

Square Foot Gardening

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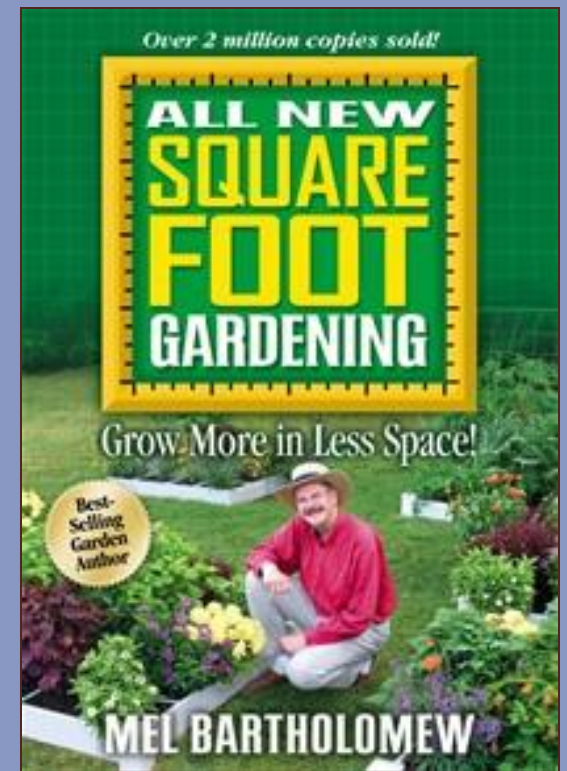
Where Can We Grow Plants?

- In ground, in soil
- In containers
- In cold frames
- In raised beds



Square Foot Gardening

- Mel Bartholomew
- Gardening on a square foot grid
- Each grid contains a set number of plants
- Usually based on a 4 ft. x 4 ft. grid, 16 units
- Bed often made of reused materials



Square Foot Gardening

Principle #1:

- Uses 20% space to grow the same amount compared to traditional garden rows



Square Foot Gardening

Principle #2:

- Only need 6 inches of mix to grow plants in
- Bagged compost from 3 different manufacturers



Square Foot Gardening

Principle #3:

- 4 ft. x 4 ft.
- Can easily reach across and tend



Square Foot Gardening Tips

- Location – Close to the house
- Direction – Up, Not Down
 - Locate your garden on top of existing soil
- Soil Mix – equal portion of:
 - 1/3 Peat Moss
 - 1/3 Vermiculite
 - 1/3 Blended Compost – your own or bagged

Square Foot Gardening Tips

- Box Depth
 - 6 - 12 inches Deep
- Fertilizer
 - Less or none compared to conventional gardening
- Easy Access
 - Above ground
 - Build a 4' x 4' box



Square Foot Gardening Tips

- The aisles
 - Comfortable width
 - 3 – 4 feet between boxes
 - Fill with grass, mulch, rock, etc.
- Grids
 - Prominent and Permanent



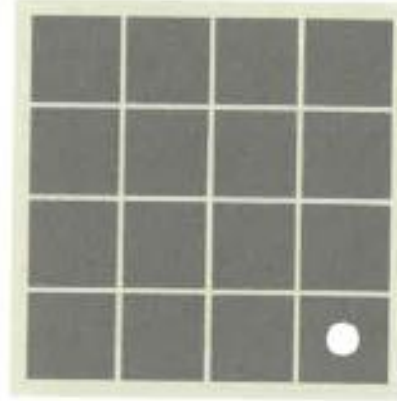
Square Foot Gardening Tips

- Seeding
 - A small pinch in each hole
 - Snip off the weakest and keep the strongest

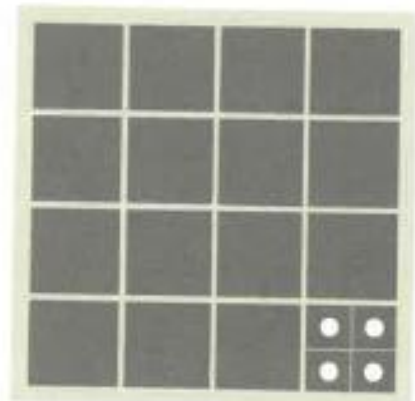


Plan Your Garden

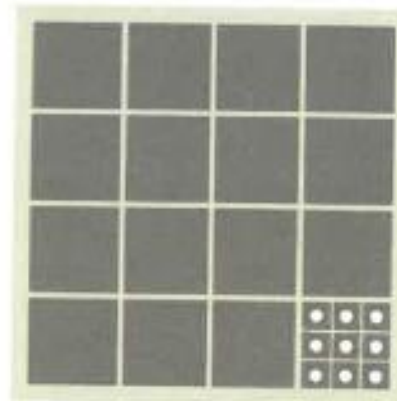
- Start Small!
- Don't forget to add aisles
- Draw it out



Plants spaced 12 inches apart, such as eggplant, are planted one per square.



Plants spaced 6 inches apart, such as lettuce, are spaced four per square.



Plants spaced 4 inches apart, such as spinach, are planted nine per square.



Plants spaced 3 inches apart, like radishes, are planted sixteen per square.

Size

- 1 4 x 4 box = 1 salad for 1 person every day for the growing season
- 1 more box = supply the daily supper vegetables for that person
- Add on another box = supply with extra of everything for preserving, special crops, giving away, etc.

Location

- Convenient location
- 6 – 8 hours of sun
- Clear of trees, shrubs
 - Shade and roots
- No puddles after heavy rains
- Soil matters, but not as much if you're adding your own on top

Building Boxes and Structures

- Looks neat and tidy
- Organizes and simplifies
- Holds a special soil mixture
- Size is pre-determined, so it has already-established limits for you!



Materials needed to make the beds

- Plastic or recycled lumber
 - Lasts forever but more \$\$ upfront
- Untreated lumber
 - Will need replacement, but cheaper upfront
- Concrete blocks
 - Can get these for free, lasts forever



Materials to go in the bed

- Sphagnum peat moss
- Compost (from 3 to 5 different manufactures)
- Vermiculite
- 1:1:1 mixture by volume
- Weed mat



*Extend the weed mat about 1 – 2 feet outside the frame

*A weed free perimeter is important!

Grids

- Slat-type pieces of wood make for good divisions



JOINING



Drill holes at the intersections of all the grid lath pieces.



Next, insert a pin or bolt to hold the grid together.

SECURING

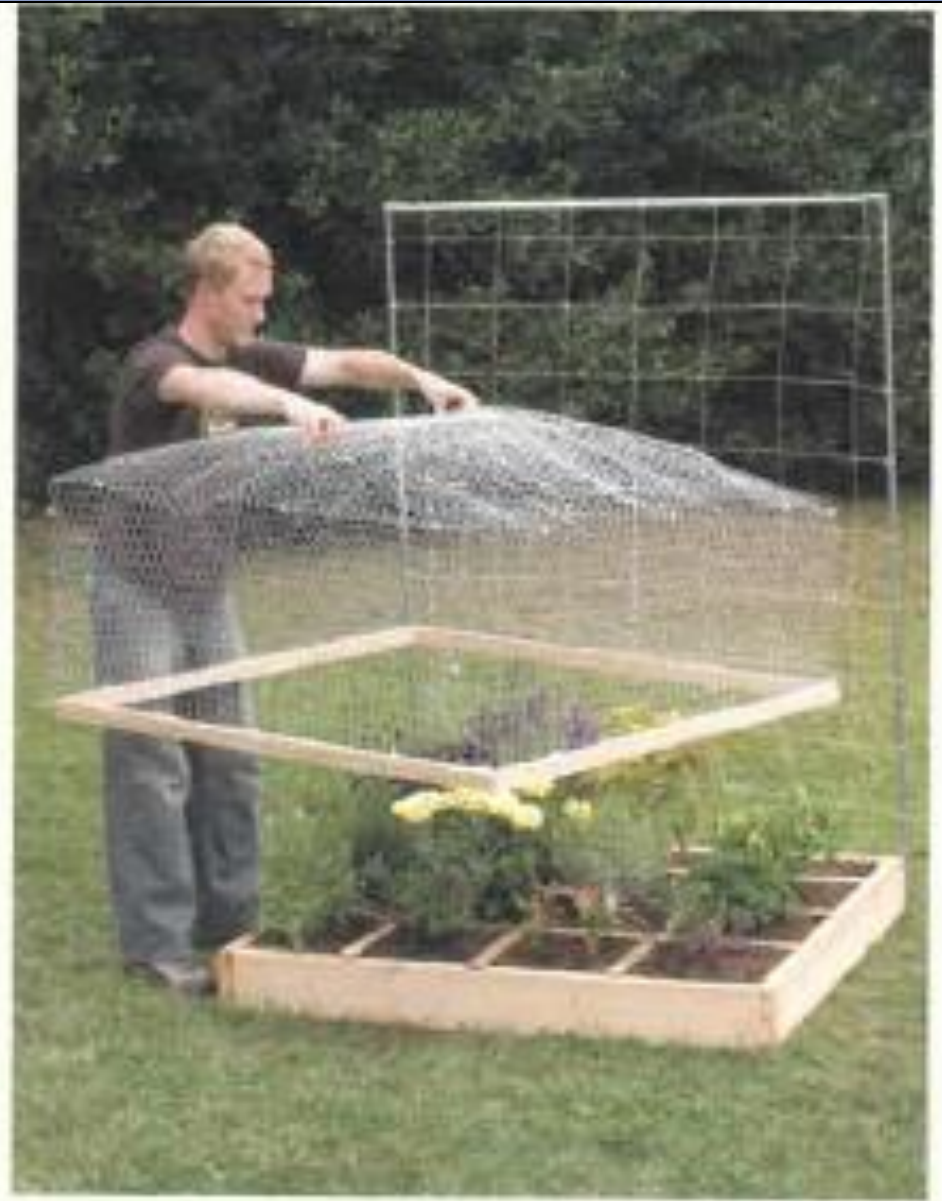


Drill holes at ends of each lath piece, into the sides of the box.



Secure the lath strips to the box with screws driven through the holes.

Plant Supports/ Protection



The frame is lightweight and easy to lift off your SFG box. Remove it to water, plant, prune or harvest.





- PVC pipe
- Plastic sheeting
- Protection from cold



- Pea and Bean netting
- Plants grow up through the netting and then are supported

Material for Aisles

- Grass
- Mulch
- Gravel
- Straw
- Walkways of stone, brick, etc.

Soiless Mix

- 1/3 garden compost
- 1/3 peat moss
- 1/3 vermiculite
- Make your own compost or buy it
 - If you buy, you need to buy more than 1 kind and mix it together.

Garden Compost Bin

<div>Yes</div> <div>Caution – Limited Amounts</div> <div>No</div>		
Straw	Corn cobs	Diseased plant materials
Leaves	Shredded twigs	Meat or bones
Grass Clippings	Shredded bark	Grease
Spoiled garden produce	Pine needles	Whole eggs
Vegetable and fruit peels	Hedge trimmings	Cheese
Shredded newspaper	Wood shavings	Seeds and fruit pits
Crushed eggshells	Sawdust	Cat or dog manure
Stable or chicken manure	Coffee grounds	Bakery products
Tea bags	Peanut shells	Dairy products

Buying What You Need

Multiply the width of your box and
divide it by 2

$$(4 \times 4) / 2 = 8 \text{ cubic feet}$$

$$(4 \times 8) / 2 = 16 \text{ cubic feet}$$

$$(4 \times 12) / 2 = 24 \text{ cubic feet}$$

$$(4 \times 16) / 2 = 32 \text{ cubic feet}$$



- Mixing on a tarp
- Water mixture as you go – it will be dusty!



Mixing in a Wheelbarrow



Planting Your Garden

How much to plant?

- Only what you want to eat
- 1 square foot = 1 pound of food
- Plant multiple squares with your favorite foods
- Stagger your planting (successions)
- Plan for a new crop after harvest
- Plant by height

PLANT SPACING

Extra Large

1 Plant

Placed 12 inches apart:

Broccoli



Cabbage



Pepper



Large

4 Plants

Placed 6 inches apart:

Leaf Lettuce



Swiss Chard



Marigold

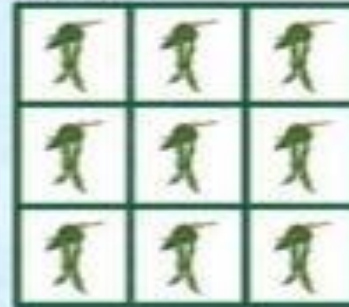


Medium

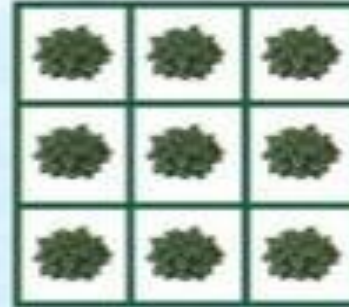
9 Plants

Placed 4 inches apart:

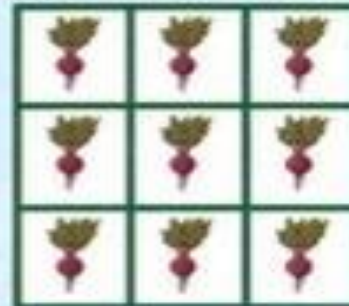
Bush Bean



Spinach



Beet

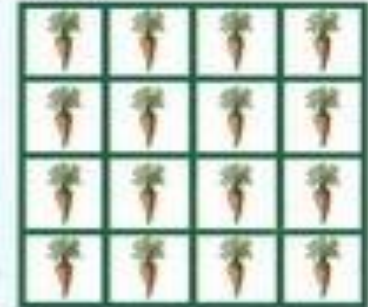


Small

16 Plants

Placed 3 inches apart:

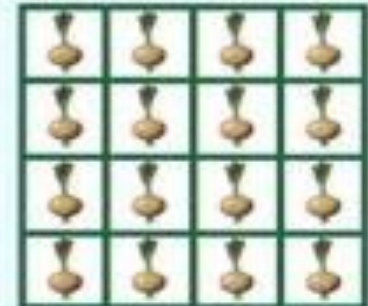
Carrot

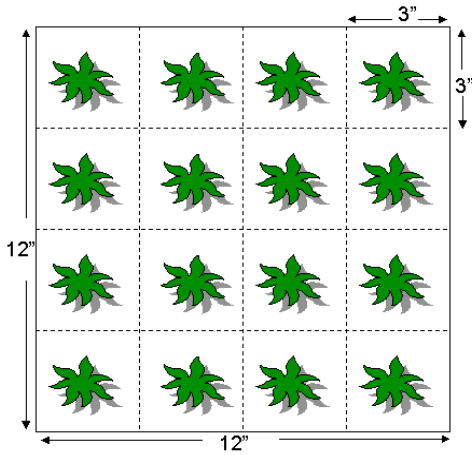


Radish

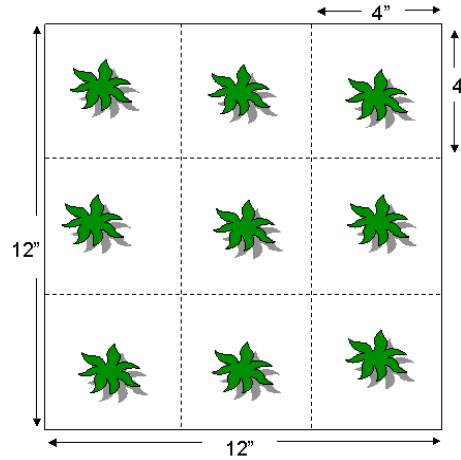


Onion

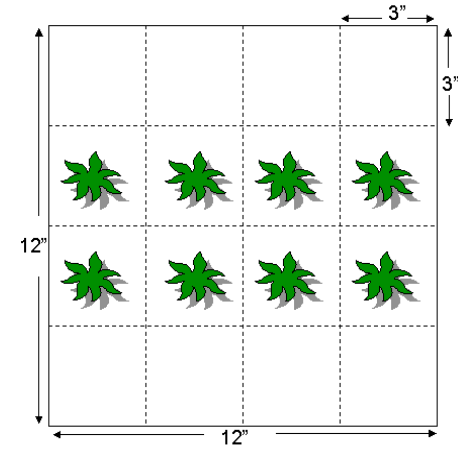




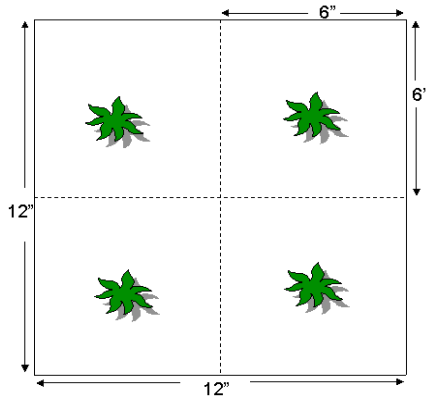
16 per sq. ft. :
Carrots,
Radishes,
Garlic, Beets



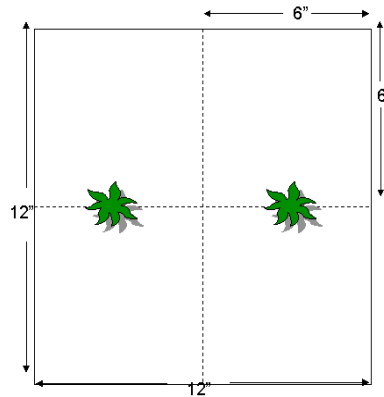
9 per sq. ft.:
Spinach



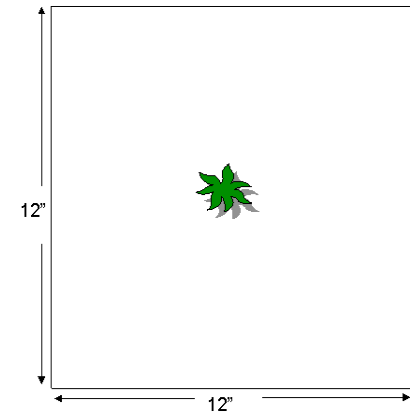
8 per sq. ft.:
Pole beans,
peas



4 per sq. ft.:
Lettuce



2 per sq. ft.:
Cucumbers,
Swiss Chard



1 per sq. ft.:
Broccoli, Cabbage,
Cauliflower,
Collards, Eggplant

Garden dedicated
to fingerling
potatoes



*Be sure to do a
better job of
keeping a weed-
free swath around
the bed



Garlic



- Broccoli & cabbage
- Spinach on corners
- Kale in others











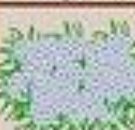

















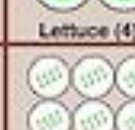

****Weed-free area around the bed**



- Spinach on ends (9 per square)
- Kale in middle 2 boxes (6 and 9 per square)
- Broccoli & cabbage spaced 1 plant per square













































Planted Square Foot Garden

 Potatoes (4)	 Carrots (16)	 2 Onion Type (16)	 Marigolds (2)	 Swiss Chard (4)	 Lettuce (4)	 Watermelon (1)	
 Nasturtium & Green Beans (9)	 Marigold & Green Beans (9)	 Tarragon	 Lavender	 Dahlia	 Broccoli (1)	 Nasturtium & Lettuce (4)	 Strawberries (4)
 Cucumber (2)	 Snap Peas (9)	 Spinach (9)	 Cauliflower (1)	 Garlic	 Lavender & Broccoli (1)	 Lettuce (4)	 Lavender & Spinach (9)
 Squash (1)	 Dill		 Marigolds (2)	 Marigold & Carrots (16)	 Nasturtium & Broccoli (1)	 Snap Peas (9)	 Strawberries (4)

SQUARE FOOT GARDEN PLAN GUIDE

garden365.com

 Tomatoes 1	 Peppers 1	 Onion 9	 Head Lettuce 4	 Carrots 6	 Leaf Lettuce 16	 Cucumber 2
 Hot Pepper 1	 Winter Squash 1	 Sweet Potatoes 1	 Potatoes 2	 Pumpkins 1	 Cauliflower 1	 Corn 2
 Beets 9	 Eggplant 1	 Spinach 9	 Garlic 4	 Radishes 16	 Melons 1	 Celery 2
 Brussel Sprouts 1	 Kale 2	 Summer Squash 1	 Rosemary 1	 Cilantro 9	 Sage 1	 Chives 1
 Bush Beans 4	 Pole Beans 4	 Basil 2	 Bok Choy 1	 Parsnips 9	 Dill 9	 Oregano 1
 Cabbage 1	 Turnips 9	 Parsley 2	 Thyme 2	 Rutabagas 4	 Peas 8	 Okra 1

*Numbers represent the number of plantings per square foot

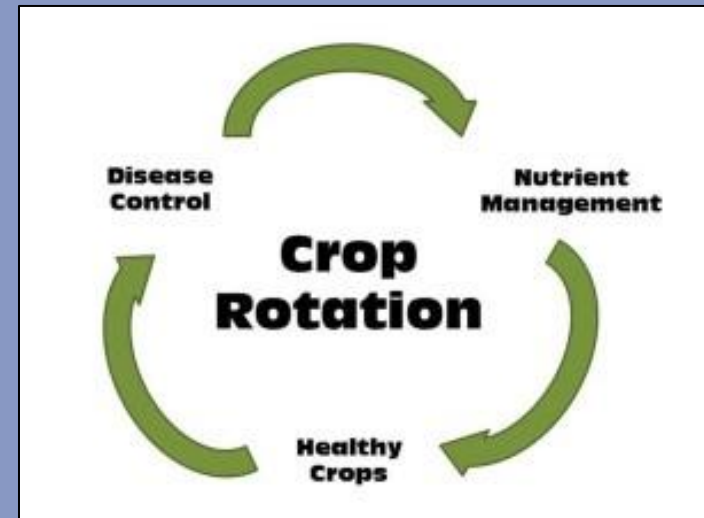
Crop Rotation for Vegetables

- Changing the planting location of vegetables within the garden each season
 - Reduce damage from insect pests
 - Limit the development of disease
 - Manage soil fertility



Why is Crop Rotation Important?

- Vegetables are classified by family
- Susceptible to similar insects and diseases
- Similar nutrient requirements
 - If the same nutrients are taken from the soil year after year, soil's quality will diminish



Groups of Related Crops

Group A

Cantaloupe
Cucumber
Gourds
Pumpkin
Squash
Watermelon

Group B

Broccoli
Brussel sprouts
Cabbage
Cauliflower
Collards
Kale
Mustard
Turnips

Group C

Pepper
Tomato
Eggplant
Irish Potato

Group D

Beans (snap,
lima, pole)
English peas
Snow peas
Southern peas

Group E

Beets
Swiss chard
Spinach

Group F

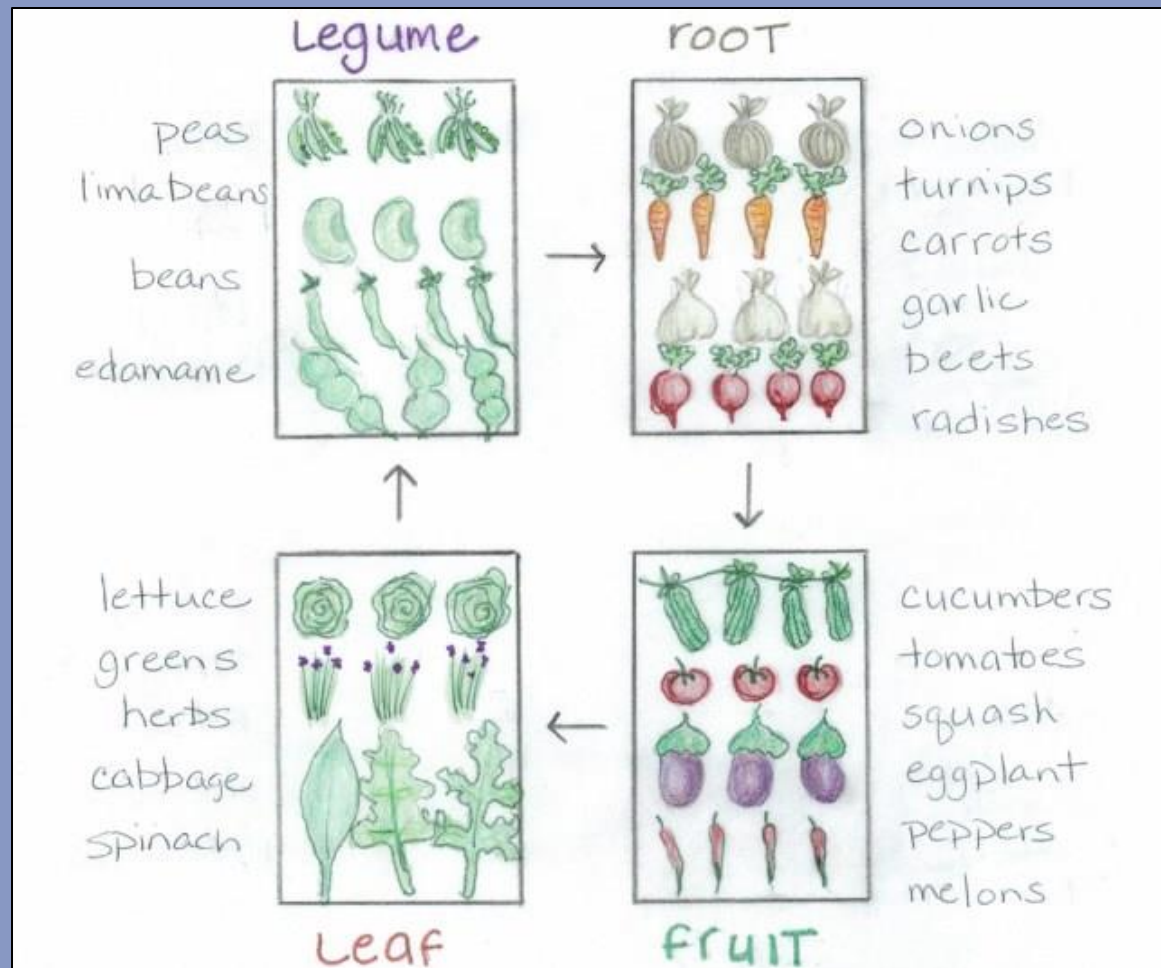
Onions
Shallots
Garlic
Leeks

Group G

Sweet Corn

How to Plan a Crop Rotation

- Vegetable crops in the same plant family should NOT be planted in the same area of a garden year after year

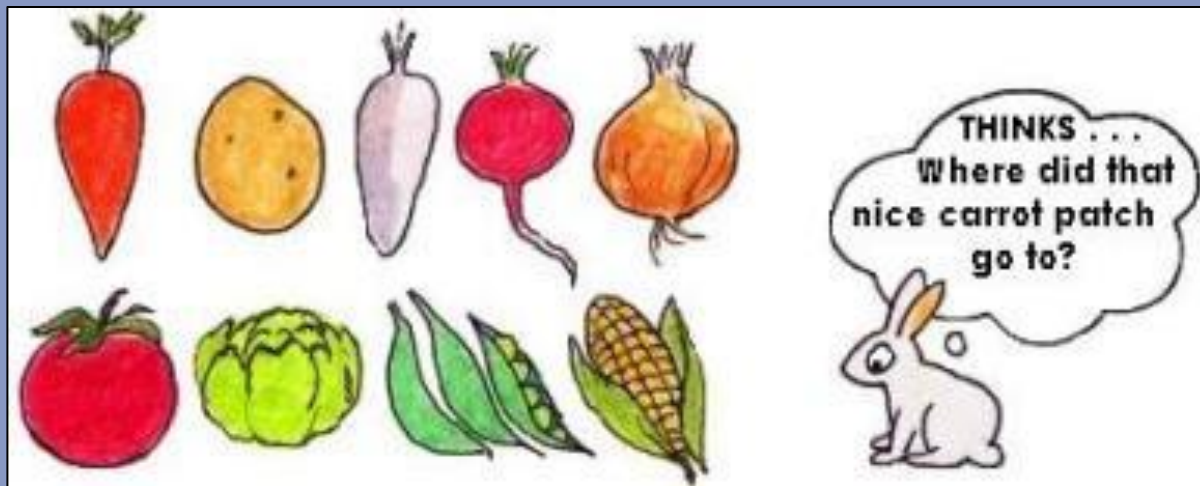


How to Plan a Crop Rotation

- Complex or Simple
 - Change vegetable locations annually
 - Use cover crops
 - Leave a garden area fallow

Rotation Rules

- Light feeders follow heavy feeders
- Deep-rooted follow shallow-rooted
- 3 years between planting the same family in the same area



Garden Care: Water

- Pay attention to soil moisture
- Too much water is just as bad as not enough
- Water the roots, not the foliage



Garden Care: Mulch

- Reduces water evaporation from soil surface
- May or may not reduce soil temperature
- Reduces competition by weeds



Garden Care: Fertilization

- 10-10-10 or starter fertilizer
- Water soluble
- Usually only need to supplement nitrogen fertilization
- Compost and organic mulch as source of nutrients



Garden Care: Pest Control

- IPM – Integrated Pest Management
 - Plant resistant varieties
 - Employ good cultural practices like crop rotation
 - Scout – note presence of problem and beneficial organisms
 - Practice the safest possible approach

Garden Care: Pest Control

- If using pesticides, please let others know and always follow directions on label!!



Garden Care: Clean-Up

- Clean-up fruit and vegetation to eliminate over-wintering insects and disease
- Soil testing
- Incorporate organic matter
- Sow cover crop
- Plan next year's garden



Questions?

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