Introduction

What is a year-round IPM program?
- Annual schedule of integrated pest management (IPM) activities recommended for the key pests in a crop
- Based on the UC IPM Pest Management Guidelines—the University of California’s best information for managing pests

How do year-round IPM programs improve environmental stewardship?
- Focus on environmentally sound management practices
- Provide information to reduce risk to human health, wildlife, parasites, predators, pollinators, and water, air, and soil quality

Who uses year-round IPM programs?
- Farmers, farm managers, farm advisers, PCA’s, certifying agencies

Where is the year-round IPM program for a crop?
- [http://www.ipm.ucdavis.edu](http://www.ipm.ucdavis.edu) > click “Agricultural pests” > look for crops with a green check

Tools to prevent pests

Integrated pest management promotes preventative practices that keep pests from becoming a problem by creating an environment favorable for healthy crops and unfavorable to pest development.

What information and tools do year-round IPM programs provide on prevention?
- How to select a suitable field
- How to prepare a field before planting
- Cultural practices such as crop rotation
- Fertility and irrigation information for a healthy, pest-free crop
- Planting and harvest practices unfavorable for key pests

Pest identification

Correctly identify the organism so you know whether it is likely to become a problem and to determine an appropriate management strategy if it is a pest.

How do year-round IPM programs help identify pests and biological control organisms?
- Provide you with photo identification pages you can print and take to the field; picture links to bigger photos, name links to the Pest Management Guidelines
- Illustrates predators and parasites and evidence of parasitism
- Distinguishes between pests that look similar
- Link you to more detailed information in the
  - Pest Management Guidelines
  - Weed Gallery
  - Natural Enemies Gallery
Monitoring

Monitoring entails observing and recording information on the activities, growth, development, and abundance of organisms or other factors. After monitoring and considering information about the pest, its biology, and other factors, you can decide whether the pest can be tolerated or whether it is a problem that warrants control.

What information and tools do year-round IPM programs provide on monitoring?

- When, how, and where to monitor
- Access to more detailed monitoring information in the Pest Management Guidelines
- Example monitoring forms that you can download and use to organize data

Management decisions

When combined with careful field monitoring and accurate pest identification, management guidelines help you decide whether management is needed or not. Management decisions for insects and mites are generally based on numbers that will cause economic damage. Management decisions for other pests such as diseases and weeds are based less on numbers and more on the history of a field or region, the state of crop development, weather conditions or other factors.

What is available in year-round IPM programs to help with management decisions?

- Treatment thresholds
- Considerations when parasites and predators are present
- Phenology models and degree-day calculators to predict treatment timing
- Using insect and mite traps
- Disease forecast models
- Treatment tables
- Pesticide toxicity ratings

Management methods

Integrated pest management combines management approaches from four main categories: biological, cultural, mechanical, and chemical tools. A successful IPM program chooses the right tools and combines several of them to effectively reduce pest numbers in the least disruptive and most cost-effective manner possible.

What kinds of management options are included in year-round IPM programs?

- Cultural practices such as orchard or field sanitation
- Mechanical practices such as mowing and cultivating
- Recommendations for pesticides useful in an IPM program
- How to choose fungicides based on efficacy
- How to choose herbicides based on selectivity
- Biological control considerations and options

Environmental Concerns

Pesticides can kill nontarget organisms such as beneficial insects and mites important for biological control. Pesticides can move offsite into air, soil, and water to harm other living things. A successful IPM program chooses the pesticide or application method that poses the least harm to the environment.

What do year-round IPM programs provide to manage pests while protecting human health, nontarget organisms and the environment?

- The pesticide application checklist helps you to make informed pesticide choices and the safest applications with links to risk assessment tools and publications on mitigating pesticide hazards
- WaterTox helps you determine the best pesticide to use if offsite movement is an issue
- Impact to natural enemies and pollinators table reports whether a pesticide is highly, moderately, or less toxic to beneficial insects, mites and honey bees
- Links to DPR’s VOC calculators to see how much volatile organic compounds are released by a pesticide