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Notices

Growing Groceries presentations are based on Washington State University home gardening publications and other science and research-based materials. Resource lists are provided at the end of the presentations.

Speakers may use examples from their own experience.



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Reasons to Start a Veggie Garden

- You have the space
- You have the time
- You love fresh produce
- You love variety
- You want to practice sustainability/organic gardening
- You love delicious things

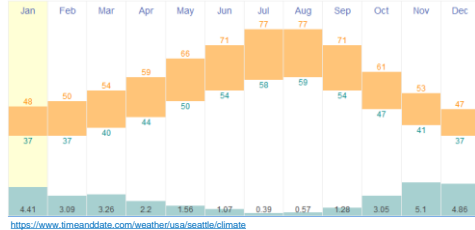


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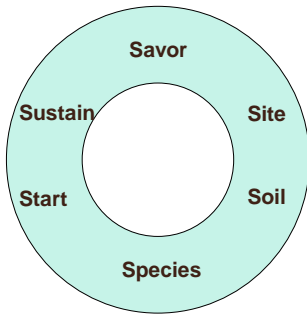
Seattle Weather

Annual Weather Averages Near Seattle

Averages are for Seattle Boeing Field, which is 7 miles from Seattle.
Based on weather reports collected during 1992–2021.



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Recipe for a veggie harvest - served with lots of prevention, and a side of cure

1. Site – full sun
2. Soil – well draining and fertile
3. Species – disease resistant and will ripen in time
4. Start – at right time/temperature
5. Sustain – water and watch
6. Savor – know what ripe is



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Recommended Tools

- Use a Gardening Calendar (free)
 - Vary from detailed to concise
 - <http://www.metromastergardeners.org/calendar/>
 - Some include all plants, some are veggie specific
 - Get one for your climate zone
- Get a soil test (free in King County)
 - add the deficient items
- Use a moisture meter (\$10 and up)

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Your Site

- Size - a one-gallon container to an acre.....or more
- Sun – full sun is 6 or more hours per day
 - Low light? Start by growing leafy greens, asparagus, garlic, and leeks.
 - Medium light? Try beans, radishes, and peas.
- Access to water
- Good drainage
- Defensible



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Site – Sun/Heat Exposure Differences



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Site - Garden Layout

- Build your raised beds or rows to allow for the best sun.
- Beds or rows should be 3-4 feet wide, so you can reach the middle of the bed.
- Paths should be wide enough to walk through comfortably, especially when the plants mature.

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Site – Ground Options



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Site - Benefits of Raised Beds

- Soils warm up faster for earlier planting
- Improved drainage allows bed to dry out faster in the spring so soil is workable earlier
- Efficient use of garden space for desired plants
- Greater rooting depth

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Site - Container Options



- The bigger the pot the better
 - Less watering, more growing
- Ditto on raised bed benefits

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Site – Go Vertical



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Gardeners Soil Recipe - Ideal Blend

- 40%-45% Minerals – clay, silt and sand
 - 5%-10% Organic matter – living, decaying and composted
 - 50% Pores – allow water movement and air pockets
-
- Add nutrients, if needed
 - N = Nitrogen
 - P = Phosphorus
 - K = Potassium

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Soil – Fertilizer/Compost Additions

Best choice -

- Have a soil test completed.
- Follow amendment directions in the report.

Other choices -

- Apply 6-7 pounds of a 5-5-5 complete organic fertilizer per 1000 sq. foot of garden.
- Apply per plant or plant row (Territorial Seed)
- Add 1 to 3" compost to new beds, less for existing beds.

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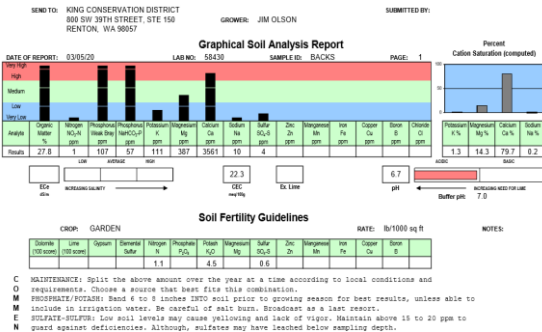
Soil-Preparing the Soil

- Get soil test (King Conservation District)

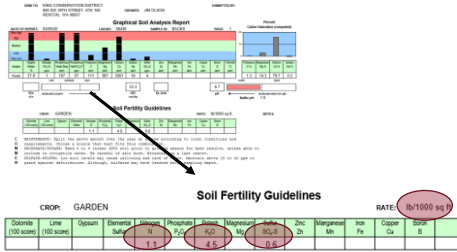


<https://kingcd.org/programs/better-soils/healthy-soil/>

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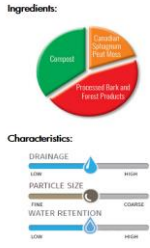
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Soil – Potting Soil

- Not soil at all.
- Sterile – free of insects, weed seeds and disease organisms
- Designed for lighter weight, good drainage, good aeration and nutrient availability.
- Typically composed of compost, peat moss, vermiculite, bark and coconut coir fiber
- They do break down in a couple years....



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Soil - For Boxes and Pots

May use good garden soil from your garden or make/buy the best potting soil you can



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Soil-To Till or Not to Till

If you soil has been compacted (walked on, driven over), you will need to break it up.



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Species - Plant Info/Label

Marketmore
Slicing Cucumber

Very popular slicing and salad variety. Harvest about 60 days after transplanting.

Slicing Cucumber
Dark green fruit, 8-9' long on vigorous growing plant. Sturdy skin holds up well in packing and transport.
Maturity: Harvest about 60 days after transplanting.
Exposure: Full Sun
Soil: Plant in warm, fertile, light, well-drained soil. Feed with half a cup of organic fertilizer per plant.
Water Needs: Maintain even soil moisture.
Spacing: Plant in hills 48" apart. Train to a trellis to save space.

Savor
Savor
Sun/site
Soil/site/start
Sustain
Start/sustain

7 25787 93386 5 3.5

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Species - Plant Catalog Information

Edamame Beans

| | | | |
|------------------|---------|-----------------|-----------|
| Days to Maturity | 65-80 D | Days to Harvest | 7-10 |
| Height | 2' | Plant Spacing | 22-36" |
| Weight | 2" | Plant Spacing | 18-30" |
| Soil | MOIST | Plant Spacing | 2-3 years |
| Water | Low | Plant Spacing | Low |

Edamame Beans Culture
• Water to keep soil moist, check often for wilting plants.
• Harvest when seeds are plump and beans are green. Cooking green often is best.
• Green pods turn yellow, beans become starchy and are best when fresh.

Harvest & Storage
• Harvesting green is best, check often for wilting plants.
• Harvest when seeds are plump and beans are green. Cooking green often is best.
• Green pods turn yellow, beans become starchy and are best when fresh.

2000 Water Breaker!
This unique line has resulted in the one we think you'll love most. It's a variety that water flows into an ultra-thick, walled bladder that keeps the moisture inside and out for storage and longer shelf life. With 1,000 holes in the 2 inch heads, the water flows in and out, so you can enjoy the beans right out of the bag. Perfect for salads and soups. The seeds are guaranteed to last these long. Available in 100lb bags. Made in the USA with a limited lifetime guarantee.

MIDORI ALABET
AJS 70 show. Late early maturing, these delicate tendrils are especially suited for storage season gardens. We found that most of the pods formed 2-3 weeks after, sweet green pods are the right color. These green pods are perfect for salads and soups. Vigorous plants reach up to 10' tall with a strong and knotted habit. 500 seeds each, 80 per ounce.

SAVANNAH
AJS 85 show. This variety is a consistently high yielding, late maturing bean that reaches 10' tall. It's perfect for salads and soups with the largest in our line. Our time tested and proven for the Southern region. 500 seeds each, 80 per ounce.

Edamame Beans

Edamame Beans

Edamame Beans

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Species – Selecting seeds or starts

Choose plants suitable for the Pacific Northwest

- Select for flavor, size, and variety
- Time from planting to harvest
- Chose disease resistant species



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Species – Seed/Stock Information

- F1 – hybrid, next generation not true to parent
- **Open Pollinated** – next generation true to parent
- **Organic** – seed stock grown organically, open-pollinated
- **Heirloom** – open pollinated, at least 50 yearly generations



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Starting (when)

- Soil temperature
 - Use planting calendar (good)
 - Use soil thermometer (better)

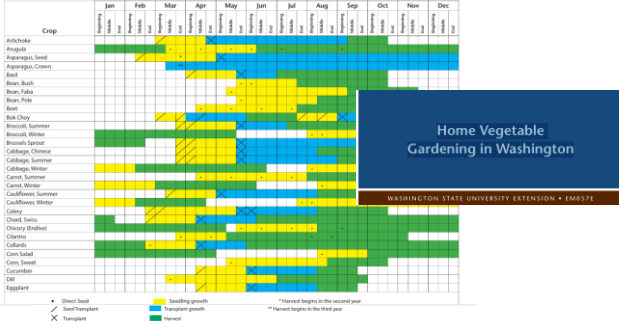


| | when to plant | days to maturity |
|------------|---------------|------------------|
| Peas | 2/15 - 4/15 | 95 - 120 |
| Spinach | 3/1 - 8/15 | 40 - 50 |
| Peppers | 3/15 - 4/15 | 80+ |
| Tomatoes | 4/1 - 5/1 | 60+ |
| Broccoli | 4/1 - 7/15 | 55 - 90 |
| Carrots | 4/1 - 7/15 | 70 - 90 |
| Lettuce | 4/1 - 8/1 | 65 - 80 |
| Cabbage | 4/15 - 6/15 | 70 - 85 |
| Pumpkins | 5/15 - 6/15 | 90+ |
| Pole beans | 5/15 - 6/7 | 70 - 85 |
| Cucumbers | 6/1 - 6/15 | 55 - 75 |
| Corn | 6/1 - 6/15 | 60 - 100 |
| Melons | 6/1 - 6/20 | 55 - 85 |

yellow shading = direct sow
blue shading = beware root bound transplants

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Table 3. Suggested planting calendar for vegetable crops in the Pacific Northwest; specific dates should be obtained by experimenting in your area (adapted from Miles et al. 2010, 9-29-21)



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Start - Timing Consequences

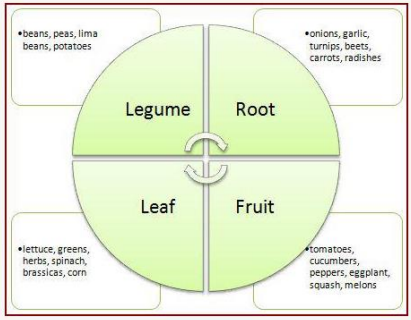
- Cool weather crops
 - Starting too early – may not germinate in soil, root bound in container
 - Starting too late – they bolt when heat arrives
- Hot weather crops
 - Starting too early - Vulnerable to disease, may be leggy
 - Starting too late - Smaller yield

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Starting (how)

- Rotate crops
 - Reduce pest, disease, and soil impacts
- Pre-warm soil and/or keep warm
- Harden off transplants
- Keep seedling plug and soil moisture levels the same
- Protect the seed/seedling from pests
 - THERE WILL BE SLUGS/SNAILS!!
- Optimal spacing and support

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Start - Raise the Heat: Raised Beds, Insulating Structures and Floating Row Covers



Added Bonus – Keeps many pests away!

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Start - Transplant



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Sustain - From Survive to Thrive (aka preventing problems)

- Raise the heat
 - Mulches
 - Cloches and beyond
- Watering - an art
- Limit competition
- Encourage optimum pollination

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Sustain - Watering-An Art

- Which holds more water
 - Dry sponge?
 - Wet sponge?
- Drench versus drip
- Too dry? Too wet?
- Know the specific needs of your crops.



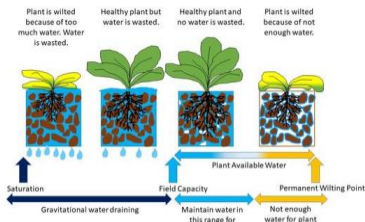
<https://www.rainbird.com/homeowners/products/drip-irrigation>

- **Slow and low is best!!**

Even artists use tools!

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Too Much – Too Little



Credit - <https://extension.umn.edu/irrigation/basics-irrigation-scheduling>

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Using a Moisture Meter



Vegetables require soil moisture between 41%-80%



<https://www.acurite.com/blogs/acurite-in-your-home/soil-moisture-guide-for-plants-and-vegetables>

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Water Percolation - From High to Low

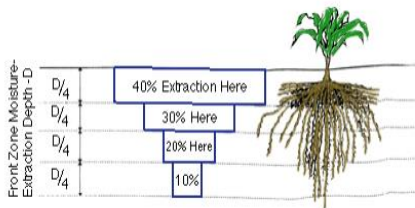
One inch of water will go:
sandy soil - 12 inches
good loam - 6 to 10 inches
clay soil - 4 to 5 inches.

Time Required – in moistened soils
Sandy loams accepts from 1/2–3 inches of water per hour
Takes 20 minutes to 2 hours to water
Clay-loam absorbs 1/10–3/5 inch of water per hour
Takes 1.5 to 10 hours to water

Time Required – in dry soils
Sandy loam - as little as 4 hours
Clay-loam - as long as 120 hours

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Water Uptake by Plants



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Sustain - Pollination

Optimize pollination – plant flowers, too!



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Sustain - Limit Competition

Culprits - weeds and other crop plants



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When Prevention isn't Enough

Don't Just Stand There, Do Something!
Which Includes Being Patient.....

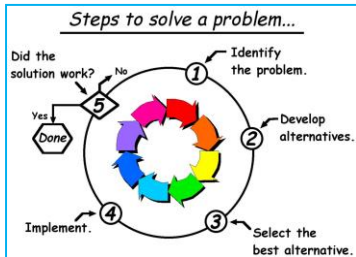
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Integrated Pest Management

- **Set action thresholds.**
 - When pests threaten your plants or your health.
- **Identify and monitor the critters you have.**
 - Is it a pest, benign or a beneficial?
 - Confirm ID before acting
- **Choose the best control options, least aggressive first.**
 - Non-chemical Controls –
 - Cultural and/or Biological Controls
 - Chemical Controls –
 - Organic Options

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Sustain - How to be a Good Problem Solver



This Photo by Unknown Author is licensed under CC BY-SA

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Sustain - Questions to Ask

- What plant(s) are affected? What plant parts are being affected?
- When did the damage first occur?
- How long has the damage been occurring?
- Is it getting worse?

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Sustain- Observe and Define Problem

- What are the symptoms
 - wilting, leaf discoloration, critter bites?
- Establish context
 - time of year, amount of sun, is the problem getting worse?
 - is this symptom actually a problem?

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WSU Problem ID and Solution Resource

The screenshot shows the 'Hortense' website header with the WSU logo and the text: 'More than one thousand fact sheets are provided to guide the home gardener in the management of plant problems using Integrated Pest Management (IPM), including cultural controls and Washington State registered pesticides.' Below this is a box listing: 'Tomatoes', '10 diseases', and '7 pests'.

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Sustain-Identify Potential Causes

- Pest or disease
- Time of year issues
- Gardening practices
 - watering, competition, etc.
- Site issues
 - sun exposure, drainage



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Sustain - Identify Potential Solutions

- Take no action, keep observing
- Change gardening practices
 - change your watering practices, consider plant density, prune or not.
- Treat pest or disease

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Sustain – Non-Chemical Options for Pest/Disease Problems

Cultural controls

- Practice good garden hygiene
- Rotate crops—prevent pest buildup
- Use good watering practices

Biological controls

- Beneficial insects (buy or attract them)
- Bacillus thuringiensis (B.t.)



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Sustain – More Non-Chemical Options

- Trap them—use cardboard, overturned cantaloupe, plant trap crops
- Barriers—block them with row covers
- Hand pick—slugs, snails, caterpillars, leaf miners
- Spray off with water



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Sustain – Chemical Options

- Pest Specific organic/conventional pesticides
- Broad spectrum organic/conventional pesticides



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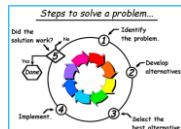
Info on pesticides

- Pesticide – a broad category of chemical agents
- Herbicide - kills plants/weeds.
- Insecticide - kills insects.
- Fungicide - kills fungi.
- Rodenticide - kills rodents.
- **READ** and **FOLLOW** all label instructions

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Sustain - Check Results after Interventions

1. Did things get better? If not, repeat steps 1-4
2. Resources to get help with your veggie problems:
 - Master Gardener clinics
 - WSU publications
 - Demo gardens



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Sustain - Summary

- Take preventative steps to avoid problems.
- Use good gardening practices.
- Be a good problem solver.



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Savor

- Easiest and most enjoyable part of gardening.
- Timing is important
- Nurture and feed yourself and others
- Take satisfaction in a job well done



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Savor - When to Harvest Watermelon



Tendril nearest fruit turns brown

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Savor - When are green beans ready?

When 4-7" in length and the width of a pencil.

Firm to the touch with no visible bulges.



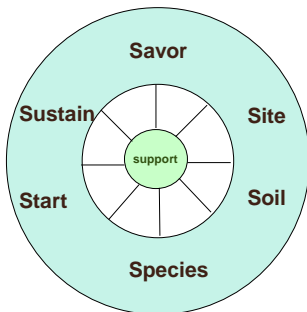
Credit: https://www.burpee.com/bean-pole-kentucky-blue-prod000587.html?gclid=EAb1QobCMIP-_3ZK_gIVJBChCI0zshEPEAQYASABEgWPID_BwE&gclid=aw.ds

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Points of emphasis

- Get and use a gardening calendar.
- Get a soil test & follow the recommendations
- Use a moisture meter.
- Enjoy your garden.

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Questions?



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Fair Use

- Slide 11: <https://hopefarmblog.wordpress.com/2016/05/04/how-to-use-a-mason-jar-to-test-your-soil/>
- Slide 14: <https://www.rootssimple.com/2011/04/till-vs-no-till/>
- Slide 16: https://www.gardenersedge.com/images/500/5976T_1.jpg
- Slide 19: <https://www.amazon.com/Red-Mulch-Plastic-Embossed-Solution/dp/B00BD70XB0>
- Slide 20: <https://trashbackwards.files.wordpress.com/2012/05/p1090956.jpg>
- Slide 20: <http://1.bp.blogspot.com/-0j0KOJ7vQQc/UISbBwNYJkI/AAAAAAAAAFvo/K3GFfMF1R1w/s1600/row+cover.JPG>
- Slide 22: <https://www.flickr.com/photos/bizzyb0t/5833947740>
- Slide 25: <https://i1.wp.com/www.leereich.com/wp-content/uploads/2013/09/Corn-poor-pollination.jpg>, http://gardenmentors.com/wp-content/uploads/2015/07/2015_07_zucchini_pollination.jpg
- Slide 27: <http://thecollaboratory.wdfiles.com/local--files/2013-philosophy-of-thought-logic/steps-to-problem-solve.jpg>
- Slide 39: <http://sacmg.ucanr.edu/files/244416.jpg>
<https://www.plantedwell.com/balcony-garden-ideas/>

Special thanks to Gia Parsons and Heidi McKibbin Copper for many great photos.

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Upcoming Presentations



Growing Groceries

2025 Cool Season Series

Wednesdays 7:00pm-8:30pm



| Date | Class |
|------------------|--|
| Wed, January 22 | Vegetable Gardening in the PNW |
| Wed, February 5 | Early Starts, Early Harvests |
| Wed, February 19 | Essential Culinary Combinations |
| Wed, March 5 | All About Brassicas |
| Wed, March 19 | What's a Garden Without Tomatoes? |
| Wed, April 2 | Beacon Food Forest: Seattle's Communal, Edible Landscape |

PNW Garden Savvy

2025 Series 1

Saturdays 9:30am-10:30am



| Date | Class |
|------------------|--|
| Sat, January 11 | Tips for New and Experienced Gardeners |
| Sat, January 25 | Growing Roses in Today's World |
| Sat, February 8 | Balcony to Backyard: Climate Adapted Gardening in the PNW |
| Sat, February 22 | Wildlife Friendly Gardening for Natural Pest Control |
| Sat, March 8 | Best but Unusual Companion Plants for Rhododendrons |
| Sat, March 22 | Mastering Mason Bees: Essential Insights for Successful Spring Pollination |

More info: <https://kingcounty.mastergardenerfoundation.org/education>

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Master Gardener Resources



Ask a Master Gardener

Send a messages with questions and photos to: ask-a-mastergardener@live.com

Or use the online form at <https://extension.wsu.edu/king/ask-a-master-gardener>

Become a Master Gardener

For information on King County Master Gardener training, visit <https://extension.wsu.edu/king/gardening/become-a-master-gardener>

Applications for the 2026 class will open in September 2025

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