



Integrated Pest Management: Finding the Right Balance in your Garden

What Is Integrated Pest Management?

- Manage pest sustainably without harmful chemicals, work with nature, not against it.
- A combination of control methods, not just one: biological, cultural, habitat
- Balance is the key. Control techniques work on the ecosystem so that the pests and their prey are in harmony, pests at an acceptable level, whole system healthy and happy, and, in the process, saving time and energy.

How to tackle your pests

- Research the pests of the plants you want to grow, learn the life cycle of these pests.
- Inspect your garden for pests.
- Some damage is acceptable, ie once Kale gets big, pests do minimal damage.
- Monitor garden regularly for pest problems. Monitor the pest situation regularly. Only when monitoring has indicated that the pest will cause unacceptable damage should treatment be considered.
- Cultural Control (both animal and disease control)
 - Modify habitat reduce its food, water, shelter, etc.
 - Crop rotation
 - Attract pest predators (companion planting)
 - Hygiene (clean tools to remove diseases or pests)
 - Modify watering routine (don't over water, under water, water in am)
- Physical Control
 - Hand pick or kill pests physically. (slug traps, copper tape, yellow sticky traps, pails of soapy water)
 - Row covers to prevent pests from reaching preferred crop
 - Remove diseased plants/ leaves and discard not compost.
- Beneficial Insects, Biological Pesticides, and Botanical Insecticides (must purchase)
 - Release beneficial insects into the garden (lady bugs, paracitic wasps), harmless to people, plants and pets)
 - Biological Pesticides safe for environment, used for specific pest.
 - natural pesticides, derived from plants, Pyrethrin spray and organic neem oil.
- Soaps, Oils and Abrasives
 - Safe, natural, degrade withing days.
 - Can harm beneficial insects.
 - Diatomaceous earth, Safer® Soap and horticultural oil
 - Diy pest control recipe
- Prevention
 - Remove target insect's over wintering ground with a good fall cleanup. Same for common diseases

Companion Planting

Follow these guidelines to best structure the layout of your garden

Cucumber



Friends	Foes
Beans Cabbage Lettuce Peas Radish Tomatoes	Aromatic Herbs

Peppers



Friends	Foes
Eggplant Onions Tomatoes	Beans Broccoli Kale

Beans



Friends	Foes
Radish Eggplant Potatoes Cucumber	Onions Peppers Garlic

Eggplant



Friends	Foes
Beans Peppers	Fennel

Potatoes



Friends	Foes
Beans Cabbage	Tomatoes

Beets



Friends	Foes
Lettuce Bush Beans	Pole Beans

Kale



Friends	Foes
Onions	Peppers Tomatoes Squash

Radishes



Friends	Foes
Peas Lettuce Cucumber Beans	Kohlrabi

Broccoli



Friends	Foes
Spinach Onions Squash	Peppers Tomatoes

Lettuce



Friends	Foes
Beets Carrots Cabbage Cucumber Onions Radish Squash	None

Squash



Friends	Foes
Lettuce	Broccoli Kale

Cabbage



Friends	Foes
Potatoes Onions Lettuce Cucumber	Tomatoes

Onions



Friends	Foes
Broccoli Cabbage Carrots Kale Lettuce Peppers Tomatoes	Peas Beans

Tomatoes



Friends	Foes
Cucumber Onions Peppers	Cabbage Corn Broccoli Kale Potatoes

Carrots



Friends	Foes
Beans Onions Lettuce Peas	Dill

Peas



Friends	Foes
Carrots Cucumber Radish Tomatoes	Onions

Turnips



Friends	Foes
Peas	Eggplant

Top 15 Worst Garden Pests

Pest	Most Susceptible Crops	Best Organic Controls
Slug	Beans, cabbage-family crops, lettuce and other greens, strawberries, seedlings of all types	Copper strips, diatomaceous earth, handpicking, iron phosphate bait, poultry
Squash bug	Summer and winter squash	Good garden cleanup, handpicking, neem, poultry, row cover, vacuum
Aphid	Beans, cabbage-family crops, peas, potatoes, tomatoes	Beneficials, oil, soap, strong sprays of water
Cabbageworm	Cabbage-family crops	Bt, handpicking, row cover, spinosad
Squash vine borer	Summer and winter squash	Growing resistant varieties, row cover, Bt injections
Japanese beetle	Beans, grapes, raspberries	Birds, diatomaceous earth, handpicking, poultry, row cover, trap-cropping
Tomato hornworm	Peppers, tomatoes	Beneficials, Bt, handpicking
Cutworm	Cabbage-family crops, pepper and tomato seedlings	Birds, collars, diatomaceous earth
Grasshopper	Beans, cabbage-family crops, carrots, corn, lettuce, onions	Handpicking, poultry, row cover
Cucumber beetle	Cucumbers, melons, squash	Handpicking, neem, vacuum, yellow sticky traps
Corn earworm	Beans, corn, peppers, tomatoes	Bt, neem, vegetable oil
Whitefly	Eggplant, okra, peppers, sweet potatoes, tomatoes	Beneficials, horticultural oil, insecticidal soap, reflective mulches, sticky traps, vacuum
Flea beetle	Cabbage-family crops, eggplant	Cultivation, row cover, yellow sticky traps
Colorado potato beetle	Potatoes	Handpicking, neem, poultry
Leafhopper	Beans, beets, eggplant, lettuce, potatoes	Diatomaceous earth, insecticidal soap, row cover

Natural Insecticidal Soap spray

aphids, mites, white flies, thrips, and mealy bugs:

1 1/2 tablespoons of liquid soap (biodegradeable)

1 quart of water

Mix and spray on affected plants

Baking Soda Spray

1 tablespoon of baking soda

1/2 tablespoon of oil

2 quarts of warm water

for treating plants with fungal diseases on leaves, mix and use immediately

Japanese Beetles, borers, leafhoppers and slugs

Garlic also deters larger pests like deer and rabbit.

-Natural Insecticidal Soap Spray (from recipe above)

-1 tbsp chili powder (or fresh or dried hot peppers)

-5 cloves of garlic, crushed

Allow garlic and chili powder to steep overnight. Strain and pour into a spray bottle. Add Natural Insecticidal Soap Spray. Will keep for a couple weeks.

Thrips, aphids, grasshoppers, chewing and sucking insects

Garlic, Peppers & Onion Insecticide

2 hot peppers 1 whole bulb of garlic

1 large onion 1/4 cup water

Toss in the food processor and add water, blend until a mash is made.

Cover mash with 1 gallon hot (not boiling) water and let stand 24 hours.

Strain. Spray on roses, azaleas, vegetables to kill bug infestations. Bury mash in ground where bugs are heaviest.

Friend or Foe: Which Insects Benefit Your Garden?

✓
Say yes to these helpful bugs

✗
Keep these pests out

Bees



Ladybugs



Tomato Horn Worms



Cabbage Worms



Spiders



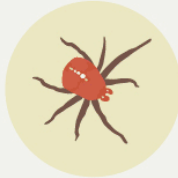
Green Lacewings



Cabbage Moths



Mites



Praying Mantis



Ground Beetles



Slugs and Snails



Cutworms



Small Pirate Bugs



Predator Flies



Flea Beetles



White Flies & Aphids



Parasitic Wasps



Centipedes



Carrot Rust Flies



Squash Vine Borers



Earwigs



Ants



Mexican Bean Beetles



















Parsley Worms



What's Eating My Plant?

How to Recognize Common Pests by the Leaf Damage They Cause

Damage	Pest
<ul style="list-style-type: none"> Deformed leaves, sucking damage 	<ul style="list-style-type: none"> Aphids 
<ul style="list-style-type: none"> Discolored leaves, sucking damage 	<ul style="list-style-type: none"> Thrips and mites 
<ul style="list-style-type: none"> Chewed or skeletonized leaves 	<ul style="list-style-type: none"> Beetles, caterpillars, and sawflies 
<ul style="list-style-type: none"> Leaf galls (abnormal plant growths) 	<ul style="list-style-type: none"> Cynipid wasps, certain aphids, psyllids, and mites 
<ul style="list-style-type: none"> Leaf mines (white patterns on leaves) 	<ul style="list-style-type: none"> Beetle, fly, or moth larvae 
<ul style="list-style-type: none"> Folded leaves 	<ul style="list-style-type: none"> Caterpillars, tree crickets, and spiders 
<ul style="list-style-type: none"> Rolled leaves 	<ul style="list-style-type: none"> Certain mites or some caterpillars 
<ul style="list-style-type: none"> Chewed leaves, slime trails 	<ul style="list-style-type: none"> Slugs and snails 

<https://www.fix.com/blog/common-garden-pests-and-how-to-get-rid-of-them/>

COMMON WEED

IDENTIFICATION GUIDE



Creeping
Charlie



Canada
Thistle



Nutsedge



Shepherd's
Purse



Crabgrass



Buckhorn
Plantain



Pigweed



Lambsquarter



Bindweed



Quackgrass



Chickweed



Dandelion



Purslane



White
Clover



Sweet
Clover



Cinquefoil



Oxalis



Dayflower



Wild Violet



Smartweed



Quickweed



Knotweed



Nettle



Pokeweed



Ragweed



Poison Ivy



Black
Nightshade



Black
Medic



Dock



Henbit



Salsify



Fleabane



Spurge



Musk
Thistle