be able to answer word problems and calculations based on a sample label