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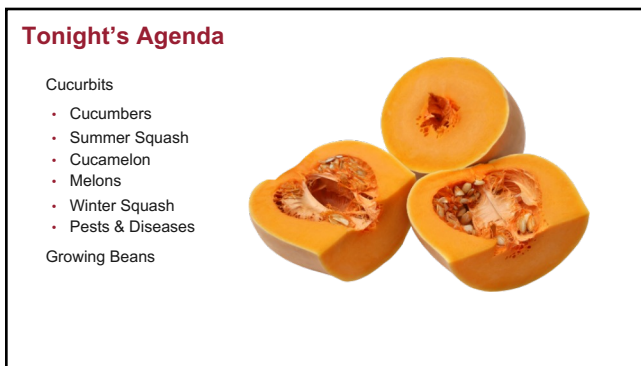
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🔥 Bring the Heat!! 🔥



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**Cucurbitaceae**

- Latin for Gourds, which come in a huge range of shapes, sizes and uses
- Native to the Andes & Mesoamerica
- About 985 species in 95 genera




Photo credit: Territorial Seed Co.

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**The Cucurbits Mainly Grown in the PNW are Cucumbers, Summer & Winter Squashes**



Cucumber



Zucchini – summer squash



Delicata – winter squash (with garlic)

Photo credit: Territorial Seed Co.

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**Cucurbit Growing Needs**

All cucurbits have a few growing needs in common

They all like:

- Warmth
- Moisture
- Quick draining soil so they don't become waterlogged

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**Cucumbers (*Cucumis sativa*)**

**Greenhouse**

- Telegraph Improved
- Poniente

**Slicing**

- Picolino
- Pepinex
- Sweet Slice

**Pickling**

- Diamont




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**Cucumber (*Cucumis sativa*)**

Soil Temp for Germ.	Seed Depth	Days to Harvest	Thin Plants To	Distance Apart	Average Yield	Growing Needs
Minm. 55°F	1/4"	45 to 70	1 per hill	approx 3ft	Varies w/variety & culture	Good mix of compost and sand

- Direct seed late spring or plant in pots and move when soil temperature allows
- Easy to grow
- Full sun best
- Harvest before they reach full size to keep them coming
- Best grown up trellis or similar
- n.b. 'Hills' are mounds of enriched earth which allow water to drain easily & heat by the sun — Cucurbits do not like to sit in wet conditions

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### Use Vertical Space

- Increases crop yields by 2 to 3 times — better air flow & disease control
- Less damage to vines during harvest; more thorough harvesting
- Fruit hangs vertically and ripens properly; can discolor on ground
- Prevents slugs from taking a bite



Photo credit: Harris Seeds



Photo credit: Gardeners Supply Co.

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### Summer Squashes (*Cucurbita spp.*)



Zucchini & Crookneck Squash

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### Summer Squash (*Cucurbita ssp & pepo*)

Time to Plant	Seed Depth	Days to Harvest	Vine Spacing	Hill Spacing	Average Yield	Hill Prep.
After last major frost	1/4"	60-70 days	2 vines per hill	4' - 5'	10 - 15 per vine	Good mix of sand & compost

- Best sown in spring
- Make hills free draining to encourage heating by sun
- Direct sow in late spring
- Start indoors 4 weeks before transplanting in late spring
- Harvest often for smaller fruit and better yield

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**Some Summer Squash Varieties**



Yellow Zucchini, Romanesco, Pattypan, Cousa, Cue/Eight Ball, Green Zucchini

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**Cucamelon aka Mexican Sour Gherkin (*Melothria scabra*)**

- Heirloom native of Mexico
- Matures at about 1" long
- Cucumber flavor with a tangy, citrus twist
- Good in salads and cocktails!
- Pickles well



Photo credit: Territorial Seed Co.

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**Cucamelon (*Melothria scabra*)**

Sowing Needs	Seed Depth	Days to Harvest	Vine Spacing	Pot Spacing	Average Yield	Hill Prep.
Spring-time, in warmth	1/4"	75 days	One per pot	4' - 5'	Prolific	Free draining

- Best sown in spring to allow ample time to fruit
- Pot on singly and place where plant can climb, once soil temp hits a min of 60°F
- Able to thrive in drought conditions once grown
- Before frost, cut stem at soil level and bring inside over winter
- Harvest frequently to encourage continuous supply

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**Melons (*Cucumis melo* & *Citrullus lanatus*)**

Savor

- What do you want to eat?
  - Cantaloupe
  - Honeydew
  - Watermelon
- What beauty do you want to look at?
  - Orange Silverwave
  - Alvaro

Photo credit – Territorial Seed



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**Seed Selection**

- You like the flavor and texture
- Has disease resistance
- Ripen in less than 80 days



Ed Hume Seeds

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**Western WA Melon Timeline**

- by 5/10 - plant seeds in 4" pots
- by 6/1 – warm soil, cover with clear plastic
- by 6/15 - transplant starts
  - use plastic mulch
  - use row cover over seedlings
- by mid July – remove row cover when flowers appear
- by late July – first fruit set
- early to mid September – first fruits ripen

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### What I'm growing at BDG this year

**ALVARO (F1)**

65 days. A French Charentais type of melon with cantaloupe flavor. About 5 inches in diameter, ripen to an yellowish-tan, smooth skin with green striping. Creamsicle-orange flesh. Healthy plants set about 5-6 fruit each.

**MINNESOTA MIDGET (OP)**

65-70 days. An heirloom with mini cantaloupes - fruit 4-6 inches across with deep orange flesh.

**SUGAR RUSH (F1)**

65-70 days. bulky, 4-pounders offer enough sweet, orange flesh for several generous servings from slightly elongated, well-netted fruit. The disease-resistant plants produce high yields very early in the season. For best flavor, harvest when the melon's background loses its green color.

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### Potential Melon Problems

**Diseases**

- Damping-off
- Powdery mildew
- Fusarium wilt
- Verticillium wilt

**Pests**

- Slug/snail
- Brown marmorated stink bug
- Spider mites
- Squash bug

Consult WSU Hortsense to diagnose and treat

**Cultural Problem** – No female flowers or poor pollination

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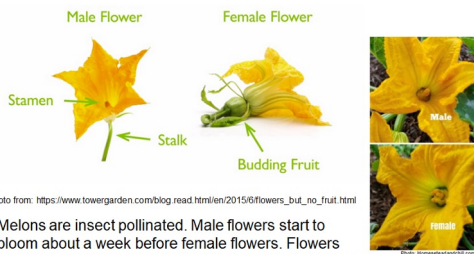


Photo from: [https://www.towergarden.com/blog/read.html/en/2015/04/flowers\\_but\\_no\\_fruit.html](https://www.towergarden.com/blog/read.html/en/2015/04/flowers_but_no_fruit.html)

Melons are insect pollinated. Male flowers start to bloom about a week before female flowers. Flowers only bloom for a few hours in the morning. A fertilized female flower will take 10 - 12 days to produce fruits.

High temperature, high rainfall and/or excess nitrogen may inhibit formation of female flowers.

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**When to Harvest Melons**

- Cantaloupe:
  - Harvest when fruit slips from the stem
- Honeydew & French Charentais
  - When leaf closest to the fruit turns brown or when melon color changes
- Watermelons
  - When the tendril closest to the fruit is dry and brown or when the bottom side of the fruit is yellow



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**Storing cantaloupe**

- Most watermelon and honeydew melons do not continue to ripen once off the vine. Some varieties of honeydew will
- Cantaloupe can be harvested a little bit early (before full slip) and left to ripen on the kitchen counter
- Store at 36 to 41 °F, cantaloupes can last for up to 3 weeks.



Photo credit: <https://www.harmons-grocery.com/product/great-grapes-melon-fruit-tray/>

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**Cucurbita genus**

All Squashes (including Summer Squash) are in the Cucurbita genus  
This includes pumpkins and some gourds

**Main species:**

**Pepo: (Latin for melon)**  
Varieties: Acorn Squash, Delicata, Summer Squash (including zucchini), some specialty pumpkins  
Originated in Northern Mexico and Southeast United States

**Maxima: (Latin for Largest)**  
Varieties: Buttercup, hubbard, red kuri, kabocha, Giant Pumpkins  
Stem will look like a dried rope.  
Native to Central and South America  
Maximas can be more susceptible to pests (vine borers, squash bugs and cucumber beetles.)

**Moschata: (Latin for musky)**  
Varieties: Butternut, honeynut and most pumpkins  
Native to Central and South America

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**What's the difference?  
Pumpkins and Winter Squash**  
*Shape, Color, Size & Use*

**Pumpkin Species**

		
<i>Cucurbita maxima</i>	<i>Cucurbita pepo</i>	<i>Cucurbita moschata</i>

**Squash Species**

		
<i>Cucurbita maxima</i>	<i>Cucurbita pepo</i>	<i>Cucurbita moschata</i>

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***Cucurbita pepo***  
*(Latin for melon)*

		
Beppo Pumpkin	Sugar Pie Pumpkin	Reno (acorn) Squash
		
Delicata Squash	Spaghetti Squash	Sweet Potato Squash

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***Cucurbita maxima***  
*(Latin for Largest)*

		
Amish Pie Pumpkin	Cinderella Pumpkin	Banana Squash
		
Hubbard Squash	Buttercup Squash	Sweet Meat Squash

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***Cucurbita moschata***  
(Latin for musky)



Fairytale Pumpkin



Butternut Squash



Butterkin Squash

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**Winter Squash and Pumpkins (*Cucurbita* species)**

Soil Temp for Germ.	Seed Depth	Days to Emergence	Thin Plants To	Row Spacing	Seed Life	Fertilizer Needs
65-85°F	1 - 1 1/2"	5-10	1-2/hill	3-6'	3-4 years	Medium to high

- Needs fertile well drained soil
- Warm season crop!
- Monoecious: need bees and insects for pollination!
- Start indoors 3-4 weeks before transplanting (careful when transplant, roots don't like to be disturbed)
- Direct sow when soil 65°F
- Use floating row cover



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**Harvesting Winter Squash and Pumpkins**




Photo: Credits: dynetork.com

- Leave on vine until mature; rinds should be firm
- Cut stems leaving 2-4 inches and wash
- Move to warm dry area to cure (time depends on variety)
- Store at 50-60°F with good air circulation

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### Curing and Storage Varies!

Squash	Curing Time	Storage
<i>Cucurbita pepo</i>	not required	2-3 months
<i>Cucurbita maxima</i>	10-14 days	4-6 months
<i>Cucurbita moschata</i>	10-14 days	4-6 months




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### Favorite Recipes

#### Squash soup



Photo Credit: parodip.com

Squash, onion, apples, carrots, broth, and spices (curry - Indian or Thai)

#### Pumpkin pie



Photo Credit: Sue Kramer

Pumpkin puree, eggs, evaporated milk, sugar, and spices in butter crust



#### Roasted Squash

Squash (can be summer or winter), salt, pepper and oil

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### Growing Cucurbits: Inter-Planting

#### Nasturtiums & Marigolds:

- Good for most all vegetables and herbs
- Adds beauty to the garden
- Trap Crop for flea beetles, aphids and squash vine borers (nasturtiums)
- Attracts pollinators



Photo: Jane Kim

#### Radish

- Quick growing
- Repels Cucumber Beetles, aphids & squash bugs



Photo Credit: www.almanac.com

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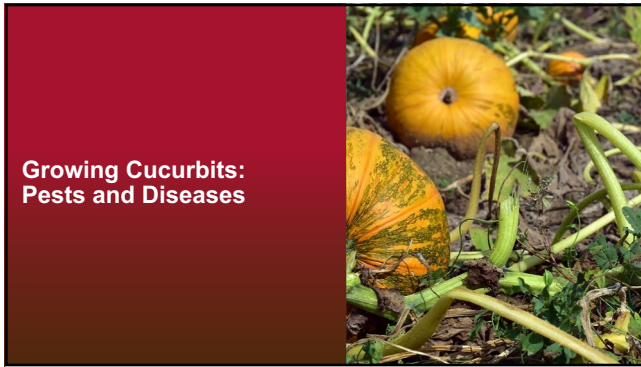
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**Integrated Pest Management (IPM)**

- **Identify** pests
- **Prevent** problems before they start
- **Monitor** with careful observation
- **Control** with mechanical and biological practices first (not eradicate)






Photo Credits: Wikipedia      Photo Credits: Sue Knaemer

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**Squash Bugs**

**Affected Crops:** squash, melons, and pumpkins

**Prevention and Control**

- Hand-pick and destroy eggs, nymphs, and adults
- Clean up debris






Photo Credits: extension.illinois.edu      Photo Credits: extension.illinois.edu

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### Stink Bugs

**Affected Crops:** all members of the family

**Prevention and Control**

- Hand-pick and destroy eggs, nymphs, and adults
- Natural enemies: chickens, praying mantis, and others
- Row covers



Photo Credits: hortense and whitlocks

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### Spotted and Striped Cucumber Beetle

**Affected Crops:** all members of the family

**Prevention and Control**

- Pick and kill individual beetles
- Attract beneficial insects
- Row covers



Photo Credits: territorial seeds and hortense

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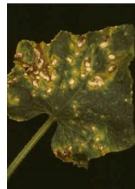
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### Angular Leaf Spot

**Affected Crops:** all members of the family

**Prevention and Control**

- Plant disease-free seed
- Rotate crops
- Plant resistant varieties
- Avoid over-watering




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### Powdery Mildew

**Affected Crops:** all members of the family

**Prevention and Control**

- Remove affected leaves
- Rotate crops
- Space plantings for air circulation
- Don't water from above
- Prevention: spray with 10-50% milk solution



Photo Credits: lambrini seeds

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### Cucumber Mosaic Virus

**Affected Crops:** all members of the family

**Prevention and Control**

- Plant resistant varieties
- Control aphids and beetles
- Control weeds
- Remove infected plants



Photo Credits: horstense

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### Verticillium Wilt

**Affected Crops:** all members of the family

**Prevention and Control**

- Rotate crops
- Plant when soil is warm
- Clean up debris

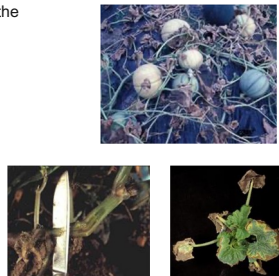


Photo Credits: horstense

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### Hand Pollinating ... when bees don't



Photo credit: Territorial Seed Co.

When the pollen in the male flower is plentiful & ripe, carefully remove the whole flower. Peel back the large one-piece petal, exposing the pollen-bearing stamen. Gently touch the stamen to the female stigma, leaving as many grains of pollen as possible. If your intent is to produce pure seed & fruit, gather the female petal together and snap a small rubber band over the tip to hold it together, excluding any insects that could introduce pollen from other plants.

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### Seed Saving

Be careful if you save seeds!

- Cross-pollination can happen between plants within in a mile of each other
- Hand pollination and sealing helps to prevent insects/wind from bringing in outside pollen
- Generally, stick to one variety of any species
- Seed maturity:
  - Color change
  - Hard Rind
  - Stem Dry
- Winter squash seeds are mature when normally harvested  
Stored in cool dry conditions, seed can be viable for 6 years



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### Resources

- Home Vegetable Gardening in Washington, #EM057E
- Growing Cucumbers in Home Gardens, #FS096E
- Growing Squash in Home Gardens, #FS087E
- HortSense: <http://hortsense.cahnr.wsu.edu/Search/MainMenu/WithFactSheet.aspx?CategoryId=5&PlantDefId=55>
- Territorial Seeds: [www.territorialseed.com](http://www.territorialseed.com)



Photo Credit: Sun Hammer

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**Introduction to beans**

- Homegrown beans are fresh, nutritious and relatively easy to grow
- Once called string beans due to stringy fiber along seed pod
- Newer varieties are mostly "stringless"
- Some varieties are yellow or purple
  - Purple usually fades with cooking/preserving



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**Planting**

- Planting: May 15-June 1<sup>st</sup>
  - Soil temperature is 65 degrees
- Check seed packet for spacing and harvest
  - Approximately 2 inches apart in rows 12-24 inches apart
  - Days to harvest: 50-80 Days
  - Select variety with shortest growing season
- Grows best in fertile, well drained soil
- Needs full sun
- Can be grown in containers

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### Pole Beans (Climbing)

- Grow as vines
- Provide support for growth
- Can grow six feet or higher
- Look for varieties that do well in PNW
- Plant 6-8 seeds at the base of the support or space 1 inch apart along a trellis
- Sow seeds one inch deep
- Can be started indoors 10-14 days before transplanting



This Photo by Unknown Author is licensed under CC BY-NC-ND

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### Bush Beans

- Grow without additional support
- Mostly self supporting
- Can be prolific producers
- Sow about 1 inch deep and every 2 inches



This Photo by Unknown Author is licensed under CC BY-NC-ND

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### Disease Management

- Diseases can be reduced by:
  1. Planting certified disease free seeds
  2. Planting in light, well drained soils
  3. Avoiding overhead watering
  4. Weeding and proper spacing
  5. Cleaning up garden areas, removing diseased plants and not composting diseased plants

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### Care of Beans

- Moderate watering needs early in growing season
- Increase water during the heat of the summer
- Water at the roots to prevent fungus



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### Protection from Critters

- Cover with floating row cover to protect from crows and squirrels
- Remove cover when plants are about 3 inches high
- Can add a short (~12 inch) fence to protect from bunnies
- Harder to protect from deer
- Practice crop rotation
- Hand pick slugs



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### Pollination

- Bean flowers are self pollinating
- Both male and female parts on same plant
- Depend on bees and insects to transfer pollen
- Best to avoid pesticide use during the flower bloom



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### Harvest

- Harvest for their edible pod when the seeds start to form but before they start bulging
- Keeps seeds sweet and tender
- Harvest ¼ inch above fruit
- Some varieties can be eaten as "green" beans and also dried beans
- Continual harvest will keep new beans coming
- If picked later in the cycle, the seeds are starchier and not as sweet
- Can be preserved by freezing, drying or canning
- After final harvest, plant material

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### Uses

- Can use in salads, side dish or preserve for future use
- Can steam, sauté or braise
- Can eat raw, blanch or cooked



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### Resources

- Growing Green Beans in Home Gardens, #FS088E
- Territorial Seeds: [www.territorialseed.com](http://www.territorialseed.com)



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# Questions?

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**Spring Series Presentations**

2024 Growing Groceries Classes and BDG Garden Workshops

Date	Class
Wed, March 27	Grow Kale, Broccoli, and Related Cole Crops
Wed, April 10	Grow Tomatoes, Peppers, and Other Edible Nightshades
Wed, April 24	What Loves Heat? Cucumbers, Squash, Beans and Melons
Sat, May 4	BDG Workshop – Irrigation and Effective Water Management
Wed, May 8	Savoring What You Sow: Roots and Herbs
Sat, May 18	BDG Workshop – Beneficial Insects

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

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**Master Gardener Resources**

**Ask a Master Gardener**

Send a messages with questions and photos to: [ask-a-mastergardener@live.com](mailto: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 2025 class will open in September 2024

*This institution is an equal opportunity provider. Please report violations through your local Extension office.*

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Thank you!

Growing Groceries

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WASHINGTON STATE UNIVERSITY  
EXTENSION

King County Master Gardener Program

<https://extension.wsu.edu/kinggardening>

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



Master Gardener Foundation of King County

<http://www.mcfkc.org>

- Fundraising for these programs

More information about growing groceries:

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

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