

Private Pesticide Applicator Exam Study Guide

This study guide is intended to serve as an outline of the knowledge base covered by the Private Pesticide Applicator Exam. If you don't understand a statement, refer to the National Pesticide Applicator Certification Core Manual for more information. This exam consists of 50 multiple choice and true/false questions taken from the manual. Topics include:

1. Proper Conduct/Laws/Liability
2. Pest Management
3. Label Comprehension
4. Hazards/First Aid
5. Personal Protective Equipment (PPE)
6. Planning the Pesticide Application
7. Pesticide Application Procedures
8. Pesticides in the Environment
9. Formulas/Equations
10. 2-4, D Label

1. Proper Conduct/Laws/Liability

- a. The United States Environmental Protection Agency enforces the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).
- b. The New Mexico Department of Agriculture supervises and enforces the New Mexico Pesticide Control Act.
- c. Records of all restricted use pesticide applications must be kept for 2 years.
- d. Certified applicators of restricted use pesticides are required to keep records that include the brand/product name, the date of application and the location of treatment, among other required records.

2. Pest Management

- a. Chemical controls are pesticides that are either naturally derived or synthesized.
- b. Pesticides, which are commonly grouped according to the type of pest they control, include avicides, herbicides, repellents, insecticides, rodenticides and fungicides.
- c. Pests in enclosed areas may sometimes be suppressed by altering physical or environmental conditions such as water, temperature and light.
- d. Major benefits associated with the use of pesticides are their effectiveness, speed and ease of controlling pests.
- e. In recent years, pest management has shifted from relying heavily on pesticides to using an integrated approach based on pest assessment, decision making, and evaluation.
- f. Pest management programs are based on the identification of pests, accurate measurement of pest populations, and assessment of plants in residential, commercial and industrial areas.
- g. Pesticide resistance can be defined as the ability of an insect, fungus, weed, rodent or other pest to tolerate a pesticide that once controlled it.

3. Label Comprehension

- a. Labels are legal documents providing directions on how to mix, apply and dispose of pesticide products.
- b. The active ingredient is the chemical or chemicals in a pesticide product responsible for controlling the target pests.
- c. *Danger-Poison, Warning* and *Caution* are examples of signal words, which indicate the relative acute toxicity of the product to humans and animals.
- d. The *First Aid* section of the label lists what to do in case of exposure to pesticides.
- e. The *Agriculture Use Requirements* section of the label includes requirements for the protection of agricultural workers on farms, forests, nurseries and greenhouses and handlers of agricultural pesticides.
- f. Persons who must enter a field before the *Restricted Entry Interval* is over must wait at least 4 hours after the application and must wear the personal protective equipment (PPE) specified on the label.
- g. Pesticide misuse can include applying a pesticide to a site that is not listed on the label, applying a pesticide at a higher than labeled rate, and handling a pesticide in a manner that violated specific label instructions.

4. Hazards/First Aid

- a. Skin irritation is an example of pesticide contact effects or symptoms.
- b. Symptoms of systemic injury from pesticides include excessive sweating, breathing difficulties and dizziness.
- c. Lack of sweat is a symptom of heat stroke.

5. Personal Protective Equipment (PPE)

- a. Applicators, mixers/loaders, flaggers and early entry workers are all required to follow all PPE instructions that appear on the product label.
- b. Clothes made of cotton, leather and canvas are not chemically resistant, even to dry formulations.

6. Planning the Pesticide Application

- a. Two or more pesticides are considered to be compatible when they can be mixed and applied in combination without adversely affecting the effectiveness or the physical and chemical properties of the mixture, or causing undesirable damage to the application site.
- b. Persons who mix and load concentrated pesticides have an especially high risk of accidental exposure and poisoning.
- c. Triple rinsing empty pesticide containers allows them to be disposed of as non-hazardous waste.
- d. Always clean all mixing, loading, and application equipment as soon as you finish.

7. Pesticide Application Procedures

- a. Band application involves applying a pesticide in parallel strips or bands such as between row crops rather than uniformly over the entire field.

- b. Soil incorporation is the use of tillage, rainfall, or irrigation equipment to move the pesticide into the soil.
- c. Because pesticide container openings vary in shape and size, no single closed system can be used with all containers.
- d. A mechanical loading system is often used with mini bulk containers.
- e. Large tanks require an opening in the bottom to aid in the cleaning and draining of pesticides.
- f. Spray nozzles control the amount of material applied, control the formation of the droplets and their size, and control the distribution and pattern of the droplets.
- g. Calibration is the process of measuring and adjusting the amount of pesticide your equipment applies or delivers to a specific area.
- h. Hydraulic sprayers range from large agricultural sprayers with multiple-nozzle spray booms and power sprayers to small manual backpack and hand-held compressed-air sprayers.

8. Pesticides in the Environment

- a. The solubility, adsorption and persistence of pesticides must be understood in order to understand how they move in the environment.
- b. Pesticides can move away from a targeted application site through the air, through the water, attached to a soil particle and on or in objects.
- c. Pesticide drift can be in the form of spray droplet drift, vapor drift or particle drift.
- d. In regards to pesticide spray drift, the viscosity (thickness) of the liquid affects droplet size.
- e. Repeated spilling of pesticides at mixing and loading sites is an example of point source pollution.
- f. Pesticides can reach groundwater by moving through the soil in a process called leaching.
- g. In order to prevent groundwater contamination never mix and load pesticides near water, keep pesticides away from wells, and always identify vulnerable areas before handling or applying pesticides.

9. Formulas/Equations

- a. Be able to determine a circular area when given a diameter.
- b. Be able to determine a triangular area when given base and height dimensions.

10. 2-4, D Label

- a. Be able to find and determine application rates for various crops.
- b. Be able to find and determine the restricted entry interval.
- c. Be able to find the EPA registration number, the active ingredient, and the signal word.
- d. Be able to find and determine proper storage, disposal, and clean up procedures.
- e. Be able to find and determine proper PPE and exposure/first aid methods.