

Lawns to Lettuce: Granite Falls

SNOHOMISH



CONSERVATION DISTRICT

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Today's talk

- Why the CD cares about your garden
- Sustainable gardening benefits
- Practical information to get started
- Donating food harvests

Conservation Districts were born as a result of crisis





**We're still helping today:
Providing fruit and produce to food banks,
and establishing community gardens**



**Sustainable gardening:
Return on Investment (ROI) and Return on
Environment (ROE)**

**Converting your lawn to lettuce gives a better return on
your investment and on the environment**

Sustainable gardening- benefits

-Helps conserve soil and water, adds to local food security, and allows for healthier people and wildlife



Create and conserve healthy soil



Reducing transportation

**Growing food locally
doesn't need to be using
added energy for
transportation**



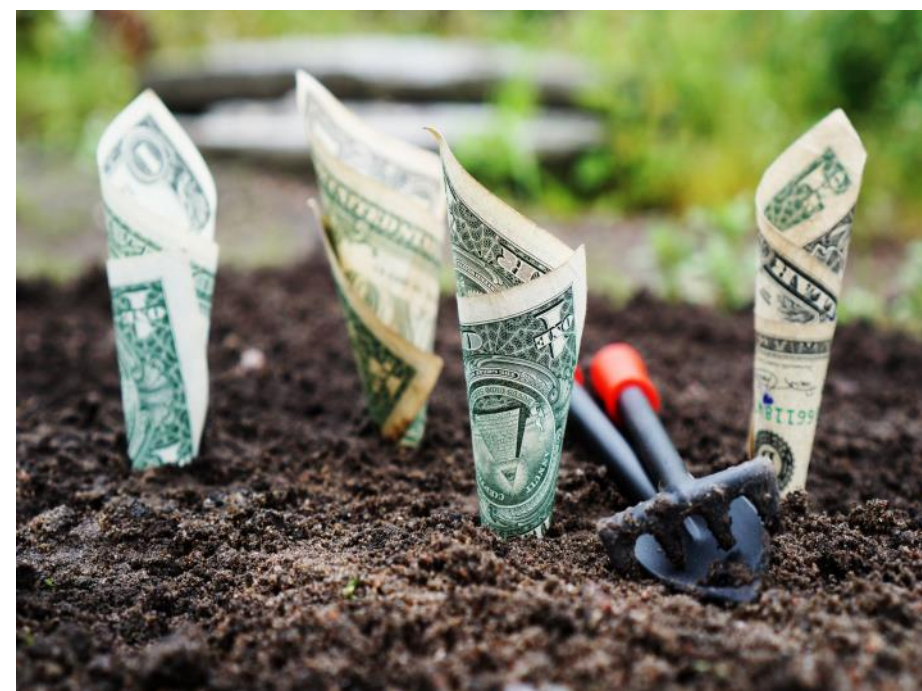
Sustainable gardens give healthy food



A healthy place



Gardens can help with food security



Getting started- some practical information

- Site selection
- Type of garden bed
- Soil preparation
- Watering systems
- Plant selection
- Managing crops, wildlife, and pests
- Care, harvest, and donations



Site selection

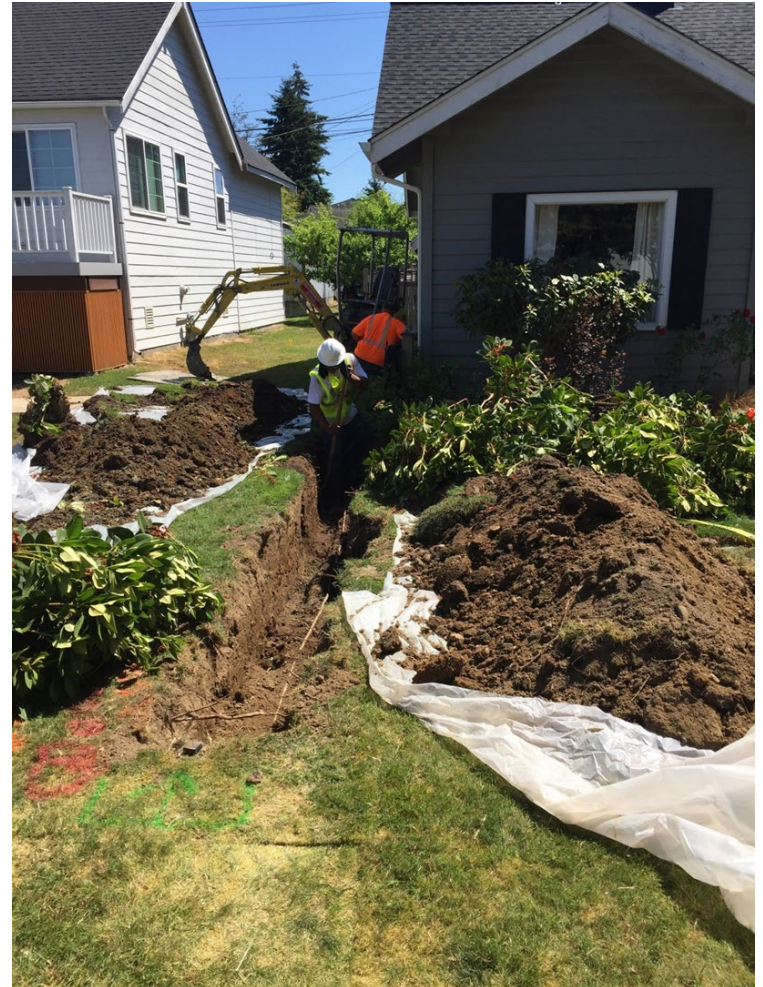
Any spot that receives at least 8 hours of direct sunlight each day



Site selection

Stay away from your house and utilities, especially sewer pipes and septic drainfields.

Call 811 before you dig!





Types of garden beds





After

Installations- Existing ground

Dig up sod and amend soil. This works well if:

- You are a good distance away from a main road, and at least 10 feet away from your house
- You have good, well-drained soil or are willing to make amendments.

Good for planting right away

A lawn goes away: before and after



Removing lawn

No-till gardening is simple and helps build your soil



Materials needed

- Newspaper or cardboard
- Compost
- Mulch

Steps

1. Layer newspaper or cardboard
2. Cover with 3-4in of compost
3. Cover with 2-3in of mulch



Benefits of mulch:

Controls weeds

Retains soil moisture

Reduces soil compaction

How much do I need?

Simply enter the values (numbers only) and press the 'Calculate' button.

Total Area: square feet (see below for area calculations)

Desired Thickness of Topsoil or Mulch: inches

CALCULATE

Total Cubic Yards Needed:

RESET

This is a great resource to calculate the volume needed:

<https://www.soildirect.com/calculator/cubic-yard-calculator/>

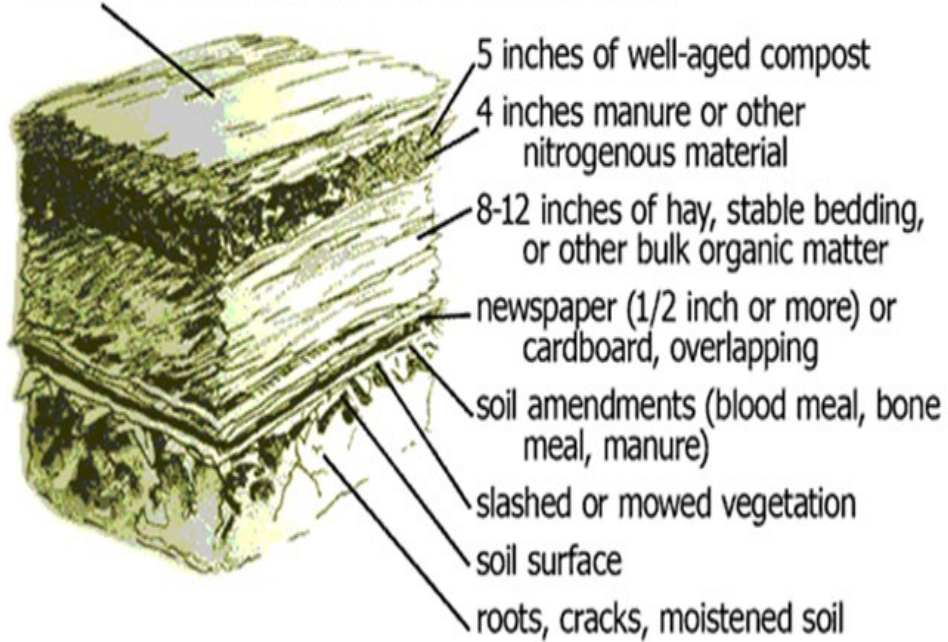


Another option- sheet mulching

- Good if you have at least 3 months before planting. Do it in the fall and it will easily be ready for spring.
- Kills any plants underneath it
- Creates fertile and healthy soil
- Retains moisture
- Improves soil infiltration
- Good for the lazy gardener



2 inches of straw, leaves, or other seedless mulch

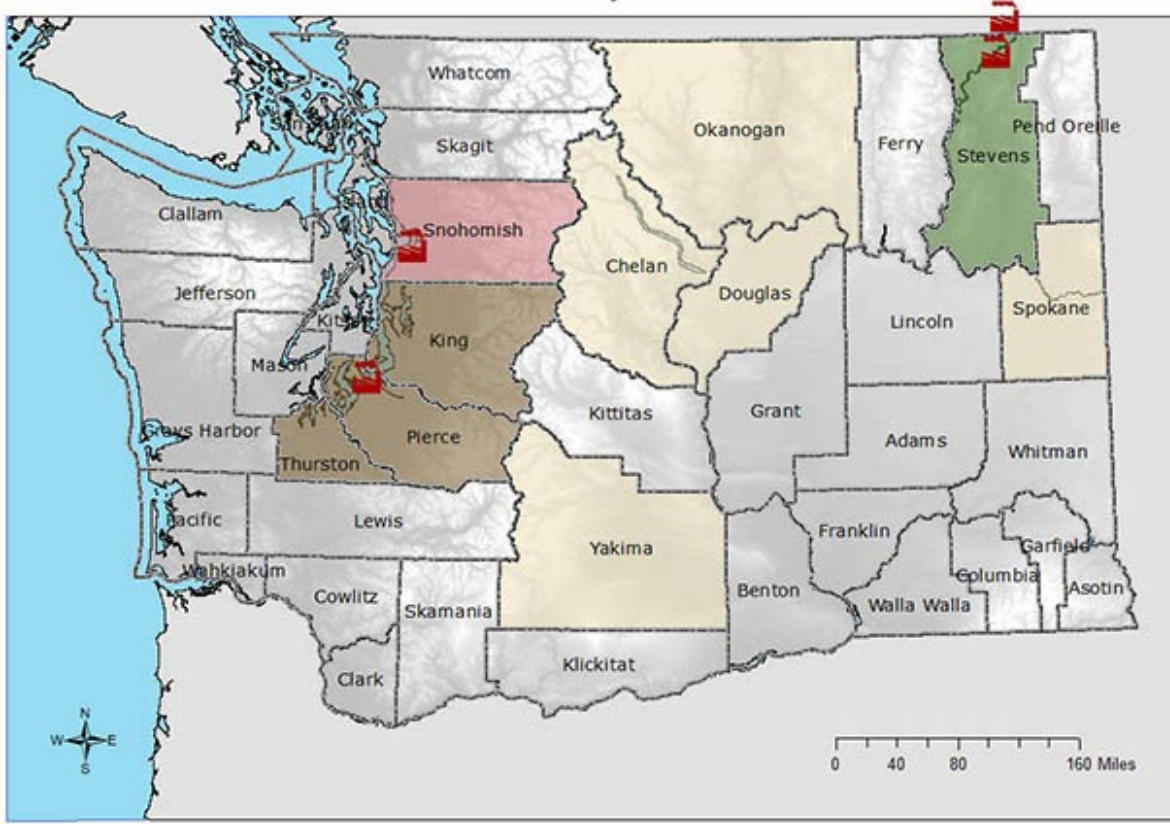


Sheet Mulching



Check your dirt

Where do you live?



Legend

- Smelter location
- Everett Smelter
- Tacoma Smelter
- LeRoi Smelter, Northport, WA
Teck Smelter, Trail, BC
- Orchard Lands



The Dirt Alert Program can help you identify if your soil might be contaminated, and help you protect yourself and your family.

<https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Dirt-Alert-program>

Installations- Raised garden beds

Raised garden beds work well if:

- Soil on site needs a lot of work
- Drainage on site is poor and soil is wet
- Pets and wildlife use the area
- Soil may have contaminants



Raised garden beds

1. Improve soil
2. Separated from contaminants
3. No tilling
4. Better use of space
5. Protection for the elements/pests/weeds
6. Extension of gardening season
7. Better water use- through built in drainage
8. Easier on the back/less bending down
9. Aesthetically pleasing



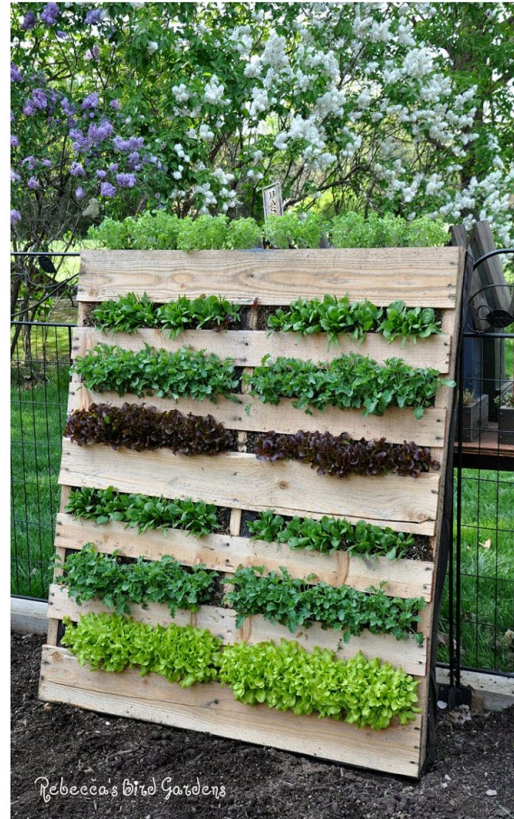
Building Raised Beds

- Build your beds **somewhere that receives adequate sunlight** (at least 8 hours for most vegetables)
- **Plant north to south** to prevent plants from shading each other



Use what you have on site

- Diverts materials from waste stream
- Saves energy transporting materials
- Smaller planters can tuck in unused space





Upcycled household
containers



Don't have a big yard? No worries.

Pots, window boxes, and hanging planters can work in small spaces.



<http://www.garden365.com/container-gardening/>



Soil preparation

First step: get to know your soil, especially planting in ground.



Building great soil is your garden superpower!

Soil tests

Measures soil fertility- how well will your plants grow?

Soil tests measure nutrients present in your soil.



Soil Tests

Results include factors that affect your plants:

- pH
- Salts
- Organic matter
- Nutrients
- Contaminants (heavy metals, lead, arsenic)



(N)

Compost

Manure

Used coffee grounds

**cover crops (peas,
beans, legumes)**

Mulch

Fish emulsion

Blood meal

Feather meal

Alfalfa meal

Soybean meal

(P)

Compost

Steamed bone meal

Fish bone meal

Rock phosphate

Soft rock phosphate

Bat guano

Chicken manure

(K)

Compost

Citrus rinds

Wood ash

Kelp meal

Greensand

Composting

- Composting can turn yard debris and vegetable food scraps into valuable organic matter for your garden!
- Your compost pile carries out an important biological cycle.
- Microorganisms, worms, fungi, and insects recycle materials from decaying plants into your soil.

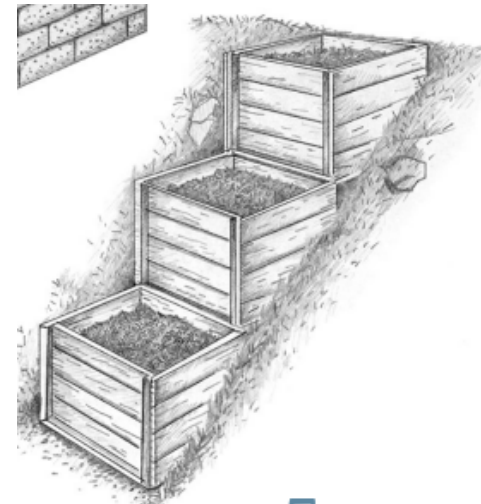
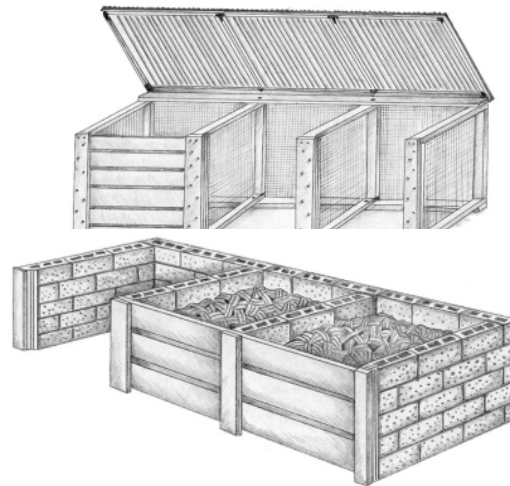
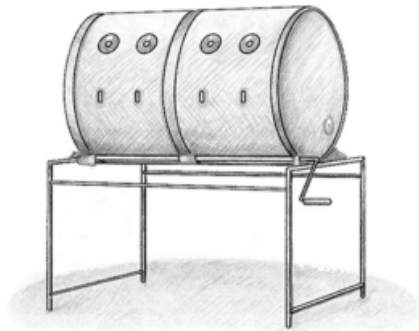


Composting benefits

- Adds nutrients and organic matter to soil
- Increases the moisture holding capacity of soil
- Reduces rainwater runoff and erosion
- Reduces nutrient and pollutant runoff
- Increases the capacity of soil to hold nutrients and deliver them to plants
- Reduces the need for fertilizers and pesticides
- Reduces waste in landfills

Composting

- Choose a compost method that best fits your space and your needs
- Open compost piles should be covered to prevent them from becoming too dry or too wet.
- They will also need to be mixed as the inner part of the pile will composts faster.



Composting basics on the SCD site at: <https://snohomishcd.org/sound-homes-resources/2018/5/1/composting-basics>

Water systems



Water systems- types

- Catchment- rain barrels and cisterns
- Irrigation
- Hand-watering



Catchment

Large catchment

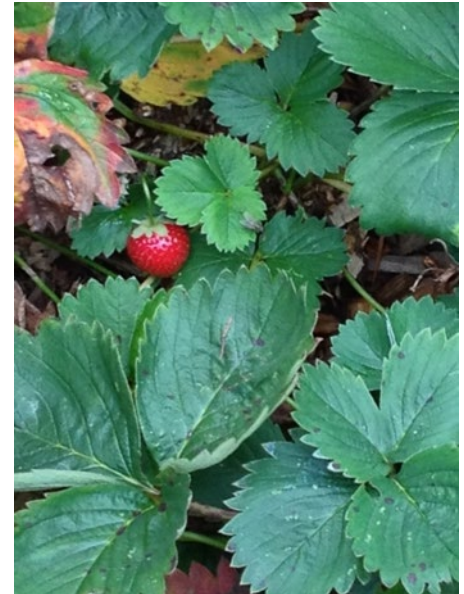


Irrigation systems

- Water from the roots up, using micro-irrigation directly into the soil



Plants



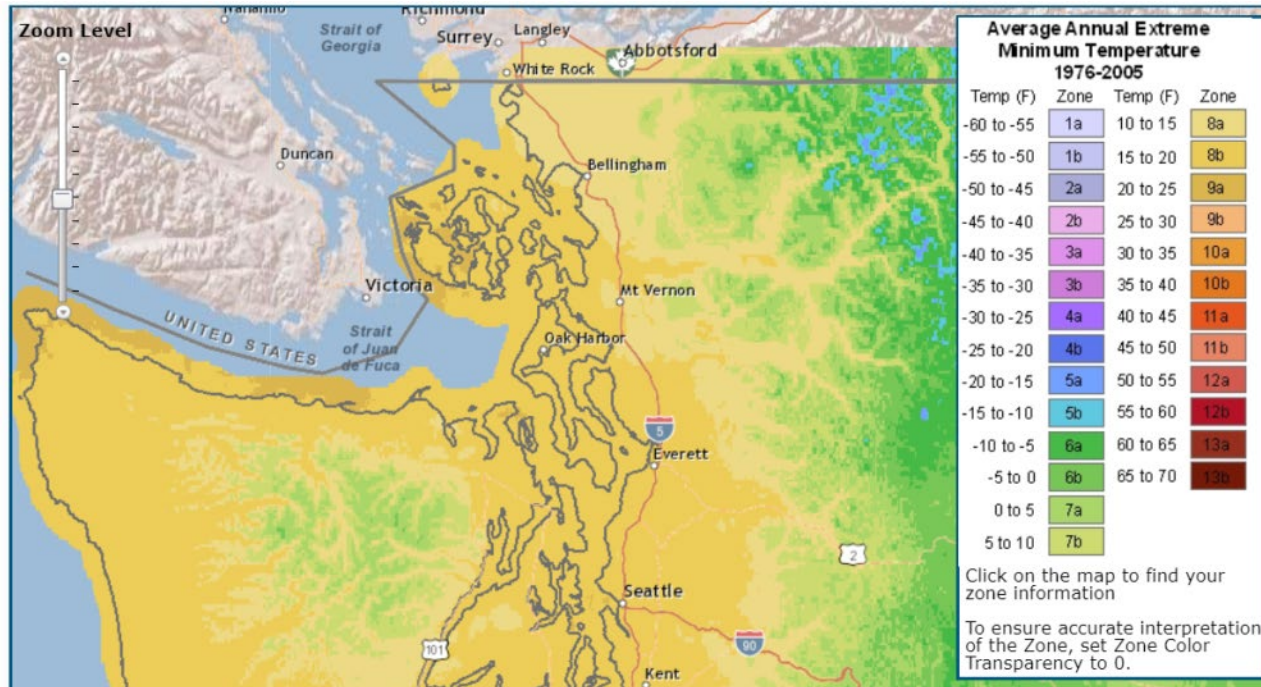
Plants

- Planting zones/ site selection
- Options-start with seeds, starts, etc.



Planting zones

Temperature ranges in planting zones will affect what fruits and vegetables you can grow



Regional and local environments

- **Regional** differences:
 - planting zones
 - urban environments with pavement
- **Local** differences:
 - Sun/shade
 - Moisture in soil

Adapt to extend growing season

- **Greenhouses:**
 - propagate and germinate vegetable seeds into starts during the colder months
- **Hoop houses:**
 - inexpensive
 - extends the growing season for many plants
 - grow varieties requiring hotter weather than our regional climate allows
- **Compost:**
 - retains heat in the soil for longer



Some crops you can grow today

Typically, you see flowers come up in the spring, and many of those will need to be planted now.



Feel free to reach out to the conservation district for things you can plant any time of the year, or you can also see the link below:

<https://snohomishcd.org/s/City-of-Granite-Falls-Winter-Gardening-Checklist.pdf>

Home vegetable propagation

Propagate the base of green onion roots in water for a couple days, changing the water daily.

This is a good way to reuse the plant base, which would otherwise go to waste.



Home vegetable propagation

- After the roots grow a little longer, you can **transplant them in a pot with soil on the windowsill or directly outside.**
- Wait until **mid May** in most areas if planting outside. This can be done with other vegetables such as **celery** or **romaine lettuce.**



Too many potatoes?

If your potatoes turn green and get eyes, you can plant them in a barrel and grow potatoes instead of throwing them out!



<https://davesgarden.com/guides/articles/how-to-make-a-potato-barrel>

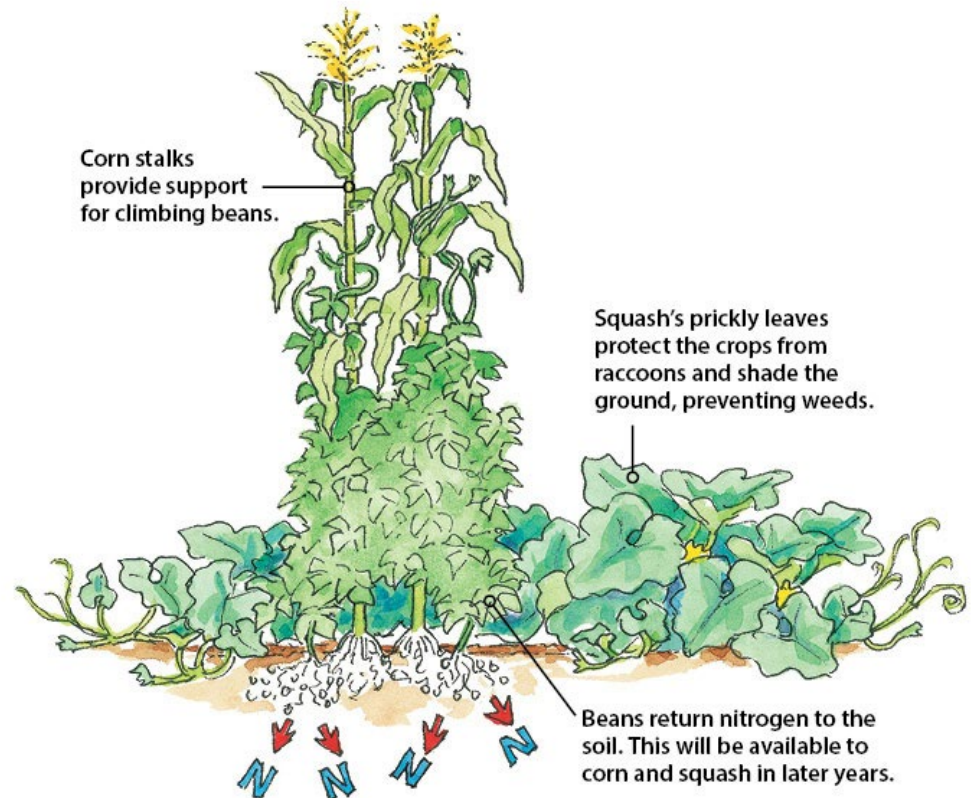
Seedling germination

- Check the back of each seed packet to see if you should start plants indoors.
- Germinating seeds with soil in used egg cartons on a windowsill is great for all ages.



Healthier Gardens

- Compost instead of fertilizer
- Companion planting
- Natural Pest Control
- Tolerance



Cover crops/garden winterization

- **Cover crops:** *reduces* soil compaction, soil-bourne pests, erosion, weeds, *increases* organic matter, nutrients, beneficial insects
- **Legumes** (peas/beans): add nitrogen to the soil during the growing offseason
- **Other varieties:** canola/rapeseed, clover (red, crimson, strawberry, subterranean, white), small seed fava, flax, kale, mustards, oat, cereal rye



Companion planting

COMPANION GARDENING

www.motherearthnews.com/organic-gardening/companion-planting-guide-zmaz81r



- Some plants add nutrients to the soil, which other plants take away, working symbiotically
- Companion planting can also result in deterring garden pests, such as the geranium shown in this picture

Three sisters

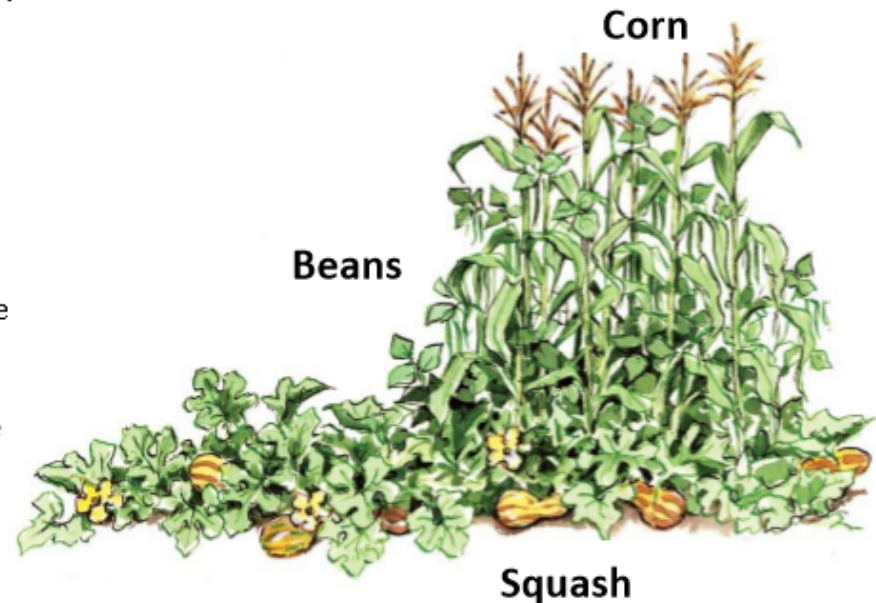
Teamwork in the Garden: The Three Sisters



Planting **beans**, **squash**, and **corn** together is a traditional cultivation method practiced by many Indigenous nations. Another name for this famous trio is "**The Three Sisters**"!

When planted together, these crops grow even stronger! The corn supports the pole beans that need something to climb on, beans add nitrogen to the soil – an important nutrient for leafy plants like corn and squash – and squash shades out the weeds that would outgrow the beans and corn plants. Together, they make a great growing team!

Not only do they make a great team growing, they make a nutritious meal together too. Corn is a good source of carbohydrates, beans are packed with protein and fiber, and squash seeds are full of healthy fats. Together, they make a healthy summer and fall meal!



There are many plants that grow better together, while some other plants just don't seem to get along!

For more garden "friends and foes" check out: <http://www.heirloom-organics.com/guide/companionplanting.html>

Crop rotation

- Create a planting plan which utilizes crop rotation
- Crop rotation reduces bacterial and fungal plant diseases
- Ex: Tomatoes require heavy nitrogen, phosphorus, and potassium, so they would benefit from being rotated with soil-building crops such as beans which add (N) to the soil and then with light-feeding crops such as onions.

Managing crops

- Weeding, watering, controlling pests
- Harvesting for yourself and others



Support pollinators

- Limit pesticide use
- Increase yields
- Provide pollinator plants
- Create pollinator nest sites



Let nature help



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Maintenance

- Take soil tests 1-3 years to avoid over fertilization or under fertilization
- You will likely have enough organic matter in the soil for years to come
- You can apply slow release organic fertilizer if needed
- You can apply 2-3 inches of compost if needed

Harvest

Plan to harvest for people or animals will do it for you!

If you have too much to use right away or preserve, you can donate.



Harvesting for others

- Vegetable seeds are available for those who participate



Plant a Row is an initiative of Snohomish Conservation District's Lawns to Lettuce program, where folks can pledge to grow a little extra food for those in need. Learn more about Lawns to Lettuce and Snohomish Conservation District at www.snohomishcd.org or give us a call at 425-335-5634.

Food Bank Map

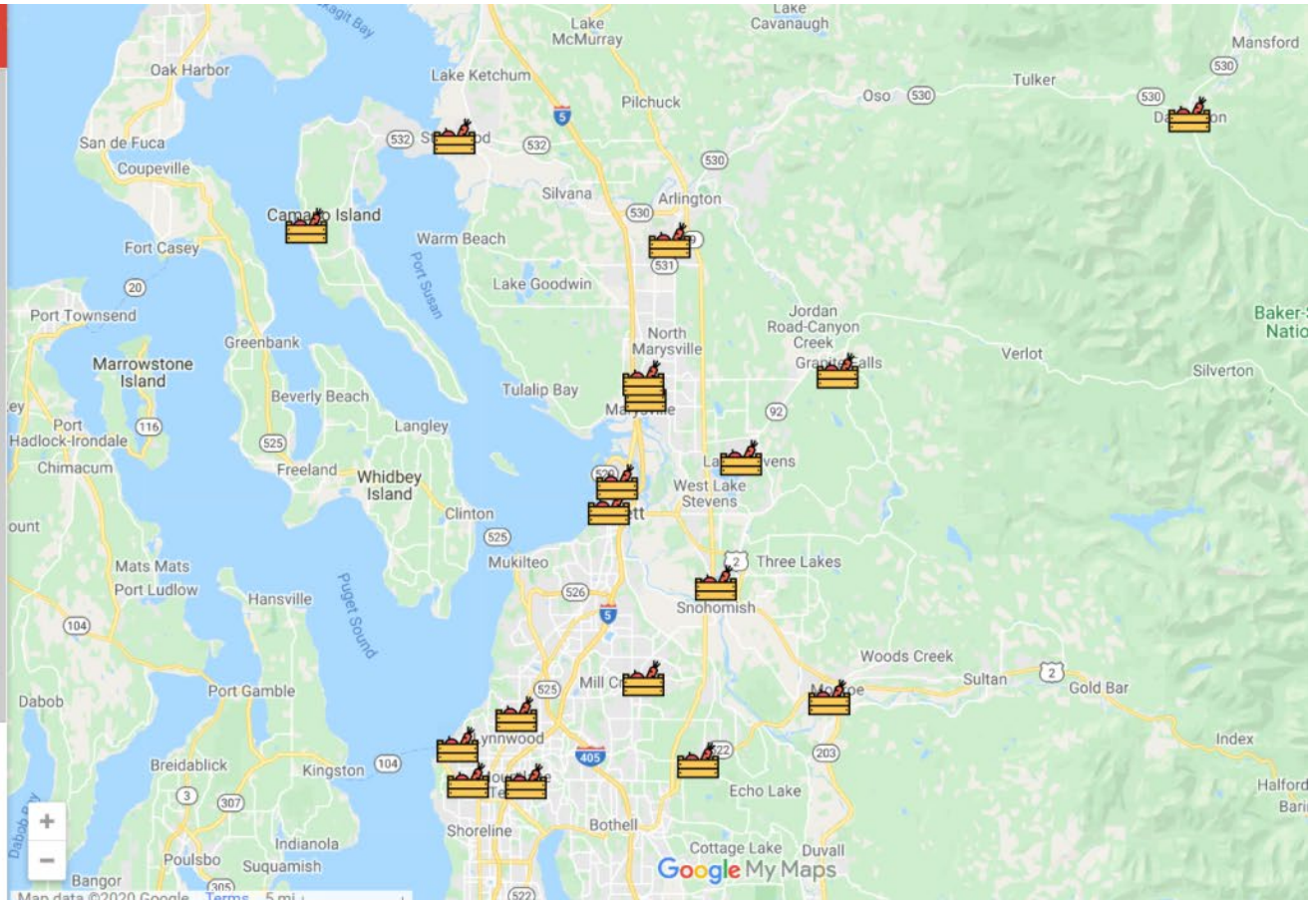
☰ Harvest a Row: Food B... 🔍 ⋮

1,669 views ☆

SHARE EDIT

✓ **Snohomish County Food Bank Locati...**

- 🏠 Allen Creek Community Church (Resourc...
- 🏠 Arlington Community Food Bank
- 🏠 Carol Rowe Memorial Edmonds Food Ba...
- 🏠 Darrington Food Bank
- 🏠 Granite Falls Community Coalition Food ...
- 🏠 His Pantry-Camano Island
- 🏠 Lake Stevens Food Bank
- 🏠 Lynnwood Food Bank
- 🏠 Maltby Food Bank
- 🏠 Marysville Community Food Bank
- 🏠 Mill Creek Community Food Bank
- 🏠 Monroe (Sky Valley) Food Bank
- 🏠 Mountlake Terrace (Concern for Neighbo...
- 🏠 Salvation Army Food Bank
- 🏠 Snohomish Community Food Bank
- 🏠 Stanwood Camano Food Bank

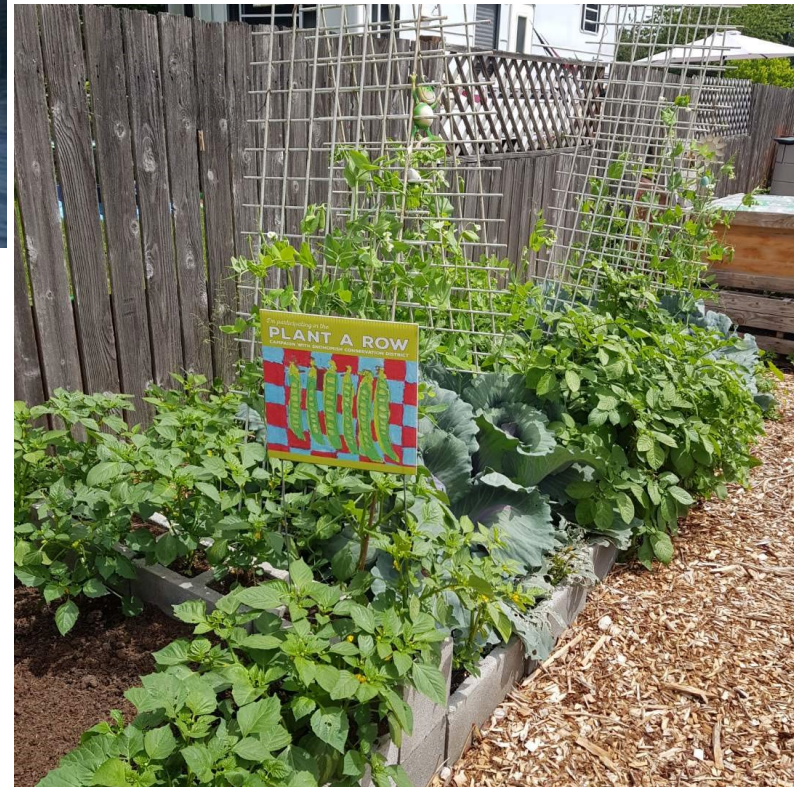
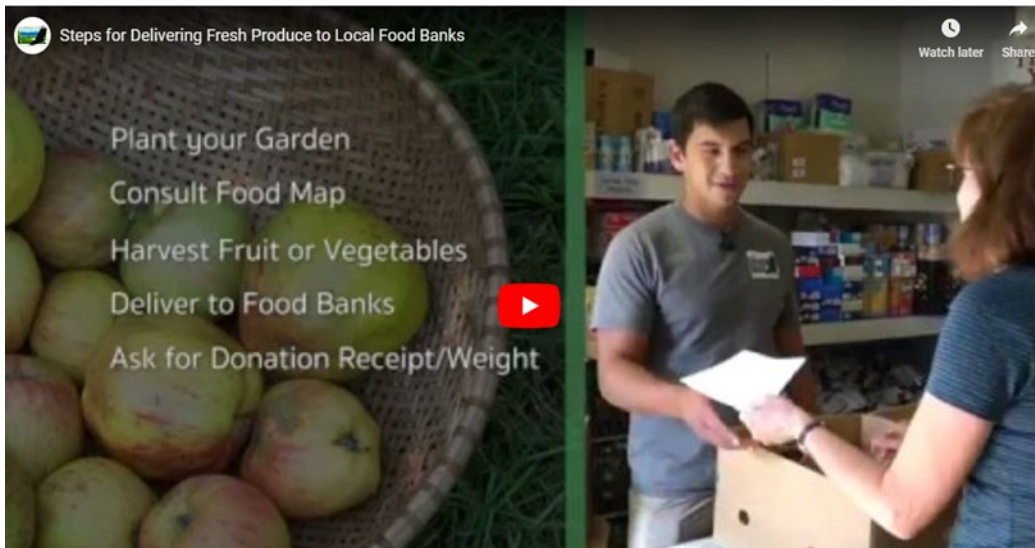


We have some resources for you!

Distributing vegetable starts



Plant A Row instructional video available on SCD website (under programs)



Raised garden bed distribution

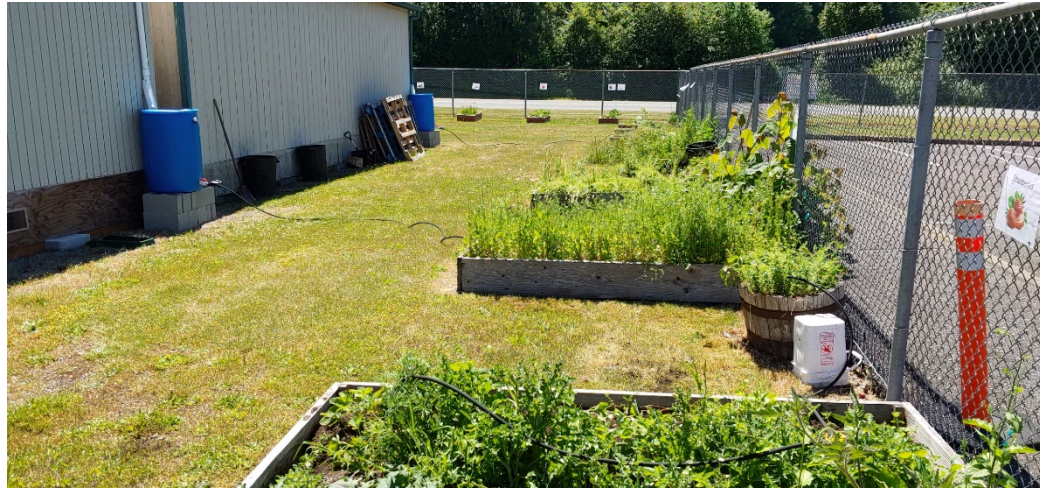


Raised garden beds for individual homeowners through Lawns to Lettuce



Vegetable seeds for individual homeowners through Plant A Row

Granite Falls resource distribution



Collaboration with Granite Falls ECEAP



Collaboration with Granite Falls Food Bank

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Thank you!

References

- Rutgers New Jersey Agricultural Experiment Station, Fact Sheet FS1218 “Rain Barrels Part IV: Testing and Applying Harvested Water to Irrigate a Vegetable Garden”
- Sightline Institute, “A GREEN LIGHT FOR USING RAIN BARREL WATER ON GARDEN EDIBLES”
- WHO Water Sanitation and Health, “6.11 Rainwater Harvesting”
- <http://www.clemson.edu/extension/hgic/plants/other/soils/hgic1650.html>

Resources for planning your layout

- The old farmers almanac
 - Planting calendar
 - Garden planner
 - Frost dates
- Tilthalliance.org, justgardensproject.org
 - Composting methods, bins, raised garden bed and compost bin ideas, suggestions
- Betterground.org
 - Resource list for compost, soil, and mulch
- <https://planthardiness.ars.usda.gov/>
 - USDA plant zone map
- www.chipdrop.in
 - Woodchip mulch
- <http://www.savingwater.org/>
 - Sprinkler calculator
- Calculatorsoup.com, soildirect.com
 - Mulch calculator



Additional resources

- Rodales Organic Life
- Grow smart grow safe
- Oregon Metro
- Mother earth news
- Old world garden farms
- Cropnutrition.com
- Department of Ecology “Dirt Alert”
<https://apps.ecology.wa.gov/dirtalert/>
- Department of Ecology “Watershed Characterization Map”
<https://fortress.wa.gov/ecy/coastalatl/wc/MappingPage.html?xMax=-13617599&yMax=6176482&xMin=-13677496&yMin=6078203>