Creating a Successful ORGANIC Garden

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What *IS* Organic Gardening?

The garden is an ecosystem, not just a plant collection.

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All elements affect each other and work together harmoniously.

The whole environment is nurtured in addition to the plants.

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Synthetic and dangerous products that disrupt the natural balance are avoided

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How Can **you**
Create an **Organic Garden**
That is safe for your **family**, your **pets** AND your **environment**?

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It Begins with the **SOIL**

A good gardener grows soil, not just plants
Keys to Heathy Soil

- **Soil Improvement**
  - Compost
  - Vermicompost
  - Manure

- **Soil Testing**
  - A pH of 6.0 – 7.0 is good
  - Check plant requirements

- **Mulch**

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10 Benefits of **COMPOST**

1. Supplies organic matter
2. Supplies nutrients and micronutrients
3. Improves soil structure
4. Loosens heavy soils
5. Improves water holding capacity and drainage
6. Increases water penetration into soil
7. Encourages beneficial organisms
8. Decreases landfill waste
9. Carbon sequestration (reduces greenhouse gas emissions)
10. Builds soil

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Make Your Own Compost

1. Choose a container (or not)
   • **pallets or wood** slats on 3 sides of the pile
   • a circle made of **chicken wire**
   • Store bought “**compost tumbler**”

2. Collect and pile up materials
   • alternate 2 parts “browns” and 1 part “greens”

3. Water the pile and keep it moist

4. Mix it every few days to heat and speed it up
   • only a HOT pile (140-160°F) will kill seeds and disease

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What to Compost

**BROWNS/CARBON**
- Shredded leaves
- Shredded paper
- Cardboard
- Pinestraw
- Mulch
- Wheat Straw
- Dry plant material
- Coffee filters
- Eggshells

**GREENS/NITROGEN**
- Vegetable scraps
- Fruit scraps
- Fresh/green plant clippings
- Coffee grounds
- Coffee grounds -for Hot Compost only
- Manure (no dog/cat/pig)
- Tea bags
- Fresh (grass clippings)

**AVOID**
- Herbicide treated materials
- Fats, Oils, Grease
- Meats
- Bones
- Dairy
- Waxy Paper
- Treated wood
- Bad weeds with seedheads
- Nutgrass
- Diseased plants

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Vermicompost
(Composting With Worms)
Benefits of Vermicompost

All the benefits of typical garden compost

PLUS

Promotes seed germination
Increases plant yields
Reduces pest populations
Suppresses disease

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How to Make Your Own Worm Bin

What You Need

- Dark Container (worms don’t like light)
- Drill (to drill drainage holes and airholes)
- Shredded Paper/Cardboard (for bedding)
- Bucket of Water (for soaking paper)
- Worms (red wigglers)
- Kitchen scraps (to feed ‘em)
- Grit (powdered eggshells or a little sand)
How Much Compost and Vermicompost Do You Use?

- **POTTED PLANTS**
  - 20% Vermicompost
  - 80% Soil Mix

- **GARDEN SOIL**
  - 0.1 lbs per ft²
  - 2-3” Compost
  - Soil

- **4’x8’ RAISED BED**
  - 3.5 lbs Vermicompost
    - Mixed into top several inches

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Prepare Your Soil

Remove vegetation by covering or tilling & removing all grass rhizomes. Add compost, fertilizers and amendments according to soil test results. Mix into top 6”-8” of soil.
Start with high quality plants!

When purchasing transplants, choose health, disease free plants that are not rootbound.
## Choosing the Right Plants

<table>
<thead>
<tr>
<th>Heirlooms</th>
<th>Hybrids</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pros</strong></td>
<td><strong>Pros</strong></td>
</tr>
</tbody>
</table>
| • Withstood the test of time | • Bred for a superior trait  
 | • Passed down through generations |   - disease/pest resistance  
 | • Abundance of varieties |   - high yields  
 | • Seeds can be saved |   - color  
 | **Cons** | **Cons** |
| • Not always disease/pest resistant | • Cannot save your own seed  
 | • Harder to obtain transplants | • Less diversity  

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Right Plant  →  Right Location

- Select varieties for your region
- Plant in good soil
- Ensure good drainage
- Ensure water access
- Appropriate sunlight

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Managing Fertility

- Soil testing
- Composted Manure
- Green Manures/Cover Crops
- Compost/ Vermicompost
- Rock Dusts
- Organic Fertilizer Blends
- “Ala carte” Organic fertilizers
  - Alfalfa Meal
  - Fish emulsion, etc.

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Organic Pest Control

Physical
- Row Covers
- Traps
- Diatomaceous Earth
- Remove sick plants

Cultural
- Ensuring horticultural requirements are met

Biological
- Beneficial Insects
- Bt

Mechanical
- Remove pests by hand
- Vacuum
- Solarization

Chemical
- OMRI Certified Organic Pesticides

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Organic Pest Control cont’d

Pest Monitoring

• Check plants OFTEN for pests and disease
• Some pests multiply QUICKLY!
• Most pests are easier to control when young and less numerous
• You can remove a sick plant or two before disease spreads
• Monitoring areas close to the garden can be helpful too

Thresholds

• With Organic Gardening, there is a balance between allowing some insects to survive, because they attract and feed beneficial.
• The threshold is the point at which a pest becomes present in numbers that will significantly reduce plant health and yields.

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Consider Companion Planting

- **Basil** repels flies and mosquitoes.
- **Dill** repels aphids, squash bugs, spider mites, cabbage loopers and tomato hornworms.
- **Rosemary** repels cabbage looper, carrot fly, slugs, snails, and the Mexican bean beetle.
- **Petunias** repel aphids, tomato hornworm, asparagus beetles, leafhoppers, and squash bugs.
Monoculture vs. Polyculture

All You Can Eat Buffet!!!
Crop Rotation

Pest Disease Control – Rotate Families every 2 years
  Rotate every 4 years for severe problems

Nutrient Management- Heavy Feeders vs Light Feeders

Note: Companions vs Antagonists
Organic Pest Control Products to Keep on Hand

• Pest ID book or guide
• Bt - Bacillus thuringiensis
• Neem Oil
• Horticulture Soap
• Horticulture Oil
• Spinosad
• Copper Fungicide

• Insect row covers & Animal Barriers
• Vermicompost
• Compost/Worm Tea
• Pyrethrum (NOT Pyrethrin/Pyrethroids)
• Mulch for weed suppression
• Sluggo

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Know Your Bugs

Bad Bugs
- Aphids
- Whiteflies
- Mites
- Leafhoppers
- Some Caterpillars
- Some Beetles
- Cutworms
- Borers

Good Bugs
- Ladybug
- Lacewing
- Assassin Bug
- Parasitic Wasps
- Pollinators
- Minute Pirate Bug
- Syrphid fly

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Organic Weed Control

- Prevention
- Organic Herbicides
- Physical Removal
- Organic pre-emergents
- Barriers
Why You Need Mulch

• Suppresses Weeds
• Retains Moisture
• Reduces erosion
• Inhibits disease
• Shelters beneficials
• Maintains temperature
• Prevents soil cracking
• Prevents frost heaving

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