

# OREGON DEPARTMENT OF AGRICULTURE

## IIHS SPACE FUMIGATION

### 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 "Pesticide Licensing Guide for Oregon" (available online 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  
IHS SPACE FUMIGATION

1) Fumigation Strategy - Methods of Fumigation

- a) Vault
  - i) Vacuum Chambers
    - (1) Equipment used
    - (2) Fumigants used
    - (3) Advantages
    - (4) Disadvantages
    - (5) Special techniques
    - (6) Special safety precautions
  - ii) Atmospheric Chambers
    - (1) Equipment used
    - (2) Fumigants used
    - (3) Advantages
    - (4) Disadvantages
    - (5) Special techniques
    - (6) Special safety precautions
- b) Ship Fumigation
  - i) Equipment used
  - ii) Fumigants used
  - iii) Procedures
  - iv) Special safety precautions
- c) Structural Fumigation
  - i) Equipment used
  - ii) Fumigants used
  - iii) Procedures
  - iv) Special safety precautions
- d) Tarp Fumigation
  - i) Indoor
    - (1) Equipment & tarps used
    - (2) Items/Commodities typically fumigated
    - (3) Fumigants used & characteristics
    - (4) Procedures
    - (5) Special safety precautions
  - ii) Outdoor
    - (1) Equipment & tarps used
    - (2) Items/Commodities typically fumigated
    - (3) Fumigants used & Characteristics
    - (4) Procedures
    - (5) Special safety precautions
- e) Entire Structure Fumigation
  - i) Types of structures fumigated

- ii) Equipment & tarps used
  - iii) Fumigants used & characteristics
  - iv) Procedures
  - v) Special safety precautions
- f) Spot or Local Fumigation
  - i) Equipment used
  - ii) Items/Commodities typically fumigated
  - iii) Fumigants used & characteristics
  - iv) Procedures
  - v) Special safety precautions
- 2) Terminology – as identified in recommended study material
- 3) Fumigation Characteristics and Equipment
  - a) Active ingredients used
    - i) Aluminum Phosphide
    - ii) Magnesium Phosphide
    - iii) Carbon Dioxide
    - iv) Chloropicrin
    - v) Sulfuryl Fluoride
    - vi) Methyl Bromide
  - b) Equipment
- 4) Safety and Handling
  - a) Fumigant Toxicity Characteristics, Exposure, and Emergency Treatment
    - i) Aluminum Phosphide
    - ii) Magnesium Phosphide
    - iii) Carbon Dioxide
    - iv) Chloropicrin
    - v) Sulfuryl Fluoride
    - vi) Methyl Bromide
  - b) Safety and Handling
    - i) Protective Equipment
      - (1) Respirators
        - (a) Atmosphere Supplying Respirators
          - (i) Where most likely used
          - (ii) Advantages
          - (iii) Disadvantages
        - (b) Supplied Air Respirators
          - (i) Characteristics
          - (ii) Where most likely used
          - (iii) Advantages
          - (iv) Disadvantages
        - (c) Air Purifying Respirators
          - (i) Characteristics
          - (ii) Where most likely used
          - (iii) Advantages
          - (iv) Disadvantages
      - (2) Gloves

- ii) Antidotes
- iii) Radio Communications
- iv) Detection Equipment
  - (1) Halide Detector
  - (2) Thermal Conductivity Analyzer
  - (3) Interference Refractometer
  - (4) Miran Gas Analyzer
  - (5) Interscan Gas Analyzer
  - (6) Draeger Hydrogen Phosphide Badge
- v) Fumigant Transport
  - (1) Modes of transport
  - (2) Routing
  - (3) Positioning of cylinders
  - (4) Spills & leaks
- vi) Safety Recommendations While Fumigating
- 5) Pest Characteristics
  - a) Commodity and structure-infesting insects
    - i) Identification by characteristic descriptions
    - ii) Photo Identification
    - iii) Insect lifecycles
    - iv) Insect behavior
- 6) Label Interpretation
  - a) Answer questions based on label. Questions regarding labeling and interpretation of label directions, precautions, and other information from fictitious labels included in the examination.
  - b) Perform calculations based on label