

UNIVERSITY OF MINNESOTA EXTENSION
MAKING A DIFFERENCE IN MINNESOTA: ENVIRONMENT • FOOD & AGRICULTURE • COMMUNITIES • FAMILIES • YOUTH

Introduction to Vegetable Gardening

Introduction to Vegetable Gardening is a 3-part series of classes to help beginning and intermediate vegetable gardeners expand their knowledge and improve their vegetable gardening skills. Whether you want to grow veggies in your yard, a raised bed, in containers or in a community garden plot, this workshop is filled with tips to help you reap the harvest and the satisfaction of "homegrown."

Brought to you by the University of Minnesota Extension & Ramsey County Master Gardeners

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1


PART 3 – GARDEN CARE

- Regular care
- Pest control
- Local resources



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4



Caring for Your Garden

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5

VISIT REGULARLY

- Make a schedule, or set a reminder
- Water as needed
- Remove weeds
- Inspect plants
 - Check for problems
 - Harvest ripe vegetables
- Take notes



6

WATER AS-NEEDED

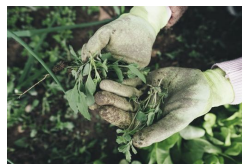
- Early morning is best
- Water deeply
- Apply to the roots; **NOT** the leaves
- Mulch around roots
- May need to water more in hot, dry weather



7

WEED OFTEN


- Reduces competition for light, nutrients & water
 - Bigger vegetables
 - Faster to mature
 - Larger crop yields
- Discourages pests & diseases



8

CONTROL DAMAGE

- Check often
 - Limits amount of damage
 - Prevent the spread to healthy plants
- Look for
 - Strange marks
 - Holes
 - Insect droppings (*frass*)



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9

HARVEST

- Harvest as soon as ripe
 - Check often
 - Be thorough
- Use food safety practices
 - Wash your hands
 - Wash your vegetables
- Remove overripe, brown, or dead plant material




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10

TAKE NOTES

- Digital or paper
- Reminders for future gardens
 - Which plants
 - Planting/harvest dates
 - Problems/solutions
 - Ideas to try



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11

END OF SEASON CARE

- Remove dead plant material
 - Compost healthy material at home
 - Take diseased material to Yard Waste Site
- Add organic matter to soil
- Mulch or cover soil
- Clean & store tools
- Order soil test



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12



Pest Control

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ACCEPT IMPERFECTION

- Gardens are never perfect
 - Leaves will have holes
 - Plants will wilt
 - Flowers will die
 - Vegetables will have weird shapes
- Decide if what you see is actually a problem

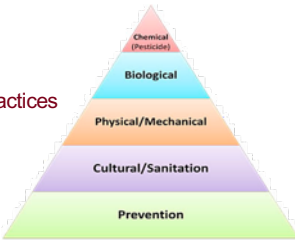


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14

INTEGRATED PEST MANAGEMENT (IPM)

- Common-sense steps to manage pests & optimize plant health
- Steps
 - Know your plants
 - Use good gardening practices
 - Identify the problem
 - Make physical changes to the garden
 - Using control agents as needed



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15

GOOD GARDENING PRACTICES

"An ounce of prevention is worth a pound of cure"

- Stop most problems from starting
 - Good garden sanitation
 - Proper plant selection
 - Block pest access



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16

IDENTIFY THE PROBLEM

- Research **before** treatment
 - Signs & symptoms
 - Conditions that favor pest
 - Pest lifecycle
- Many resources available
 - U of MN Extension website
 - Master Gardeners
 - Diagnostic Clinics



Who dunnit?

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17

COMMON PROBLEMS

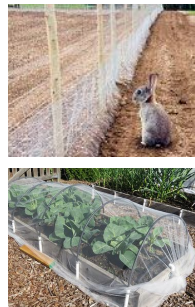
- Abiotic
 - Weather, salt, pesticide drift, nutrition depletion, soil compaction
- Animal
 - Voles, rabbits, woodchucks, deer
- Insect
 - Caterpillars, beetles, borers
- Fungal
 - Rust, mildews, mold
- Bacteria
- Viral



18

PHYSICAL BARRIERS

- Benefits
 - Blocks animals or insects from accessing the garden
 - Can encircle individual plants or whole gardens
- Recommendations
 - Use **fences** for animal pests
 - Use **row covers** for insect pests
 - Use **mulch** for microbial pests (fungus, bacteria) & weeds



19

MANUAL REMOVAL


- Benefits
 - Reduces the number of plant & insect pests
 - Relieves plant stress & competition
- Recommendations
 - Remove the whole plant & as many insects as possible
 - Weed when the soil is wet
 - Squish insects or drop into soapy water



20

PESTICIDES

- **Benefits**
 - Designed for specific needs
 - Tested for effectiveness & safety
 - May be the only solution
- **Recommendations**
 - Know the problem
 - Use the right pesticide
 - Make sure it is safe for **edible plants**
 - Apply **exactly** according to the label






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21

TYPES OF PESTICIDES

<p>Herbicide</p> <ul style="list-style-type: none"> ▪ For plants ▪ Preventative or curative ▪ May kill vegetables 	<p>Insecticide</p> <ul style="list-style-type: none"> ▪ For insects ▪ Preventative or curative ▪ Ingested or contact-based 	<p>Fungicide</p> <ul style="list-style-type: none"> ▪ For fungus, mold, mildew, & rust ▪ Preventative only 
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22

HOMEMADE PESTICIDES

- **Supposed Benefits**
 - Lower cost
 - More “natural”
- **Not Recommended**
 - Many not scientifically proven
 - Can cause unexpected damage to plants or soil
 - Research solutions from trusted sources



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23

FOOD SAFETY

- Benefits
 - Reduce contamination of illness-causing microbe
- Recommendations
 - Wash hands
 - Clean & sanitize harvest tools & containers
 - Avoid harvesting produce near scat
 - Wash produce in water



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24



Garden Resources

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25

U OF MN EXTENSION WEBSITE

<https://extension.umn.edu/yard-and-garden>

- Lots of information
 - Common pests
 - Diagnosing problems
 - Details for growing
 - Tips & best practices
 - More resources



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26

MASTER GARDENERS

<http://www.ramseymastergardeners.org/>

- Community members & volunteers
 - Receive Extension education on horticultural topics
 - Share scientific-based information with their residents
- Where to find Master Gardeners
 - Educational programs
 - Farmers Markets
 - Yard Waste Collection Sites
 - Fairs and other community events

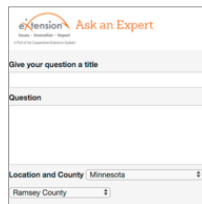


27

“ASK AN EXPERT”

<http://www.extension.umn.edu/garden/ask/>

- Master Gardeners respond within 48 hours
- Contact by Phone
 - Call and leave a message
 - Caller ID will come up as “Unknown Caller”
- Contact by Email
 - Provide as much detail as possible, including photos.
 - Ensure the subject (plant, insect, etc.) is clearly visible in any photos



28

DIAGNOSTIC CLINIC

<http://www.ramseymastergardeners.org/index.php/events/diagnostic-clinic>

- Operated by Master Gardeners
- Open Wednesdays & Saturdays from Apr-Oct
- Bring multiple samples & pictures if possible
 - Collect your samples **that day**
 - Note the overall pattern on the plant (Ex. Are all the leaves affected or just the lower branches?)



29

RAMSEY COUNTY YARD WASTE SITES

<https://www.ramseycounty.us/residents/recycling-waste/collection-sites/yard-waste>

- State law **prohibits** leaves, grass clippings, brush & other plant material from being mixed with your trash
- Multiple locations
 - Free to Ramsey County residents
 - **Photo ID is required**
 - Accepts leaves, grass, branches, garden refuse & Organics Recycling
 - Compost & wood mulch available




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30

CLASS RECAP

- Part 3 – Growing best practices
 - Regular care
 - Garden trouble-shooting
 - Finding help

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31

GARDEN RESOURCES

- U of MN Extension:
 - <https://extension.umn.edu/yard-and-garden>
- Ramsey County Diagnostic Clinic:
 - <http://www.ramseymastergardeners.org/index.php/events/diagnostic-clinic>
- Ask An Expert Hotline:
 - <http://www.extension.umn.edu/garden/ask/>
- Ramsey County Yard Waste Sites:
 - <https://www.ramseycounty.us/residents/recycling-waste/collection-sites/yard-waste>
- U of MN Soil Test Services:
 - <http://soiltest.cfans.umn.edu/>

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34
