

Sara Clark

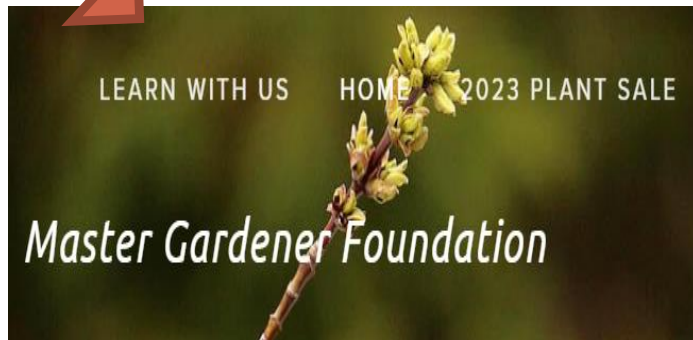


# Master Gardener Program

WASHINGTON STATE UNIVERSITY  
EXTENSION



# Learn with us!



<https://www.cowlitzcomg.com>

# Rate Your Vegetable Gardening Knowledge from 0-5

Put a number in the chat:

0= Total Newbie

1= Some knowledge

2= Medium

3= Pretty Knowledgeable

4= Confident but could learn a bit

5= Expert! \*



**5? Talk to me about becoming a  
Master Gardener!**

# What we will talk about today:

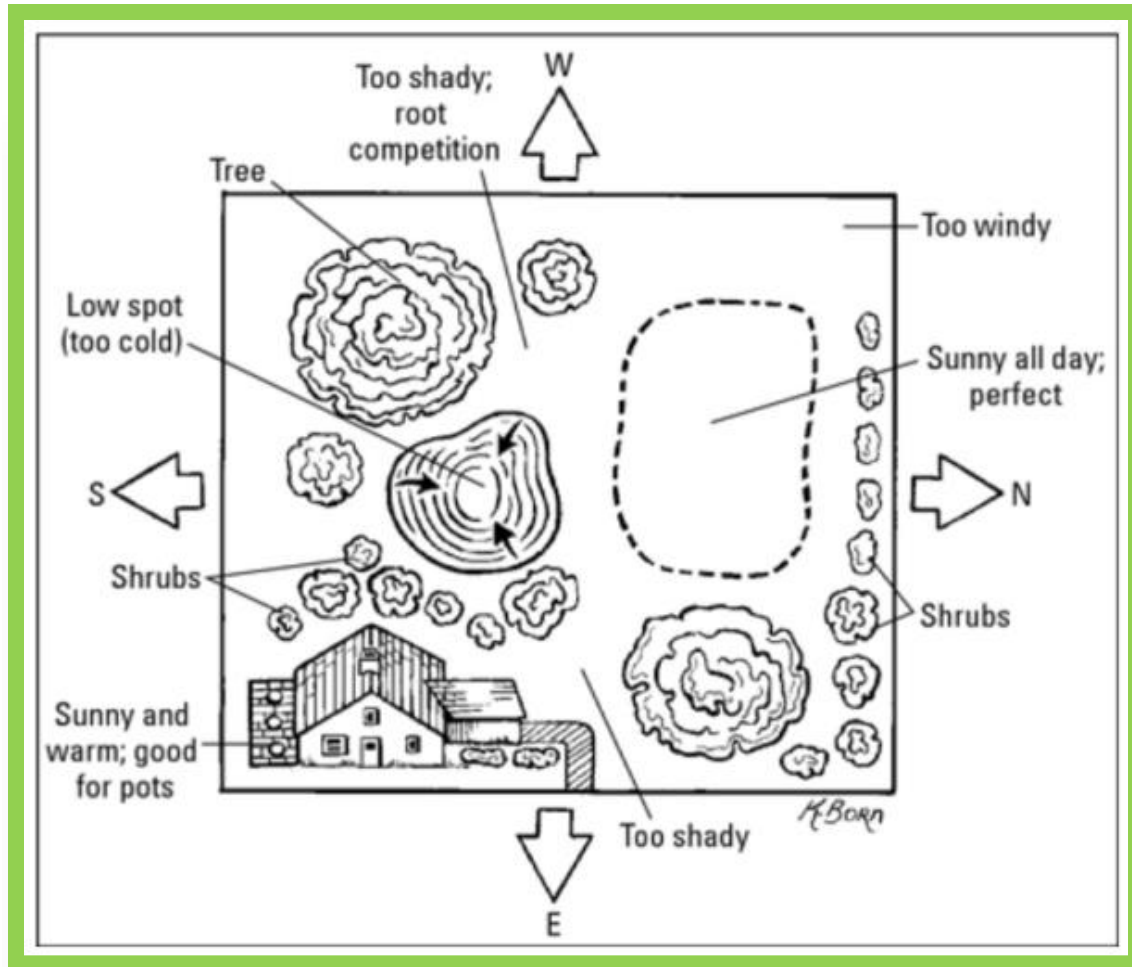
## 1. Why grow vegetables?



## 2. Our Climate and when to plant



### 3. Where to grow your vegetables



## 4. Preparing the soil



## 5. How to choose varieties



## 6. Seeds or Transplants?



## 7. Tools



## 8. Irrigation



## 9. Harvesting



## 10. Preserving the harvest





# 1. Why Grow Vegetables



A garden can:

- Supply you with fresh, healthy vegetables
- Beautify your landscape 
- Reduce transportation of food 
- Minimize purchased fertilizers-[compost!]
- Allow you to enjoy varieties not in stores
- Keep you active and fit 
- Improve your mind
- **AND!**

# Create opportunities for “generosity”



***But wait...What about saving money?***



*Technically*, it should be a money-saving adventure.

A few seeds, some water, some time,  
and you get:



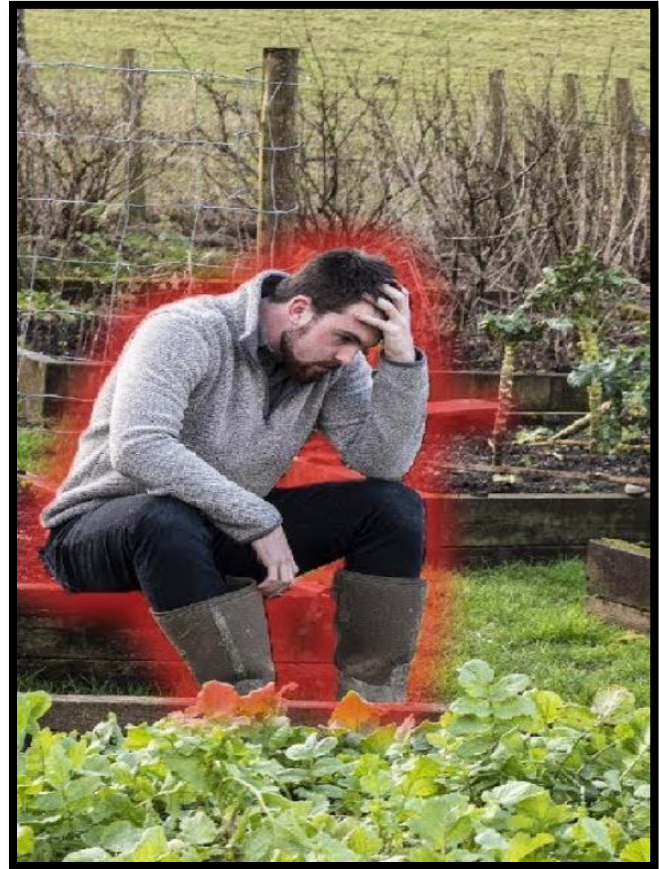
**50 broccoli plants for pennies each!  
However....**

## WARNING!

Not all home vegetable gardens save money:

- you may *buy too many seeds or plants* (*Mea Culpa*)
- you may *grow too much to use*, so it goes to waste
- you may spend too much *buying equipment* that you may not need
- OR....

You might try to do too much...



## The Good News!

You **can** save money growing your own vegetables!

---you can look for cheaper sources of seeds and equipment

---**you are getting**

**“top quality”  
vegetables for  
Less!**



---you get fresh air, exercise,  
knowledge and other benefits,  
often for free.



---AND! ***you can learn better practices!***



**Do try not to get carried away!**



# ***Full Disclosure: It can be addicting!***

WHO ARE WE?



GARDENERS!



WHAT DO WE WANT?



ALL THE PLANTS!



WHERE WILL WE PUT THEM?



WE DON'T KNOW!



## 2. Our Climate and When to Plant

PNW Climate:

Mild, Wet Winters, but Hot, Dry Summers



Unless, of course, it isn't normal.

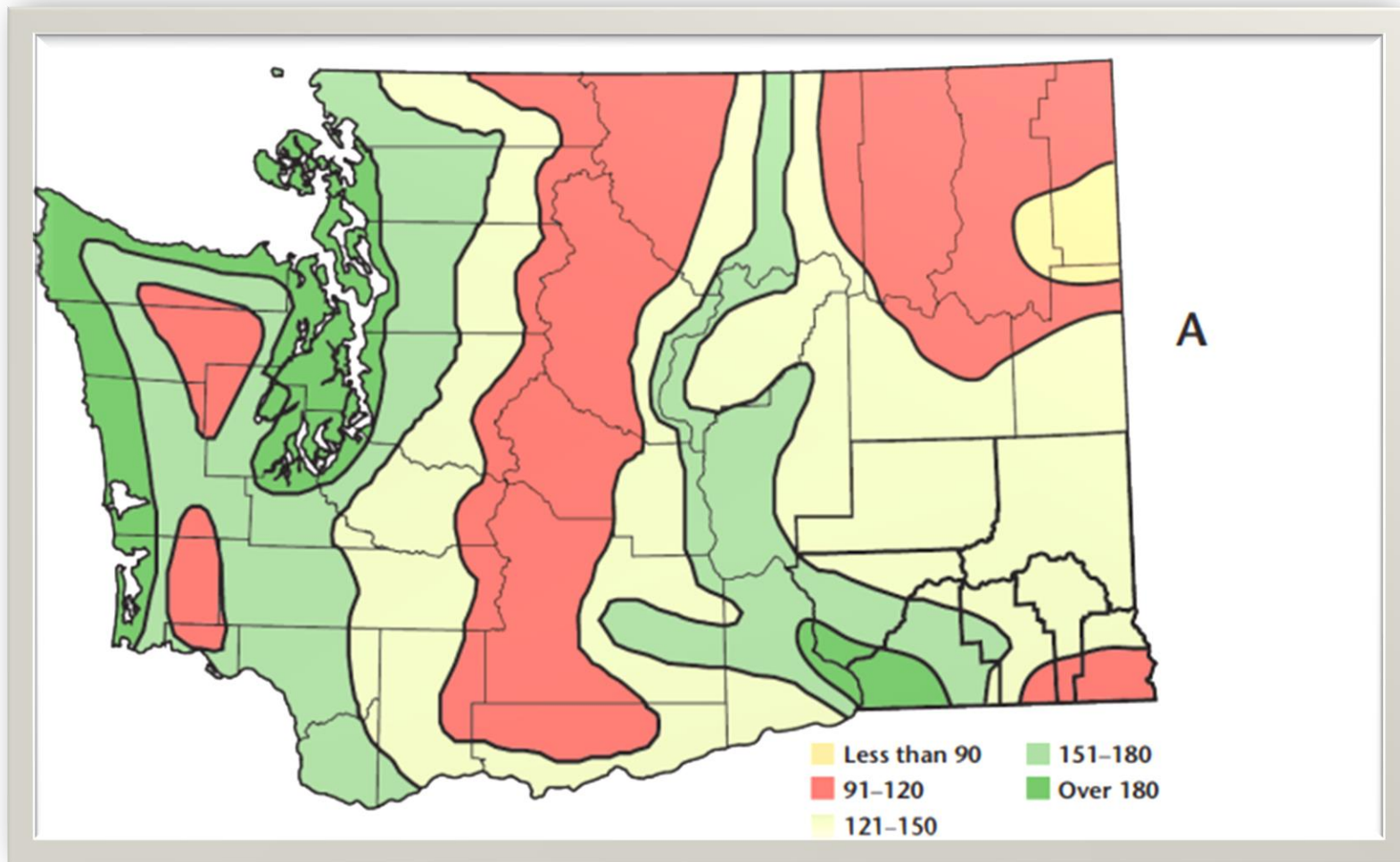
# Heat Dome: June 24-29, in 2021



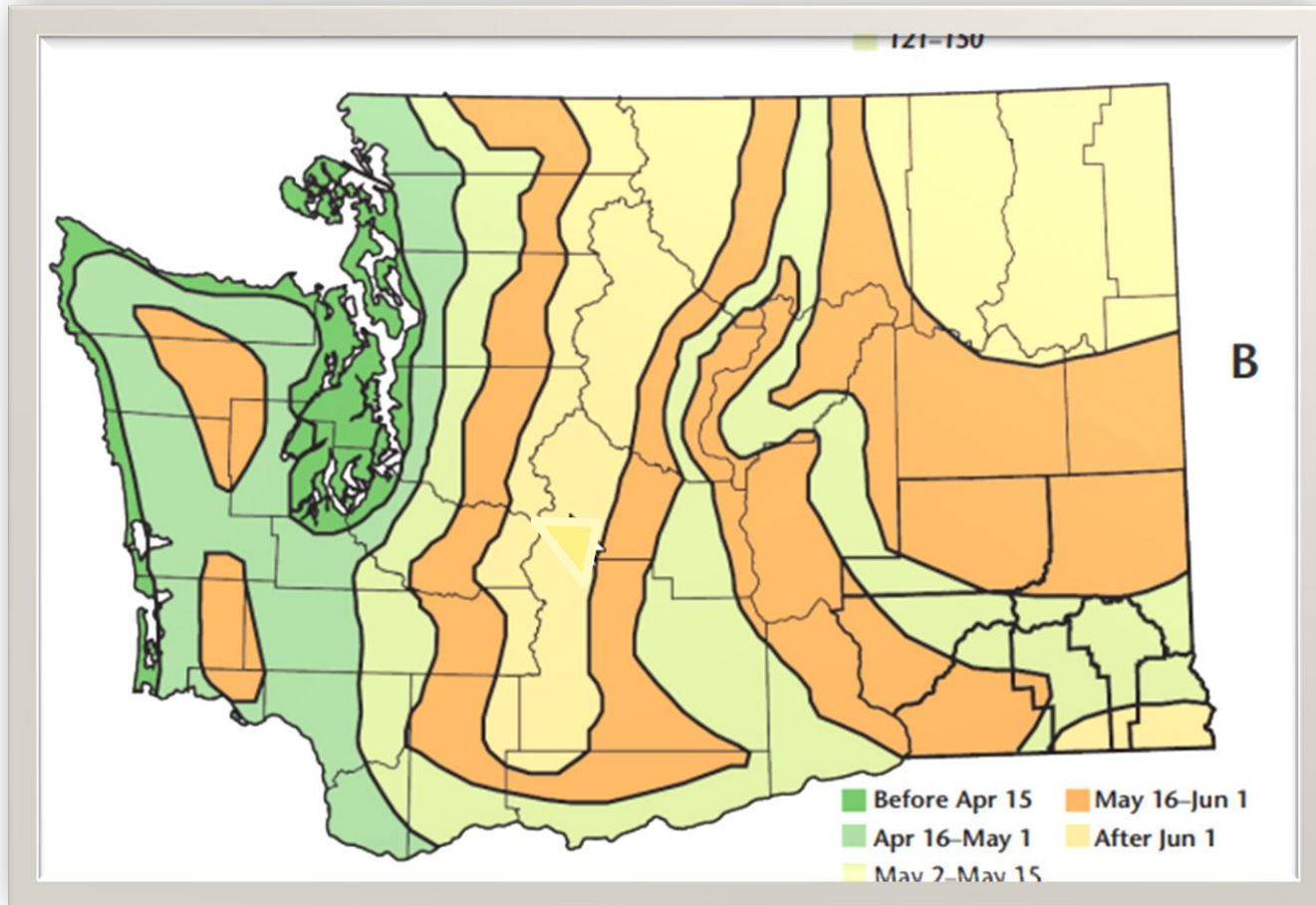
**April 12, 2022**



# Frost-Free days: 151-180



# Last Killing Spring Frost: 4/16 - 5/1



Tax  
Day?

May  
Day?

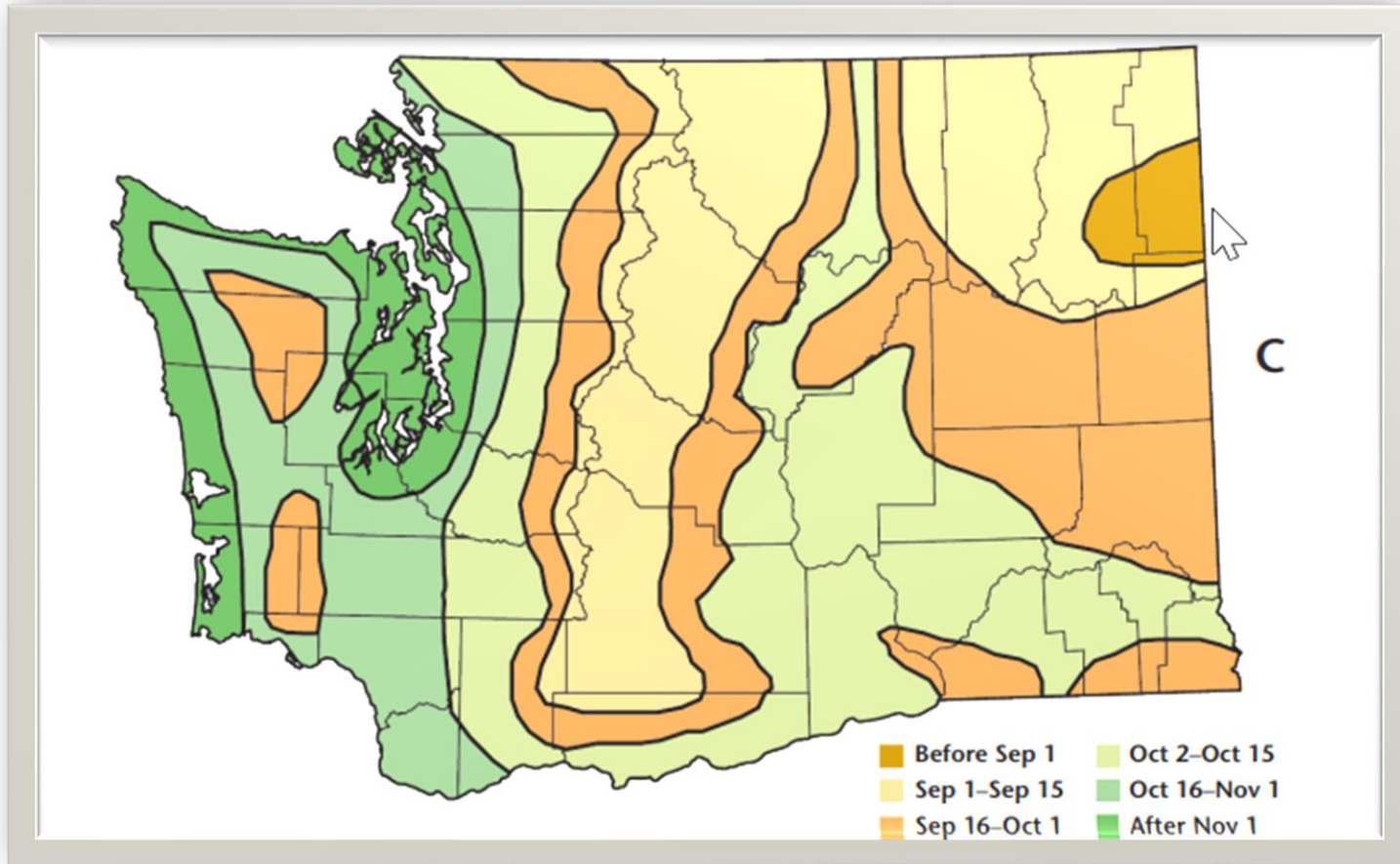
June 1?

What is your Microclimate?

**April 6, 2022**



# First Killing Frost: 10/16 – 11/1



**ALL SAINTS' DAY? *Watch the weather!***



## Crops that need Warm **SOIL**: 50°

### Warm-Temperature Crops

Bean

Corn, Sweet

Cucumber

Edamame

Eggplant\*

Melon

New Zealand Spinach

Okra\*

Pepper

Pumpkin

Squash, Summer

Squash, Winter

Sweet Potato\*

Tomato

\*These crops require the most warmth to be productive; in cooler areas they will need to be grown in plastic covered tunnels or greenhouses.

# Crops that can handle Cooler Temps:

## Cool-Temperature Crops

Artichoke**	Horseradish**
Artichoke, Globe**	Kale
Asparagus**	Kohlrabi
Bean, Broad	Leek
Beet	Lettuce
Broccoli	Mustard
Brussels Sprout	Onion
Cabbage	Parsley
Carrot	Parsnip
Cauliflower	Pea
Celery	Potato
Chard, Swiss	Radish
Chicory (Endive)	Rhubarb**
Chive	Salsify
Collards	Spinach
Garlic	Turnip

\*\* Perennial

## So when should I plant MY garden?

- **April 15:** if
  - there is no chance of frost or
  - you are willing to risk it, or
  - you are planting cold-tolerant plants
- **May 1:** to be on the safer side
- **For some folks: June 1:**
  - because you need to dry out?
  - Want warmer weather?
  - Are at 1000' elevation?
  - Aren't fond of broccoli?

# Or, CHEAT!

Transplants



Plastic Tunnels



Floating row covers



### 3. Where should I grow my garden?

What to consider:

- What you want to grow
- *[do you LIKE broccoli?]*
- Sun exposure
- Space



corn

vs.

carrots



Location! Best if you see it every day.



Near water!



- Soil & Drainage



- What kind of garden “structure” to use



- Convenience

- Costs



# What do you want to grow?

Things to consider:

- what are you willing to eat?
- how MUCH are you willing to eat?
- What are your plans for the food?  
(fresh, canning, freezing, drying)
- spacing [compact varieties!]
- watering needs
- is it possible to successfully grow it?





## Where do you have the best sun?

Most vegetable crops require at least six (6!) hours of direct sunlight each day.

Too much shade?

**Move.**

Or move your garden.

Community garden?

Neighbors' yard?

At a friend's house?

At an enemy's? Might become friends!

## How much space do you need?

You never can have enough! But:  
Consider the plant's needs  
above all.

Read the seed packet.

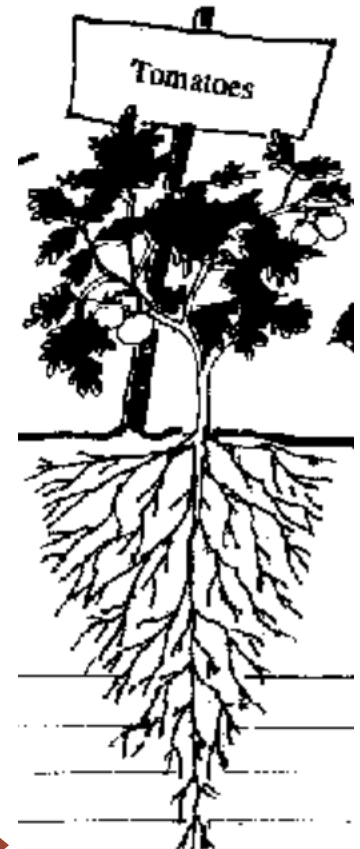
**Believe the seed packet.**

Corn needs tons of space.

Carrots need much less.

Compact varieties (ie., squash)

Remember the roots!



## What is your soil & drainage like?

- Vegetables require fertile, well-drained soil.
- Too wet? Consider raised beds/containers
- Not easy to dig? Work in organic matter (compost)
- Worried about contamination? (heavy metals, oil, chemicals) Get your soil tested professionally.

# Speaking of Soil Tests!

Home testing kits are available to buy from places like Lowes or Home Depot or online. These give you PH and a rough estimate of your **N**itrogen, **P**hosphorus and **P**otassium:  
**NPK**



# Professional Soil Testing:\*

## Simply Soil Testing

***"Simply Soil Testing"***  
provides soil testing and  
fertilizer recommendations  
for your garden, lawn and  
landscaping.

Useful and easy-to-understand  
reports

- 5 business-day turnarounds
- Customized fertilizer  
recommendations
- For both conventional and  
organic cultivation

**\*Example of one option. Other  
options are available.**

### Soil Tests and Prices

**Basic Soil Test** - \$16 per sample  
Includes pH, lime requirement, potassium,  
phosphorus, calcium, magnesium, soluble  
salts and fertilizer recommendations.

**Basic Test + Organic Matter** - \$20

**Basic Test + Fe, Mn, Zn & Cu** - \$20  
(iron, manganese, zinc and copper)

**Basic Test + S and B** - \$24  
(sulfur and boron)

**Complete Test** - \$32  
All of the tests listed above.

**Soil Texture** - \$16  
Percentage of clay, silt, sand and gravel in  
the soil, and classification of the soil type.

**Toxic Metal Testing** - \$24  
Levels of lead, cadmium and arsenic in the  
soil, and interpretation of the results.

# What do the numbers on fertilizer mean?



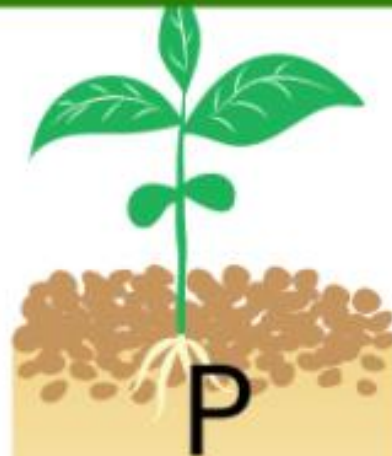
**NITROGEN**

greens up  
plants

**JUST THINK:**

↑ UP ↑

**NITROGEN**



**PHOSPHORUS**

reaches down  
to the roots  
and helps  
produce blooms

↓ DOWN ↓

**PHOSPHORUS**



**POTASSIUM**

promotes  
all around  
wellbeing

← ALL AROUND →

**POTASSIUM**

**Before you decide what form your garden will be in:**

**A note about planting!**

No matter what form your garden takes,

You should NOT plant the same plants in the same spot each year.

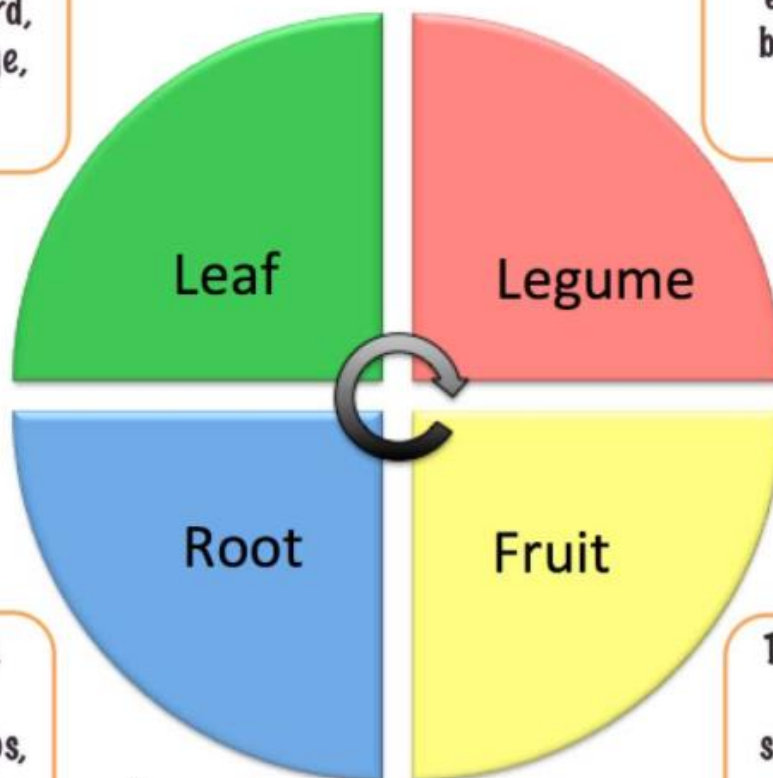
Rotation of crops stops diseases and pests from building up in the soil.

# One Suggested Rotation

## Basic Crop Rotation

Lettuce, arugula,  
kale, swiss chard,  
spinach, cabbage,  
etc.

Green beans,  
edamame, dried  
beans, cowpeas,  
lentils, etc.



Carrots, onions,  
beets, radish,  
potatoes, parsnips,  
sweet potatoes,  
etc.

Tomatoes, summer  
squash, winter  
squash, cucumbers,  
peppers, etc.



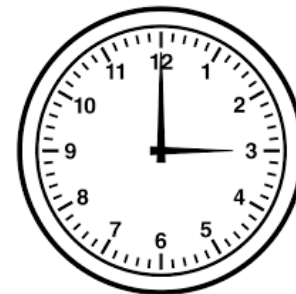
# Garden “Structure” Choices -- #1

## **Rototilling:**

- + no building beds
- + incorporate compost
- + change the configuration every year
- costs to rent or buy (or borrow) tiller
- Ground may be too wet



**And it takes TIME!**



## Garden “Structure” Choices -- #2

### Containers:

Bigger is better.

You control the soil.

Must have drainage  
(water damage?)

Locations: Driveways, decks  
(anywhere, really.)

Water reservoirs are crucial



## **Garden “Structure” Choices #3:**

### **Raised Beds:**

- +Very popular
- +Good investment (can last years)
- +Solves drainage issues
- +Can control the soil tilth and fertility
- +Can be moved or removed
- Costs
- Some plants don't work well (corn)
- Need some construction skills or handy friends.

# Raised Bed Options



## **Cheapest: Mounded Soil Beds**



**Check out: Hugelkultur Beds**

## Costs

Rototill?

- + **no construction costs**
- **buy or rent** or borrow rototiller
- **time** spent each spring

Raised beds?

- + **last** for years
- **wood, brick, metal, etc.** can cost
- + just mounding dirt is an option

Pots or bags?

? Can be cheap or expensive.

# Convenience

- Location! Is it easy to get to? Near water? Tools and Supplies: are they close by?
- Your **Comfort Level: Is it easy to work there? Too low?** Takes too much energy?



## 4. Preparing the Soil

### Tilling:

- Can be done by rototilling or
- digging with a shovel
- Need to add organic matter each year
- Composting is a great way to recycle and gain organic matter for little cost
- Worm composting makes great fertilizer
- Sheet mulching with leaves and grass works well and keeps weeds down
- Can buy compost or other amendments





## 5. Choosing Varieties for Your Garden

Things to consider:

- Does it grow well here?
- Will it fit your space?
- What are the maturity dates?
- Tomatoes=**days from transplant date**
  - 60= good, 110 = green tomatoes.
- Does it need a support? (ex: pole beans, tomatoes)
- Determinate or not? (tomatoes)
- Does it sound good to eat?

HEIRLOOM

VEGETABLE  
Cucumber  
Straight Eight

An award winning favorite, best picked when 8" long for top flavor. Straight for even slices.

SOW in average, well-drained soil in full sun in spring after danger of frost. Sow 4-6 seeds about 3" apart in hills 36" apart. Cover with 1" of fine soil; firm lightly and keep evenly moist. Seedlings emerge in 7-14 days.



FULL SUN  
(6+ HOURS)

58 DAYS  
TO HARVEST

DEPTH  
1"

THIN  
2-3 per group

61887

Burpee Garden Products Co.  
300 Park Ave., Warminster, PA 18974  
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ENCLOSED SEEDS ARE FOR PLANTING  
PURPOSES ONLY AND ARE  
NOT FOR HUMAN CONSUMPTION.

OUTDOOR SOWN



June-July      Apr-Aug  
May-July      Mar-Sept

burpee.com

0 41530 61887 7

**Pay attention to the suggestions for planting dates. Or not! (WA = FL?)**

**Will it be ready to harvest before your 1<sup>st</sup> freeze?**

## 6. Seeds or Transplants?

**Seeds:**

**Usually much cheaper**

**Best to buy seeds for the PNW.**

**Fresh is better.**

**Can you use “older” seeds? Yes.**

**Storing seeds well helps germination**

**--- Dark, cool place**

**--- Expect lower germination: old seed**

**--- You can test germination with 10**

**seeds, damp paper towel, ziplock bag**



**Avoid This:**

**Aim for This**



**Thinning is your friend.**

## Ways to plant seeds & thin less

Use the Packet and tap them out

Use your fingers and sprinkle

---You will still need to thin the plants!!

Pelleted seed: costly but easier. Not all seeds come pelleted.

Use a seeding guide with holes

Use Seed Tape: purchased  
or homemade

(Toilet paper, flour and water)

**Use a guide to  
drop the seeds**



**Or make  
homemade seed  
tape 2' to 3' max**



## How deep should you plant seeds?

- 1. Look on the Packet!*
2. General rule: 2x the diameter of the seed
3. Or 4 x the narrowest dimension
4. Or 2-3 Times the Largest dimension



**When in doubt, small seeds, small depth.  
Large seeds, plant them deeper..**



# Transplants?

## Transplants:

Planting plants that already have been growing for weeks can give you a jump on your garden. 😊

Transplants can let you grow varieties that take longer to ripen 😊

(think **TOMATOES**)

\$\$\$ Can cost more.



INSTANT GRATIFICATION! Woot!





First we  
get a  
plant

Then,  
we get  
another  
plant

And then  
we say,  
no more  
plants

But  
then,  
we find  
another  
plant

So we  
get two  
more  
plants!!

## 7. Tools- the basics!

Hoe



Rake



Shovel

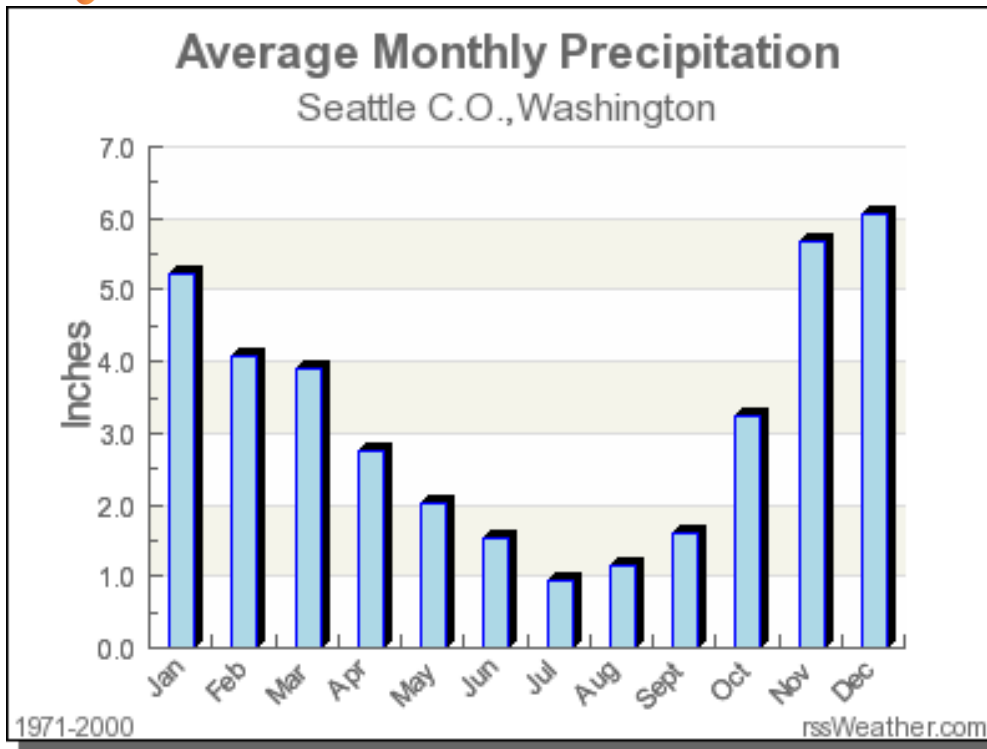


Hand tool



## 8. Irrigation What about watering?

Rainfall: June July August... 🌻 🔥



### Fun Fact:

Tucson, AZ gets more rain in the summer than we do.

**June 29, 2021:**  
**Heat Dome 114°**

# Irrigation

Avoid overhead watering



Hand Watering: Use a wand



# Drip Irrigation is Awesome!



## **How to know when to water?**

**Knuckle test: If it is dry down to the first knuckle of your finger, water.**



**Keep plants evenly moist, not flooded, and not dried out.**

## 9. Harvesting

When is it Ripe? Best tip: Try some!

Some vegetables **don't "hold" well.**

- tomatoes (rot, drop off)
- cabbage (cracks)
- basil (goes to seed)
- corn (loses sweetness)



Others are **more forgiving:**

- onions (need to dry down)
- carrots (can be left overwinter)





## 10. Preserving the Harvest

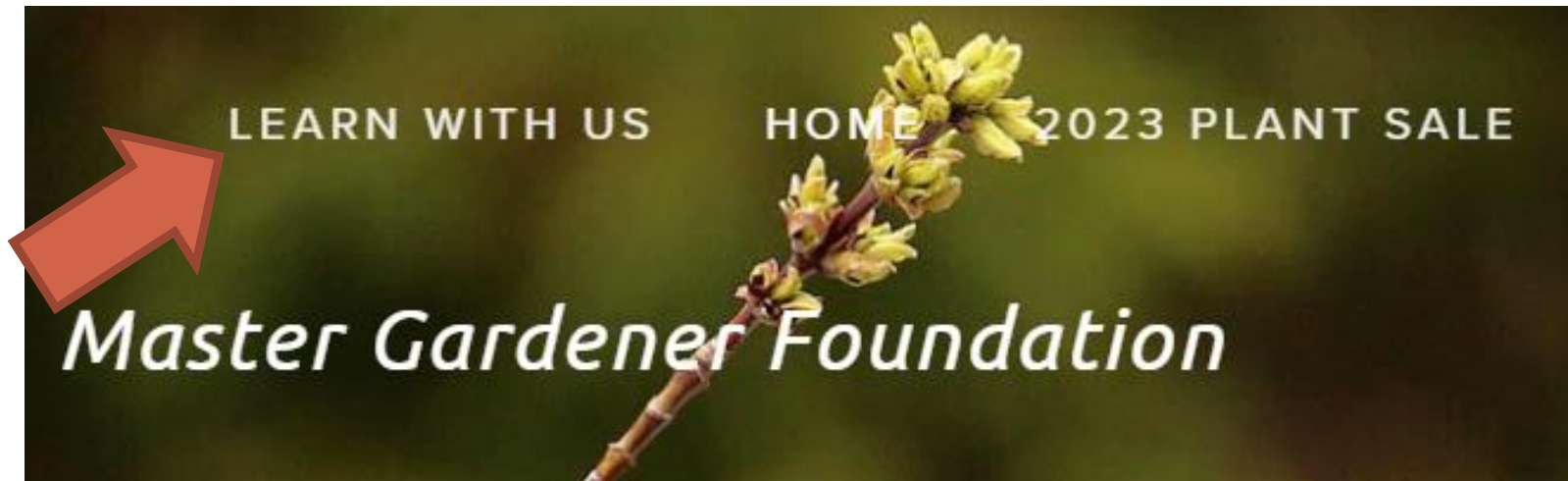
**[Quick Question Time... Do you can your vegetables?]**

- Refrigeration—not for long term
- Drying– really shrivels things up
- Freezing– some limits on storage, and use within a year.
- Canning– equipment, \$\$\$, storage, and KNOWLEDGE!
- **Avoid Killing Dinner Guests!**
- **Use A Pressure Cooker, and**
- **Test The Gauge!!!**



**Where you can find this  
information again:**

<https://www.cowlitzcomg.com>



## References, Links:

### *EXCELLENT Resources:*

#### Growing Your Own from OSU:

<https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/em9027.pdf>

#### Home Vegetable Gardening in WA:

<https://s3.wp.wsu.edu/uploads/sites/2073/2014/09/Home-Vegetable-Gardening-in-Washington.pdf>

#### MORE Vegetable Gardening Links!

<https://www.cowlitzcomg.com/vegetable-gardening>

# Thank You!



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