



Integrated Pest Management for Edible Gardens

A systematic approach to pest and disease control

IPM Steps

- 1) Prevention
- 2) Observation, Identification & Monitoring
- 3) Cultural, Mechanical & Physical Control
- 4) Biological Control
- 5) Least Toxic Chemical Control

1) Prevention

Create a Healthy Garden

- Soil building
- Biodiversity
- Sanitation




Know Your Plant's Needs

- Plant right for your site
- Choose varieties suited for PNW
- Sound cultural practices




2) Observation, Identification & Monitoring

- Identify your plant
- Identify the culprit and learn its life cycle
- Determine if control is actually necessary






Diseases

Fungal: Rust



Viral: Pepper Mottle Virus



Bacterial: Peach Bacterial Canker




Image: http://ipmnet.org/plant-disease/plant_images/051.jpg

Image: http://ipmnet.org/plant-disease/plant_images/ACFABA005659.jpg

Pests

Sap-sucking



<http://pep.wsu.edu/hortsense/images/Large/beanaphid.jpg>

Chewing



Tunnelling or Boring



<http://pep.wsu.edu/hortsense/images/Largeturnipcabbagemaggot.jpg>

Mining



<http://www.hort.purdue.edu/hodov/hort410/peas/fminer.jpg>

Pest—or not?



Pest—or not?



Lady Bug Larvae

3) Cultural, Mechanical & Physical Control

Poor cultural practices can lead to problems or can sometimes look like a disease—don't be fooled!



Drought Stress

<http://www.omafra.gov.on.ca/IPM/english/cucurbits/insects/leafhoppers.html>

3) Cultural, Mechanical & Physical Control

Knowing the life cycle of the pest or disease allows you to time your control methods so that they are most effective.



4) Biological Control

Are the beneficial insects already there?



Northern Paper Wasp



Hover or Syrphid Fly

4) Biological Control

- Store-bought biological control—learn what it takes to keep them in the garden and thriving
 - Lady Bugs
 - Lacewings
 - Predatory Nematodes
 - Bacillus thuringiensis:
 - B.t. kustaki—moth and butterfly larvae
 - B.t. israeliensis—fly and mosquito larvae

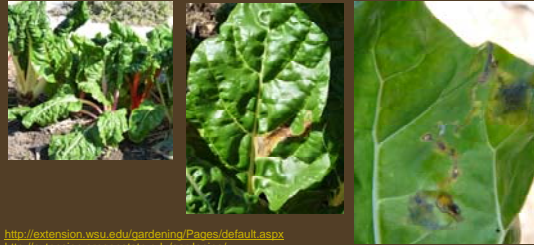
5) Least Toxic Chemical Control

Is it worth the effort and cost?

- Only use when all other methods are exhausted
- Even the least toxic can be harmful if not used properly
- Be sure to target the pest, weed or disease at the optimal time in its life cycle
- Take care not to bring it into the home



IPM Demonstration



<http://extension.wsu.edu/gardening/Pages/default.aspx>
<http://extension.oregonstate.edu/gardening/>
<http://toxipedia.org/display/ipmopedia/backyard+gardening>



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