

**Exam Knowledge Expectations for
Qualified Applicator Certificate & Qualified Applicator License
Category D – Plant Agriculture**

Use these knowledge expectations (KEs) to help study the suggested material, The Safe and Effective Use of Pesticides, Third Edition. University of California Integrated Pest Management Program (UC IPM), 2016. Knowing the information from all of the KEs should prepare you for taking the exam.

I. Pest Identification, Biology and Management

- A. Identification, biology, and life cycles of nematodes, insects, fungi, weeds, rodents, and birds.
- B. Knowledge of integrated pest management (IPM) strategies to control nematodes, insects, weeds, fungi, rodents and birds related to plant agriculture.
- C. Understanding of how pests transmit disease to plants.
- D. Ability to identify type of pest based on plant injury.

II. Pesticide Applications

- A. Knowledge of pesticide types, formulations, and appropriate uses for: insecticides, herbicides, rodenticides, avicides, plant growth regulators, adjuvants, fungicides, nematocides, and microbial pest control agents.
- B. Knowledge of pesticide application equipment including: cleaning and maintenance, safe and effective use, sprayer types, calibration, pressure, droplet size, and nozzle choice.
- C. Ability to complete pesticide related calculations and conversions including: flow rate, dosage, spray volume, application rate, and area.
- D. Ability to read and understand pesticide labeling.

III. Protection of Human Health and Environmental Exposure

- A. Knowledge of applicator safety including: safe and effective use of personal protective equipment (PPE), respirators, decontamination, pesticide disposal, pesticide residues, and restricted entry intervals (REIs).
- B. Knowledge of safe pesticide use practices to prevent drift, groundwater contamination, and environmental contamination.