

Notices

Master Gardeners provide a multitude of resources for home gardeners. This gardening information is research-based, available to the public, and focused on environmentally friendly and sustainable gardening practices.



We are grateful for this land – the ancestral homeland of the Duwamish, Stillaguamish, Suquamish, Tulalip, and Coast Salish Peoples. We pay our respects to the Elders and members of these nations, both past and present.

For more, go to:



Master Gardeners are all volunteers and sometimes technical issues arise. Please be patient.

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Presented by Washington State University King County Master Gardeners

**What's a Garden Without Tomatoes?**

Sharon Peach  
March 19, 2025

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What my friends and family think



Source: Veggiegardener.com

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WE LOVE TOMATOES!!!



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STEP 1  
CHOOSING  
YOUR  
TOMATOES



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SO MANY CHOICES!  
WHERE TO START?



**Questions to ask yourself**

**How do you plan to use tomatoes?**

- Salads-small and cherry types
- Slicers
- Sauce/canning
- Preserving

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**ANATOMY OF A CATALOG ENTRY**



- OP vs F1 hybrid
- Days to Maturity 65-75 for PNW
- Determinate vs Indeterminate

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**THE CHALLENGE OF A SHORT SEASON CLIMATE**

- Heat Units/Growing Degree Days are calculated as the mean temp minus 50
- Plants grow when temps over 50°
- Example: high 70°, low 50°  
mean temp is 60°  
subtract 50  
10 GDD




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**NOW THAT YOUR EYES ARE GLAZED OVER...**

Tomatoes need >1300 GDD in order to mature and ripen




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**STEP 2  
GROWING AND  
PLANTING  
YOUR  
TOMATOES**



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**PLANTING TOMATO SEEDS**



Why? Much greater selection of varieties, and it's incredibly rewarding.

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**TRUSTED SEED COMPANIES**

- Bakers Creek
- Seed Savers Exchange
- Tomato Growers Supply
- Totally Tomatoes
- Territorial

Online-only sources:  
TomatoFest, Bounty Hunter, Renaissance Seeds, Sand Hill  
Preservation Center

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**BASICS OF GROWING FROM SEED**

- Sow indoors by **early April**
- Plant **1/4" deep** in sterile seed starting mix
- New or sanitized containers
- Keep lightly moist
- **Use heat mat to speed up/improve germination**
- Keep under direct light
- Transplant to larger container at ~2 weeks

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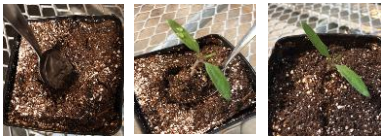
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**TRANSPLANT AT ~2 WEEKS**



- Wait for first true leaves to appear
- Plant deeply so that stem is buried

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**STRIVE FOR STURDY SEEDLINGS**

- Proper lighting keeps seedlings from becoming leggy
- This seedling is three weeks old



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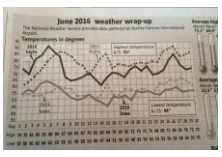
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**SITE SELECTION AND PREP**

- Warmest, sunniest spot available. **South or west** facing is optimal
- **Preheat soil with plastic**
- Prepare for potential cold snaps



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**Even with careful planning be prepared for extremes**

Floating row cover (Reemay, Agribon), bubble wrap or sheet plastic around cages or hoops

Shade cloth (20-30%) to protect in extreme heat



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**50 IS THE MAGIC NUMBER**

Soil temp  
Consistent overnight temps



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**PLANTING OUT — MID-MAY**

- **Harden off plants:** gradually introduce them to the real world
- Plant **deep** or **trenched**
- Give them space! **4 square feet** per plant



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**FERTILIZERS**

- Balanced fertilizer
- Avoid high nitrogen



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**PLANTING PROCESS**



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**PLANTING PROCESS**



Remove lowest leaves and plant deeply

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**PLANTING IN POTS**

- How big does my pot need to be?
- Can I reuse the soil in my pot from last year?



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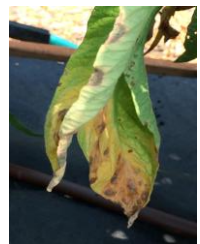
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**STEP 3 - PROPER PLANT CARE FOR BEST RESULTS**

- Watering
- Plant maintenance, pruning
- Disease control, other problems
- Fruiting and ripening



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**WATERING**

If you remember nothing else, **avoid overhead watering!**

- Deep even watering helps promote root growth
- Don't allow soil to completely dry out

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**MAINTENANCE**

<p>Stake/cage</p>  <p>Keep plants off the ground</p>	<p>Prune</p>  <p>Remove lower axillary shoots Prune for better airflow</p>	<p>Mulch</p>  <p>Mulch bare soil</p>
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**Support plants to keep the foliage healthy**



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**Cattle panels**



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**SETTING FRUIT**

- Tomatoes are self-pollinating and do not **require** insects, although bumblebees can enhance pollination
- Movement and wind are adequate; can be assisted with pollinator devices
- Optimal temps **65-80°F**



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**SAVING SEED**

- Only save seed from Open Pollinated varieties.
- Tomatoes are self-pollinating, but cross contamination can occur. Bagging a cluster of blossoms before they open prevents that.
- Once fruit has formed, the bag can be removed. Be sure to mark the branch with a string.



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### HARVESTING SEED

- Harvest seeds and place in cup
- Add a cup of warm water to tomato pulp. Cover with cheesecloth or paper towel.
- Let it ferment for 2-4 days.
- Remove mold, drain and rinse seeds. Spread seeds out to dry on paper towel or a glass dish.



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### DEALING WITH PROBLEMS

- Early season issues
- Physiological disorders
- Diseases
- Pests
- Ripening



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### THE BEST WAY TO FIGHT TOMATO DISEASE IS TO AVOID IT

1. Give your tomatoes 4 square feet when planting.
2. No overhead watering
3. Keep branches and leaves off the ground
4. Mulch your bare soil

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**FLEA BEETLE**

- Holes in lower leaves
- Small jumping bugs
- Cosmetic damage, can be ignored



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**Stink Bugs**



Brown Marmorated Stink Bug

First introduced to Pacific Northwest in 2004

Source: TracieHul.wsu.edu

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**Stinkbug damage**



- Various species
- **Piercing mouthparts** leave tiny holes surrounded by halos
- Nymphs and adults alike cause damage
- Difficult to control with pesticides. Handpick if possible

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**PHYSIOLOGICAL LEAF ROLL**

Looks bad, but no impact to health of plant or to fruiting

Response to heat, drought, pruning, and over-fertilization

Some varieties are more susceptible



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**Iron deficiency (early season)**

Pale yellow leaves on the newest growth (inner portion of leaf)

Extended wet weather

Foliar spray FeSo4 or fertilizer with iron (MiracleGro for tomatoes)

Can also self-correct



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**BLOSSOM-END ROT**



Calcium uptake disorder related to inconsistent watering

Roma-types are especially prone

Check soil pH and calcium level with soil test — tomatoes prefer a pH of 6.0–6.8

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**SUNSCALD**

South-facing and exposed fruit

**Do not overprune foliage**

Shield with lightweight shade cloth if needed



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**CATFACING**



More common in early season

Fruit set during cool, wet weather

**Heirlooms more prone**

Modern hybrids have bred this trait out

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**Fasciated flowers**



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**HERBICIDE DRIFT**

- Herbicide drift damage
- Twisted, deformed new growth




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**FUNGAL DISEASES**



Target-board lesions  
**Early Blight (Alternaria)**

Small yellow-brown spots  
**Septoria Leaf Spot**

Remove affected leaves and preventively treat plant with **fungicide**

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**FUNGICIDAL PRODUCTS**

Products are used preventively

Copper-based products are easy to use and have low toxicity

Always read the directions: is it safe to use on tomatoes, how long before harvest, and is it effective for the disease?




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**LATE BLIGHT**

Airborne fungal-like organism, infects wet foliage  
**Highly contagious**  
Remove plants, don't home compost  
Proactive pruning helps, but doesn't eliminate risk



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Practice good garden sanitation-  
clean your hands and pruners



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**PESTS OF THE 4-LEGGED VARIETY**

Stolen tomatoes? Bites out of tomatoes?  
Entire plant eaten?

Squirrels, rodents, and deer can be a challenge in the garden

- Motion-detecting sprinklers
- **Harvest fruit before it's fully ripe**



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**ENCOURAGING RIPENING**

- Remove flowers and small fruit in late summer
- Reduce watering
- Harvest in advance of rain to minimize the chance of cracked fruit
- Fruit with color development will ripen indoors



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**Varieties**



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**SMALL TOMATOES**

- **Cherry/grape types**  
Sungold  
Sweet Million  
Sparky XLS
- **Saladette/julienne**  
Copper Beauty  
Bronze Torch
- **Small/early**  
Bloody Butcher  
Moskvich



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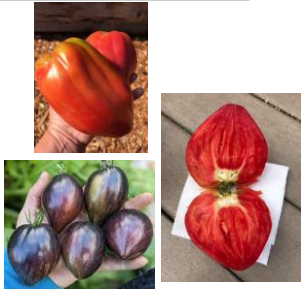
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**Sauce (Roma and Heart) types**

- Work Release Paste
- San Marzano Redorta
- Sheboygan
- Midnight Sun
- Rebel Starfighter Prime




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**BLACK TOMATOES**

- **Purple/brown/black**
- **Cherry size to slicers**  
Black Cherry  
Chocolate Sprinkles  
Black Krim  
Black Sea Man
- **Unique sweet-savory quality**




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**GREEN-WHEN-RIPE (GWR)**

- **Outstanding flavor**
- **Ripening signs—softening, slight yellow tinge in most**
- **Slicer types**  
Aunt Ruby's German Green →  
Green Giant
- **Small to medium types**  
Green Tiger  
Green Zebra




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**BLUE (ANTHO) TOMATOES**

- Same pigments as blueberries
- Natural sunscreen for plant; extended shelf life on vine and off
- Ripe when bottom turns red
- Wide range of types:  
Indigo Blueberries  
Blue Beauty (shown)  
Rebel Starfighter Prime




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**Ripeness determination in non-red varieties**



Green-when-ripe (GWR)



White



Blue (antho)

-All will soften when ripe-

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**Antho types**

Green = **not ripe**  
(unless GWR variety)

Consult catalog to see what it should look like when ripe

Most will turn red, but some are shades of yellow, orange, or pink




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Let's discuss the (purple) elephant in the room



Source: Norfolkhealthproduce.com

- Yes, it is genetically modified
- The tomato breeding community is VERY divided!
- Genetic material from snapdragons provide anthocyanins
- Open-pollinated, will breed true

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TRIAL GARDEN STANDOUTS 2024



Cowboy Purple Zebra RSP Kayleigh Anne Bronze Torch

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Master Gardener Foundation of King County  
**Bellevue Demonstration Garden**

**SPRING PLANT SALE**  
 SATURDAY, MAY 10  
 10:00 am - 2:00 pm  
 15500 SE 16TH ST  
 BELLEVUE

☛ Garden Market  
 ☛ Plant Clinic  
 ☛ Burlap Sacks  
 ☛ and more!

*featuring*  
**Veggie Starts**  
 tomatoes, peppers, cucumbers, basil, eggplant, squash  
**Ornamentals**  
 annuals, perennials, grasses, herbs, shrubs, spillers & thrillers!

Proceeds from the demonstration garden plant sales benefit the Master Gardener Foundation of King County to support the activities of the 2024 Extension and Training Master Gardener Program. Your donation supports our education and outreach efforts to be shared throughout the community. Thank you for supporting your local demonstration garden!

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**Roasted Tomatoes**



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**DRY FARMING**

A Personal Challenge

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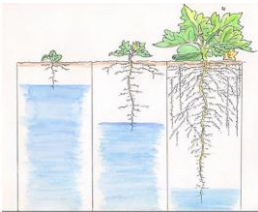
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**DRY FARMING**

- Crop production without irrigation during a dry season
- In a region that receives more than 20 inches of annual rainfall
- Plants utilize the moisture stored in the soil from the rainy season rather than irrigation



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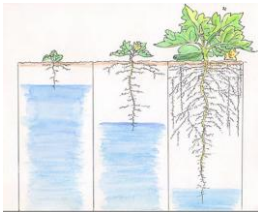
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**DRY FARMING**

- Is not a yield maximization strategy
- Reduces fertilizer demand
- Lessens weed pressure
- Improved produce quality



Source: Oregon State University

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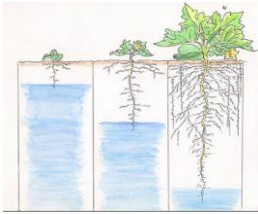
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**DRY FARMING**

- Garden site with deep soil and good water holding capacity
- Minimize competition for water by lowering plant density and removing weeds
- Decrease moisture loss by working soil in early morning before direct sun hits the area
- Mulch the soil to prevent evaporation



Source: Oregon State University

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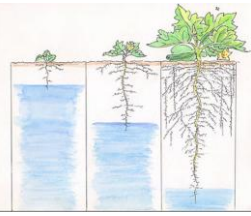
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**SOIL**

Silt Loam soil and Silty Clay Loam soil have the best water holding capabilities, although other soil types can work as well.  
 Roots grow more slowly or not at all in firm soil layers, such as clay.



Source: Oregon State University

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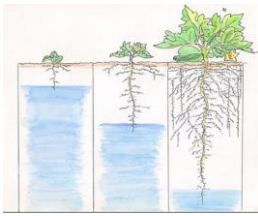
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**DRY FARMING CROPS**

- Indeterminate Tomatoes
- Potato
- Winter Squash
- Zucchini
- Dry Beans
- Corn




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**BE BOLD-TRY SOMETHING NEW!**




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**Where do you find information that you can trust?**

- WSU Extension publications  
[WSU Extension Publications/General Gardening Hortense | Washington State University](#)
- OSU Extension publications  
[OSU Extension Service](#)
- Dr.Linda Chalker-Scott information
- Other extension sites—Cornell, N. Carolina, Purdue




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**DIAGNOSING PROBLEMS AND DISEASES**

[Hortsense | Washington State University](#)



All photos are thanks to Marcia Dillon unless otherwise noted.

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**Questions?**



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**Upcoming Presentations**



**Growing Groceries**  
2025 Cool Season Series  
Wednesdays 7:00pm-8:30pm



Date	Class
Wed, January 23	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
Wed, April 16	Warm Season Series begins, See Website to Register

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

**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
Sat, April 12th	Series 2 Begins, See Website to Register

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Master Gardener Resources



Ask a Master Gardener

Visit: <https://extension.wsu.edu/king/ask-a-master-gardener>

Become a Master Gardener

For information on King County Master Gardener training (including signing up for the email notification list), visit: <https://extension.wsu.edu/king/gardening/become-a-master-gardener>

Applications for the 2026 class will open in September 2025

Horizontal lines for notes

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Thank you for the support!



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WASHINGTON STATE UNIVERSITY EXTENSION

King County Master Gardener Program

<https://extension.wsu.edu/king/gardening>

- Demonstration Gardens
- Plant Clinics
- Education Outreach
- Science-based Publications



Master Gardener Foundation of King County

<http://www.mgfc.org>

- Fundraising for these programs

More information about growing groceries:

<https://kingcounty.mastergardenerfoundation.org/education/gg/>

Horizontal lines for notes

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