

## What Can Consumers Do?

### Wash Your Fruit

Wash all your fruit with warm water before eating it. Dust, natural waxes, and some inert chemical residues can remain on the skin. Soapy water is not necessary; a good rubbing and rinsing will do the job.



### Support IPM Pest Control

Show growers your support for IPM pest control and ecosystem management. Let them know you appreciate every decision they make to use non-pesticide methods of control.

### Accept Slightly Blemished

The more blemishes we accept on our fruit, the fewer pest control materials growers will have to apply. Blemishes have no effect on the taste of the fruit. You can make sauces, pies, cobblers, jams, and even pack them in a school lunch box.



## Interesting Facts:

- ◆ Ninety percent of America's agricultural operations are still run by individuals or families and most are still small farms.
- ◆ Principal Latino operators increased by 60 percent from 1997 to 2007.
- ◆ The number of women who were principal operators increased 30 percent since 1997.
- ◆ Apples are a good source of fiber: high in vitamin C, potassium, and antioxidants; low in sodium and almost fat free.

### For More Information:

**Adams County Fruit Growers Association  
Agricultural Human Resources Management  
Committee**  
PO Box 515  
Biglerville, PA 17307  
(717) 677-7444

**Penn State Cooperative Extension of Adams  
County**  
670 Old Harrisburg Road, Suite 204  
Gettysburg, PA 17325  
(717) 334-6271 or (888) 472-0261

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College of Agricultural Sciences

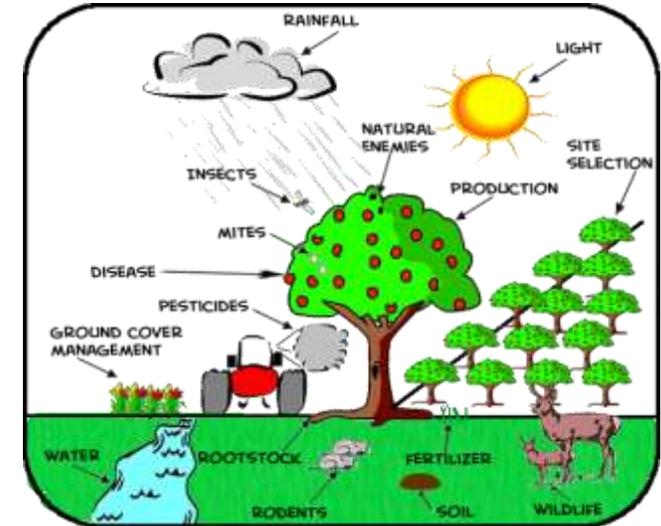
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# Penn State **Extension**

## Fruit Production & Pest Management

*Information Consumers Want to Know*



## Orchard Ecosystem

Fruit production is a complex process with many variables that must be managed to bring you the best quality fruit possible. While pest control is a producer's concern, we all share concerns for our health and environment.

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## What Fruit Does Pennsylvania Produce?

Pennsylvania growers annually produce 442 million pounds of apples, 71 million pounds of peaches and 4900 tons of pears. Tart cherries, sweet cherries, and plums are also produced.

## What is a Pest?

A pest is any type of insect, plant, bacteria, fungus, weed, or wildlife that competes with human food production.



Apple Scab



Broadleaf Weed

## How Many Types of Fruit Pests are there in Pennsylvania?

There are at least 100 types of fruit pests. Some of the most common pests are: codling moth, leaf rollers, apple scab, fireblight, broadleaf weeds, nematodes, and mice.

## Why Do Growers Have to Manage Pests?

Many consumers want to buy defect-free fruit at retail markets and growers must produce enough quality fruit to make a viable standard of living. To achieve this goal, growers develop IPM programs to control fruit damaging pests.

## Pest Control Strategies

### What is IPM?

Integrated pest management (IPM) is a pest control program designed to keep crop damage at an economically tolerable level. IPM is the use of multiple methods, including biological, cultural, genetic, and chemical controls. For example, this can be accomplished by allowing natural predators to reduce the number of pests to an acceptable level. If natural environmental control does not work, growers monitor the number of pests and only spray plant protection agents when harmful population levels have been reached.

Lacewing

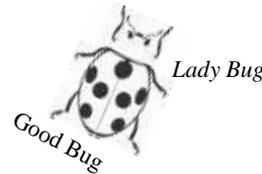


Good Bug

Parasitic Wasp



Good Bug



Lady Bug

Good Bug

Apple Maggot



Pest Bug

Pest Fungus

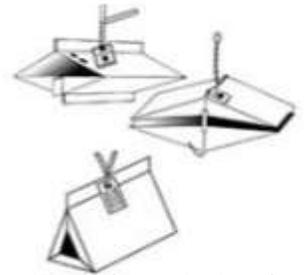


Codling Moth



Pest Bug

Fruit producers use pest control chemicals as a last resort. Because pesticides are expensive, growers try to minimize applications. According to Penn State researchers, growers have traditionally used about 25-50% of the industry recommended amounts of pest control materials.



Traps used for monitoring of peak flight of insect pests

Recent Penn State research on organic fruit production has resulted in the development of even more sustainable management strategies for commercial growers.

## What are the Safety Regulations for Plant Protection Agent Application?

To purchase or apply pesticides, the fruit grower must be trained and pass an exam that is administered by the Pennsylvania Department of Agriculture. This "private applicators certification" must be renewed every three years, during which time growers are required to attend informational meetings.