NB Chg
Gardening for change
Nurturing your garden

NB Community Harvest Gardens inc.

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NB Community Harvest Gardens inc.

To grow food
To grow minds
To grow community

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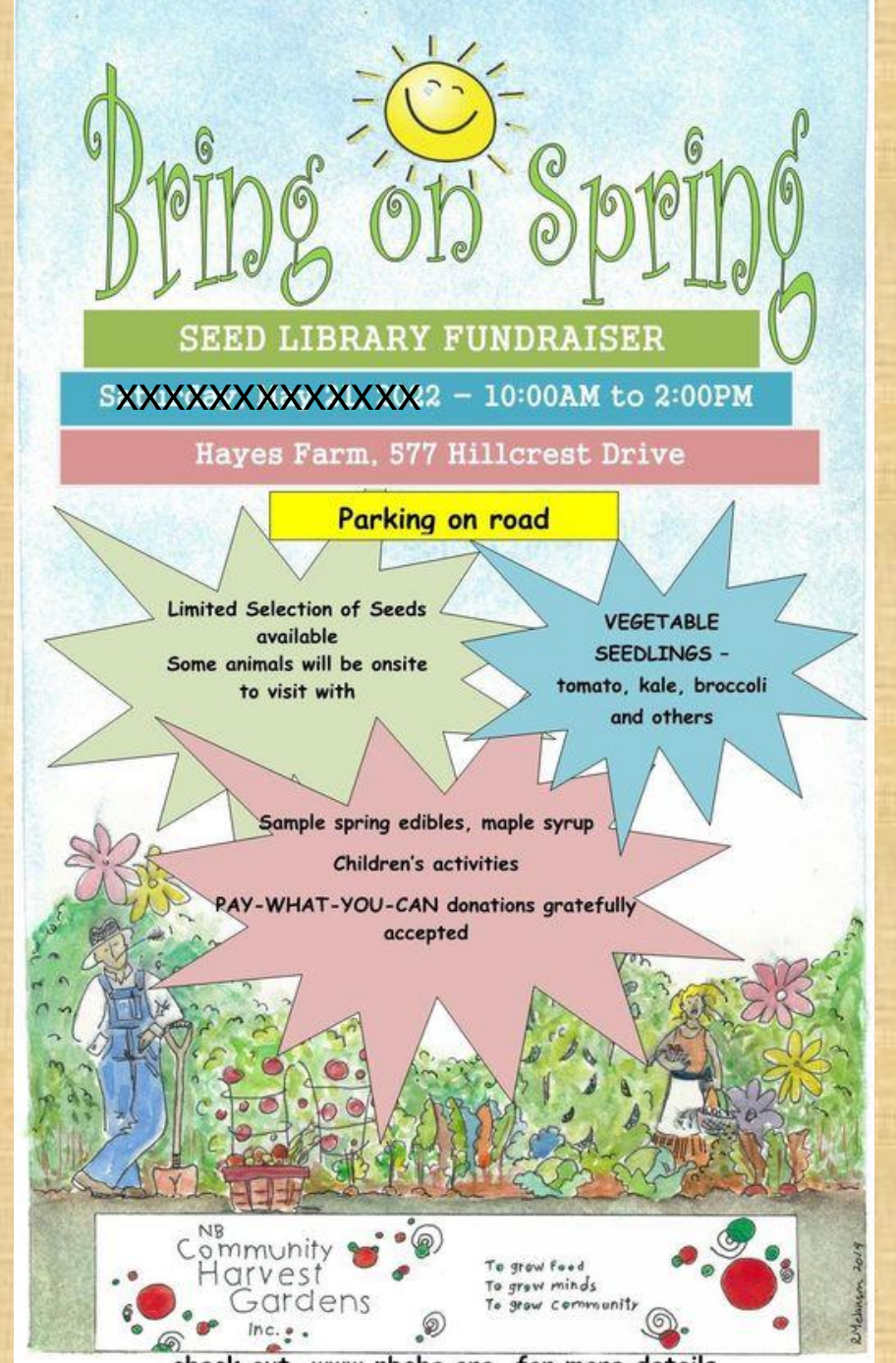

check out www.nbchg.org for more details

Last Years Programs

Plots still available at both our community gardens!

Would you like to grow your own food but

- have no access to a garden plot?
- need gardening skills or tools?
- are physically challenged?
- face some other challenge?

NB Community Harvest Gardens is here to help.

St. Mary's Community Garden

780 McEvoy Street
(beside St. Mary's Anglican Church)

Marysville Community Garden

20 McGloin Street
(behind Marysville Place)

- $20 annual membership fee
- $10 -$20 annual fee per garden plot
- Fee assistance available
- Tools and garden support available
- Persons of varying abilities welcome
- "How to garden" workshops throughout the year *included with your NBCHG membership*

For more information please contact our Garden Director Carol Muncer

muncer4813@rogers.com
www.nbchg.org

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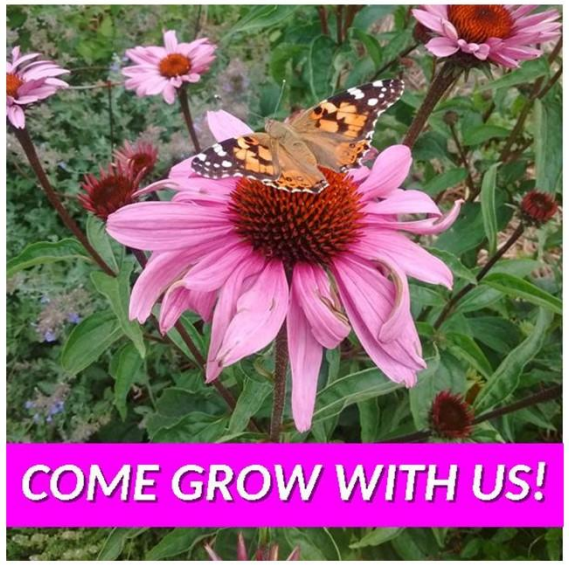
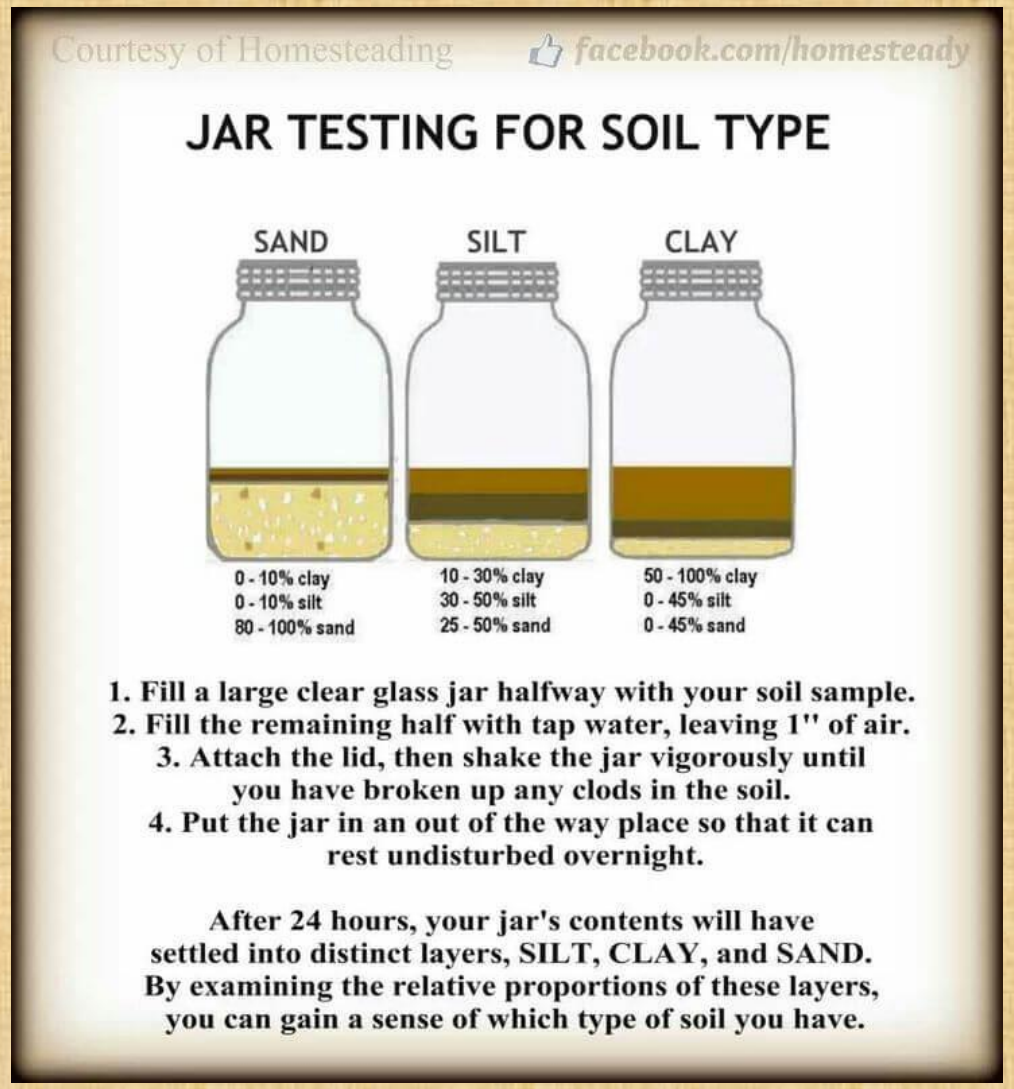


Soil, NPK , weeding, transplanting, pests, and all the rest

- Soil and Soil nutrition
- Plant problems and solutions
- Transplanting

Types of soil

- Sandy
- Clay
- Silty
- Loam

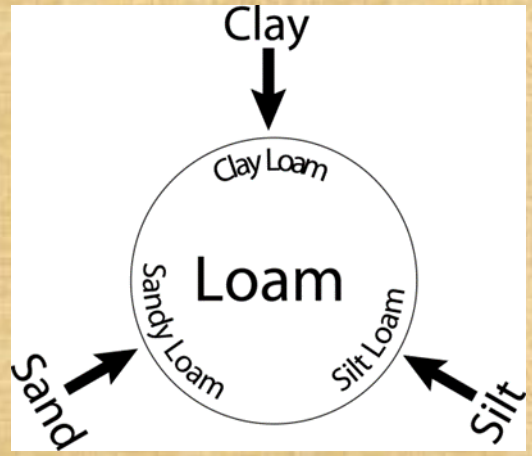


Sandy soils light and gritty, dry out quickly, are often low in nutrients, acidic.

Silty Soils between sandy and clay soils. ,tendency to form a crust, floury when dry and makes a ball when wet.

Clay soils heaviest soil, compaction and cracking makes it difficult for plants, rich with nutrients

Loamy Soil most fertile, a combination of sandy, clay and silt particles. Loamy soils don't get dried out in the summer, or water-logged in winter.

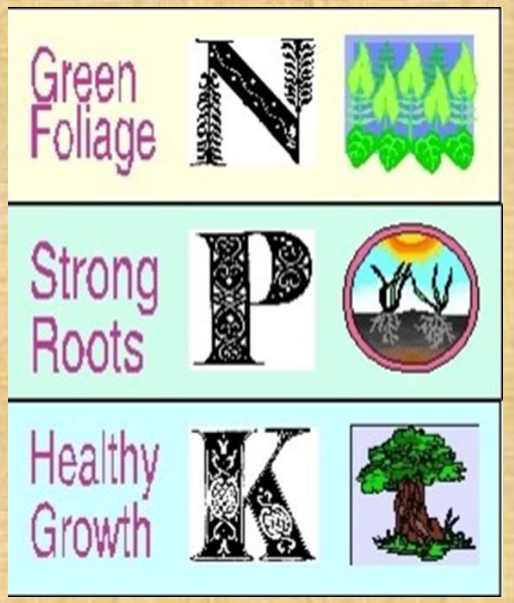


Main Nutrients Plants need

- Nitrogen
- Phosphorus
- Potassium

2- 4- 4
What do the numbers mean?

- The numbers stand for Nitrogen, Phosphorous and Potassium (in this order) ie NPK
- The numbers on any purchased fertilizer, organic or not, will have these 3 numbers. (percentage by weight of each nutrient).



PRIMARY NUTRIENTS

- **Nitrogen** It is essential for plant cell division and vital for plant growth. (green foliage)
- **Phosphorus** promotes early root formation and growth, and more. (root growth)
- **Potassium** disease resistance, improves winter hardiness, and more. (healthy growth)

SECONDARY NUTRIENTS

Calcium (Ca), Magnesium (Mg), and Sulfur (S) are required in lesser amounts than macronutrients, but each is equally important to the crop.

- **Calcium** increases fruit set and quality and is important for continuous cell division and formation (regulates hormonal activity).
- **Magnesium** the center molecule of chlorophyll, improves utilization and mobility of phosphorus.
- **Sulfur** helps develop enzymes, vitamins and oil contents, and aids in seed formation.

Micro Nutrients

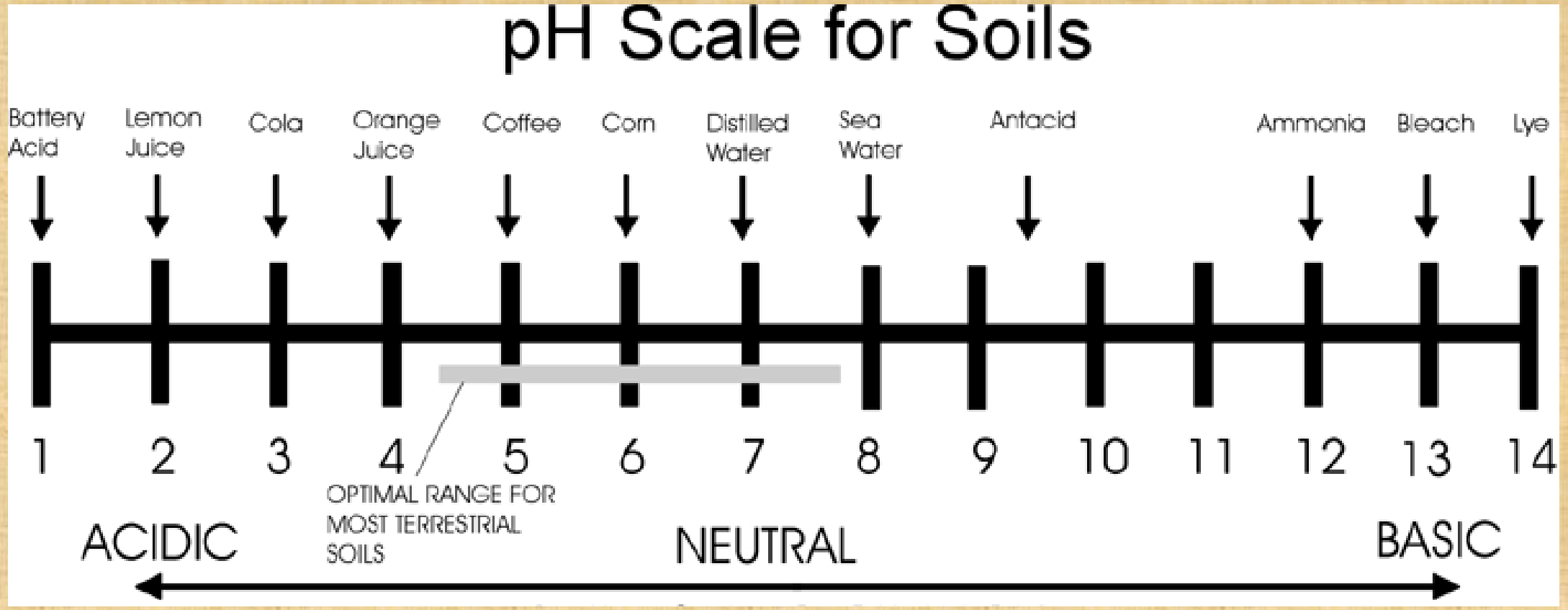
- Boron (B), Zinc (Zn), Copper (Cu), Manganese (Mn), Iron (Fe), Chloride(Cl) and Molybdenum (Mo) are used in minute amounts but are just as important to plant growth and development as the major nutrients..

Soil pH

- Plant nutrients become available or unavailable according to the soil's pH level
- Yellowing between the veins of young leaves indicates an iron deficiency, not a lack of iron but the wrong acidity in the soil
- Most plants thrive in slightly acidic soil because that pH gives them good access to all nutrients.
- Limestone is used to raise a pH level,(ie bring acidic soil closer to 7) and sulfur is used to lower it (drop alkaline soil closer to 7).
- *Limestone is relatively pure calcium carbonate, but dolomite limestone is a mix of calcium carbonate and magnesium. Pound for pound, dolomitic limestone neutralizes more acidity than pure limestone and adds magnesium to the soil.*

Amendments Can Affect Soil Conditions

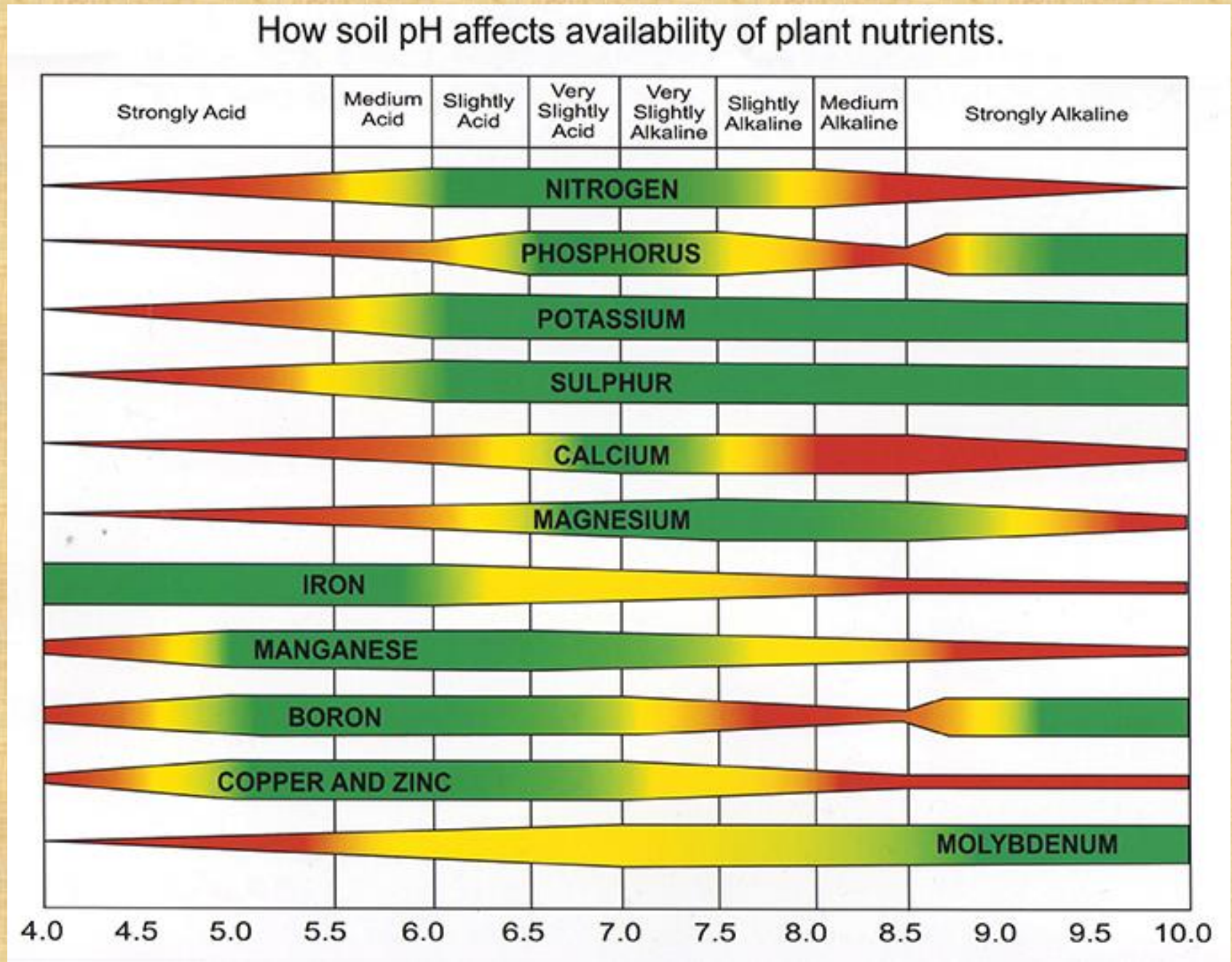
- Soil pH is more important to your plant than the actual available nutrients. If the pH is wrong, the plant can't access the nutrients that are present.
- NB soils tend to be acidic,(ie less than 7) so tend to have less bioavailability of certain nutrients, such as calcium, magnesium, potassium.
- A pH of **6.5 is ideal**; the range from pH 6.0 to 7.0 is good for vegetables. The growth of most vegetables will not be hindered if the soil pH is between 5.5 and 7.5.
- Other than lime and sulphur, other amendments can affect ph


pH Scale for Soils
Battery Acid
Lemon Juice
Cola
Orange Juice
Coffee
Corn
Distilled Water
Sea Water
Antacid
Ammonia
Bleach
Lye
1
2
3
4
5
6
7
8
9
10
11
12
13
14
OPTIMAL RANGE FOR MOST TERRESTRIAL SOILS
ACIDIC
NEUTRAL
BASIC

Plant Preferences for pH

Very acid (pH 5.0 to 5.8)	**Moderately acid** (pH of 5.5 to 6.8)	**Slightly acid** (pH 6.0 to 6.8)	**Very alkaline** (pH 7.0 to 8.0)
azalea	bean	asparagus	acacia
blueberry	begonia	beet	bottlebrush
celeriac	Brussels sprouts	bok choy	cabbage
chickory	calla	broccoli	cauliflower
crabapple	camellia	gooseberry	celery
cranberry	carrot	grape	Chinese cabbage
eggplant	collard greens	kale	cucumber
endive	corn	kohlrabi	date palms
heathers	fuchsia	lettuce	dusty miller
huckleberry	garlic	mustard	eucalyptus
hydrangea	lima bean	muskmelon	geranium
Irish potato	parsley	oats	oleander
lily	pea	okra	olive
lupine	peppers	onion	periwinkle
oak	pumpkin	pansy	pinks
raspberry	radish	peach	pomegranate
rhododendron	rutabaga	peanut	salt cedar
rhubarb	soybean	pear	tamarisk
shallot	squash	peony	thyme
sorrel	sunflower	rhubarb	
spinach beet	tomato	rice	
spruce	turnip	spinach	
wild strawberry	viola	Swiss chard	
sweet potato			
watermelon			
white birch			

How soil pH affects availability of plant nutrients.



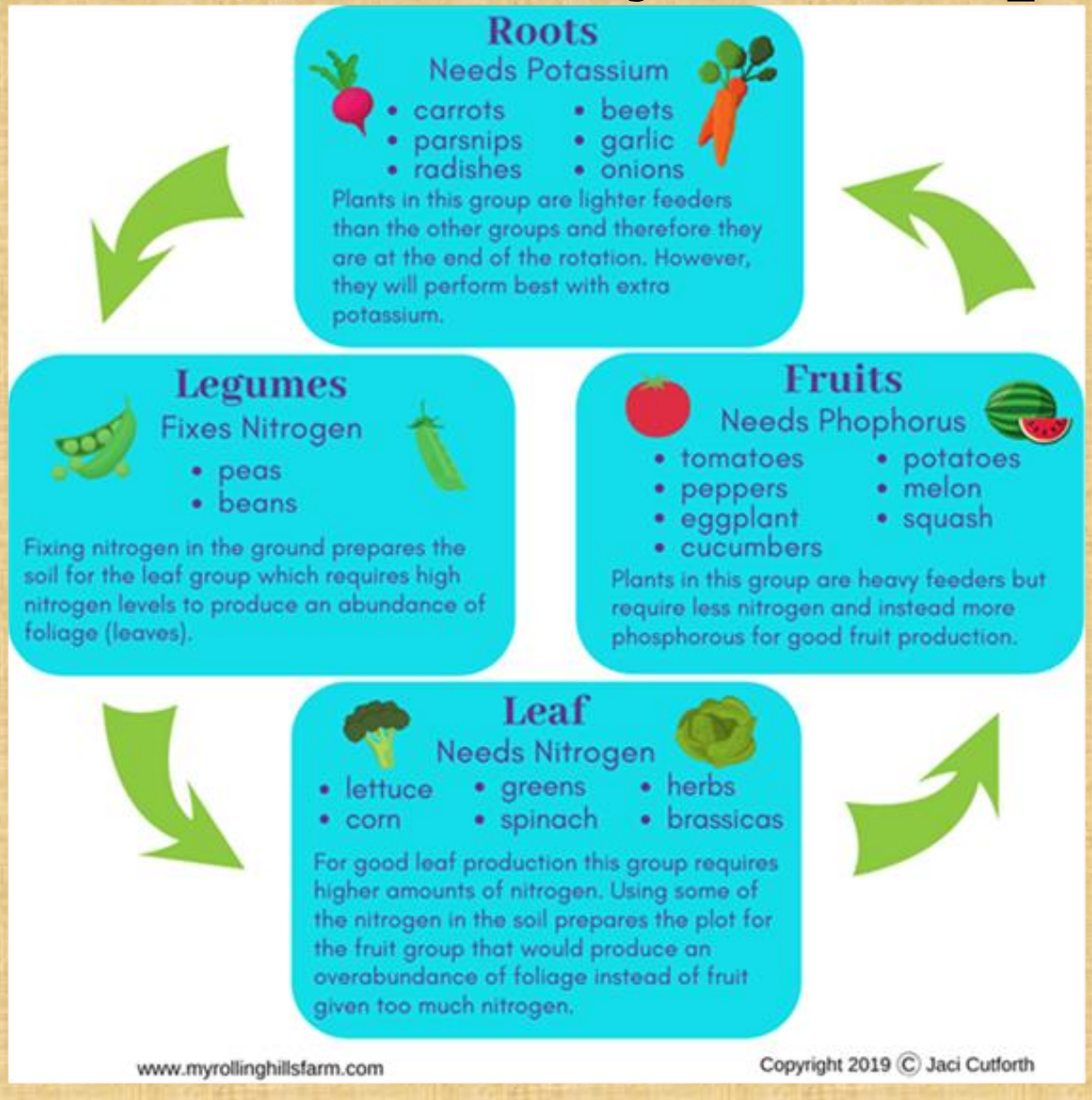
Symptoms of nutrient deficiency

- Yellowed leaves (old growth) – Indicates a nitrogen deficiency.
- Yellow-edged leaves (old growth) – Indicates a magnesium deficiency.
- Warped, misshaped new leaves – Reveals a calcium deficiency.
- Purple/reddish leaves – Lack of phosphorus.
- Deformed fruits – Typically due to potassium, though nitrogen excess can contribute.
- Blossom end rot (tomatoes) – Widespread cause is from lack of calcium, usually from watering conditions.

Symptoms of nutrient deficiency

- No flowering/dropped flowers – Can point to lack of phosphorus.
- Light green foliage (rather than dark green) – An “anemic” appearance could be nitrogen deficiency.
- “Burnt” leaf-tip appearance – Points to depletion of phosphorus.
- Abnormally dark green old foliage – Another sign of not enough phosphorus.
- Dark black or scorched leaf appearance – Potassium deficiency.
- Wilted old growth – Potassium deficiency.

Best method to rotate your crops yearly



Ins and outs of crop rotation

Each plant in your garden had different nutritional needs

- **Heavy feeders:** These heavy feeders demand a lot of nitrogen. large leafed plants like lettuce, corn, vine crops like squash.
- **Middle Feeders:** The mid sized leafed plants with above-ground fruits like tomatoes and peppers.
- **Light Feeders:** Root crops like turnips and carrots; like potash in soil.
- **Soil Builders:** leave more nitrogen in the soil than they take out; legumes like peas and beans.

Bits and Pieces

Young Growth

- Nitrogen is helpful.(too much N not good), all nutrients important

Newly Transplanted

- Will benefit especially from higher amounts of root-supporting nutrients, like phosphorus and potassium.

Blossoming

- Benefits from phosphorus, potassium, and calcium in particular.

Fruiting

- Need phosphorus and potassium, while not overdoing it with nitrogen.

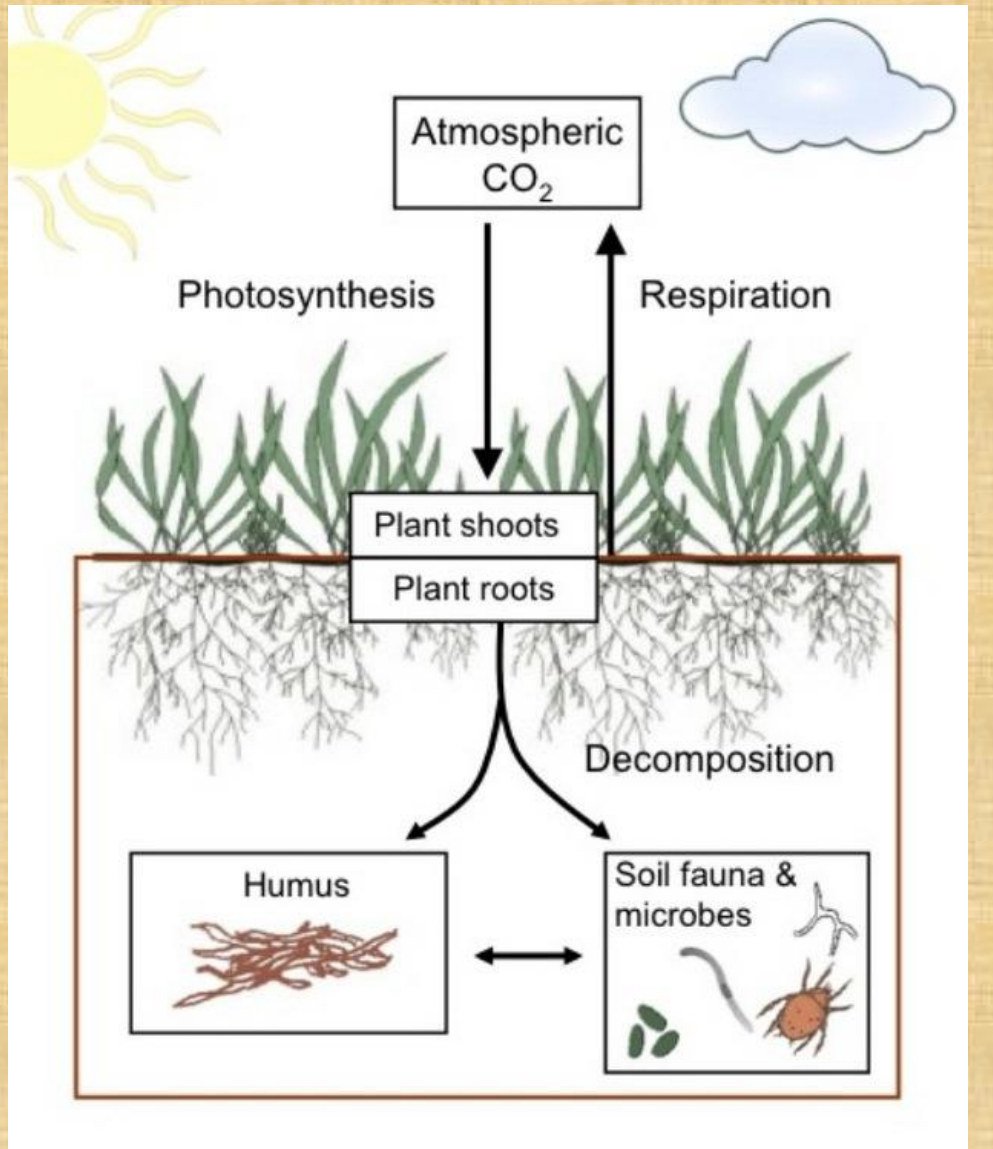
Epsom salts

- is hydrated magnesium sulfate. ... Magnesium is vital the production of chlorophyll and ensures the healthy growth of fruit and flowers as well as seed germination.


Feed The Soil
And the soil will feed you

In healthy soil

- plants pull in carbon dioxide (CO2) from the air, and exchange some of their carbon with fungi and other microbes in the ground.
- The microorganisms, send out proteins, carbon and other substances which stick to soil particles and create loose, fertile humus.
- Plants in healthy soil get about 90 percent of nutrients they need through this carbon exchange with soil microbes.
- Humus also sequesters carbon in the soil, as long as it interacts with growing plants.



Natural Soil Amendment	Source	Nutrient	Ph	Texture/Soil conditions Notes
Alphafa Meal	Plant based	Nitrogen, Phosphorus and Potassium (NPK) Vitamins, magnesium and iron, amino acids	increases	triacontanol (natural growth hormone) stimulates root and stem development
Ashes	burned wood	High Potasium, nitrogen, phosporus	increases	don't use treated wood
bat guano	Animal	yes		yes
Blood meal	Anmal	Nitrogen	lowers	
Bone Meal	Animal	High nitrogen, Phosporus, calcium	lowers	
Coffee Grounds	Plant	High nitrogen, Potasium	lowers	yes
Comphrey	Plant based	NPK trace elements.		yes
Compost	Plant Material	Depends on ingredients		yes
Cover crops	Plant based	overall fertililty,		yes
Cow Manure	Animal	nitrogen, Potasium , magnesium, sulfur		yes, make sure not fresh
Dolomite Limestone	Mineral	calcium and magnesium	increases	
Egg Shells, crushed	Kitchen waste	High calcium	increases	
Epsom Salts	Mineral	magnesium and sulfur.		

Natural Soil Amendment	Source	Nutrient	Ph	Texture/Soil conditions Notes
Fish Emulsion	Fishing Waste	High nitrogen, Phosporus		
Green Sand	Mineral	glauconite, which is high in iron, potassium and magnesium		yes
Gypsum	Mineral	calcium and sulphur	no effect	
Horse Manure	Animal	Moderate nitrogen magnesium and sulfur		yes, make sure not fresh
Leaf litter	Yard waste	Moderate nitrogen		yes
lime	Mineral	increases the availability of elements in soil.	increases	
Mushroom compost	Plant based	some nutrients, not many	increases	yes
Oyster Shell	Animal	calcium: long term slow release		yes
peat moss	Plant based	not many	lowers	environmentally a poor choice
rock sust	Mineral	yes		
Seaweed fertilizer	Plant based	potassium, micro-nutrients and amino acids	increases	yes
Soybean meal	Plant based	high amount of slow release nitrogen with lesser amounts of potassium	lowers	source non GMO
sulfur	Mineral	yes	lowers	
Wheat Straw	Farm waste	High Potasium		
Wood chips	Plant based	via decomposing		yes, tilled in binds nitrogen, best as mulch
Worm Compost	Animal	excellent, microbial life, minerals, nitrogen		yes
Other Garden Items				
Diatomaceous Earth	Animal	Silica, Helps with unwanted insects		fossilized skeletal diatoms
Borax	Mineral	Boron herbicide: creeping charlie/mint 10 ounces Borax in 4 ounces of warm water, mix in 2 1/2 gal water spray affected area		1 tbsp Borax for each 100-foot row of crops(Cole)

Household Items for the garden

Bananas

- good for adding potassium and other nutrients like potassium, phosphorus, magnesium and calcium—to the soil, good for overall plant health and root development
- Make a tea to feed the soil by soaking the banana peels in water (soak peels in water up to 1 week)
- Add chopped or whole fresh or dehydrated peel to the soil around plants to feed them.
- Dried peels hung around plants can deter aphids??

Household Items for the garden

coffee grounds

- Coffee grounds add organic material to the soil, improve drainage, water retention, and aeration in the soil.
- Coffee Grounds add nitrogen to the soil, as well as some potassium and phosphorus, plus other micronutrients but they can be used as a slow-release fertilizer.
- As a fertilizer sprinkle them thinly onto your soil, or add them to your compost heap. For the purposes of composting they're a 'green', or nitrogen-rich organic material.
- Ants don't like the strong smell so will stay away from where they are applied; eating them is harmful to ants.
- The scratchy surface of coffee may also deter soft bodied insects.
- Make sure the coffee grounds are dry and don't apply too thickly. Coffee filters will decompose so add them too.

Household Items for the garden

egg shells

- The shells contain minerals that help plants grow, such as calcium and others.
- Simply rinse and air dry your eggshells, crush them as you go, or leave them whole. Apply to the surface of the soil.
- Coarsely crushed they provide a scratchy surface on the soil surface to injure and deter soft bodied bugs.
- Rumour has it, but I can’t say it is true: try scattering whole pieces of shell around broccoli and cabbage family plants to keep white cabbage moth away.

Household Items for the garden

Fireplace Ash & Potato Water

- Fireplace Ash will supply potassium and calcium carbonate to the soil, it will also increase the pH of your soil and make your soil less acidic (like using lime)
- Make sure you use ash from untreated wood.
- The water you use to boil your potatoes can also be used to water your plants. Don’t add salt
- Potatoes are rich in potassium, magnesium, zinc and phosphorus. Thus, potato water can give your plant small traces of these elements.

Household Items for the garden

Epsom salts / Urine

- Epson Salts add magnesium and sulphate to the soil, very important for tomatoes, peppers and potatoes. Add directly to the soil or dilute in water.
- Mix two tbsp of Epsom salts with one gallon of water and spray onto leaves for maximum absorption
- Urine provides a good source of nitrogen, potassium and trace elements for plants. Diluted urine can be applied as up to 3 times per week. (human, dog, etc) Do not use if individual taking any medication.
- Dog urine around the perimeter of garden will act as a predator warning to smaller wild animals

Household Items for the garden

Hair

- hair (untreated human hair, pet fur, sheep shearings) can work as fertiliser. It contains high magnesium levels, and other nutrients making it a highly effective natural fertiliser.
- It can be used as a mulch, composted, etc. to improve the soil

Pest and Soil Health

- It’s a no-brainer that a nutrient-depleted, unhealthy garden soil will leave plants much more vulnerable to pests
- Excessive nitrogen: leads to increased pest populations of arthropods (i.e. aphids, mites, etc) Excessive nitrogen causes too much leafy growth in fruiting plants
- Weak, undernourished plants also send out chemical signals to pests that they are in trouble and attract more pests in turn.
- Healthy plants with plenty of nutrients do just the opposite, by attracting more beneficial bugs than harmful varieties, these often eat the ‘bad bugs’

Plant Diseases and Soil Health

Fungal Plant Diseases

- Downy mildew, fusarium, and others directly invade plant tissues that are weak from a lack of nutrients. A rise in fungal illness may signify the need for calcium, potassium, or phosphorus.

Viral Plant Diseases

- Excess of certain nutrients (especially nitrogen and phosphorus) can increase susceptibility to viruses. This can sometimes be balanced with more potassium.

Bacterial Plant Diseases

- Low calcium, nitrogen, and potassium can make your plants susceptible to bacterial illnesses, On the other hand, too much nitrogen can help certain bacteria to thrive as well.

Common Garden Problems (2 pages)

Symptoms	Possible Causes	Corrective Measures
Plants stunted in growth; sickly, yellow color	Lack of soil fertility or soil pH abnormal	No soil test: add compost and lime yearly in NB. Correct pH according to soil test
	Compacted, poorly-drained soil	Modify soil with organic matter or coarse sand.
	Insect /disease damage	Use a regular spray or dust program.
	Iron deficiency	Apply iron to soil or foliage.
Plants stunted in growth; sickly, purplish color	Low temperature	Plant at proper time. Don't mulch too early
	Low available phospate	Apply sufficient phosphate at planting.
Leaves: yellow, dropping, distorted or holes	Damage by insects	Use organic insecticides at regular intervals.
Leaves with spots, dead, dried, powdery,rusty areas	Plant disease	Use resistant varieties, remove diseased plants when are noticed and use a regular spray program.

Common Garden Problems Continued

Leaves with spots, dead, dried, powdery,rusty areas	Plant disease	Use resistant varieties, remove diseased plants when are noticed and use a regular spray program.
Plants wilt even though sufficient water is present	Soluble salts too high or root system damage	Have soil tested by county Extension agent. Use soil insecticides, fungicides, and resistant varieties.
	Poor drainage and aeration	Use organic matter or sand in soil.
	Insect or nematode damages	Use recommended varieties and soil insecticides or nematocides.
Plants tall, spindly, and unproductive	Excessive shade	Relocate to sunny area. Keep down weeds.
	Excessive nitrogen	Reduce applications of nitrogen
Blossom drop (tomatoes)	Hot dry periods	Use mulch and water. Plant heat tolerant varieties.
	Minor deficiencies	Use fertilizer containing zinc, iron, and manganese.
Failure to set fruit (vine crops)	Poor pollination	Avoid spraying when bees are present.
Leathery, dry, brown blemish on the blossom end of tomatoes, peppers, and watermelons	Blossom end rot	Maintain a uniform soil moisture supply. Avoid over watering and excessive nitrogen.

Take Home Message

- Don’t go crazy or overboard.
- Yearly lime can never hurt in our acidic soil conditions
- Add compost and various amendments to keep soil at its healthiest. Use avariety… animal source and plant source different years
- Avoid disturbing the soil structure as much as possible
- Don’t be fooled by packaged fertilizer that says ‘with organic ingredients’, it may have a few, but most of the product may be artificial, and less desirable for our environment

Basic Protection from bugs and disease

- Lots of organic options and diy recipes
- Herbs and flowers protect from many ‘nasty’ insects and encourage good
- Light weight covers can protect plants from sun, cold, bugs
- Prevent plant disease, treatment not as effective. Cool damp conditions are conducive to foliage diseases. Ensure good airflow (comes back to careful planning)

Pests (animals)

Many of the small wildlife we find bothering our gardens in NB are all deterred by similar methods: Groundhog (G) Deer (D) Racoons (R) skunks (S) squirrels (sk): Some DIY to try

- **Castor oil,** poured in and around burrows, or plants being eaten (smell) G, D, S,
- **Hair clippings** in a mesh bag or loose around burrow, or plants being eaten holes . (human scent.) G, D
- **Soiled kitty litter** poured around the burrow, not near your veggies (smells like a predator) G, D.
- **Offensive Scents**: . Place near the burrow or plants you want to protect: Cayenne pepper (or any similar hot pepper),Garlic (Crush and spread) , Lavender and these herbs: basil, chives, lemon balm, mint, sage, thyme, rosemary, and oregano (plant in garden or use essential oils on cotton balls) G, D, S, R, sk

Pests (animals)

Many of the small wildlife we find bothering our gardens in NB are all deterred by similar methods: Groundhog (G) Deer (D) Racoons (R) skunks (S) squirrels (sk): Some DIY to try

- **Ammonia**: plain not scented, Use undiluted to dampen anything that will hold liquid, ie soak into rags or cotton balls spread around where you don't want the pests to visit G, D, S
- **Dogs**: encourage yours or friends dog to walk(and pee) their dog around the garden (smell like a predator) **G D R S sk**
- **Plant food they like** away from your garden (like alfalfa, clover) G
- **Blood meal or Baby Powder** , R
- Noise makers, hanging CD's, tin plates, ribbons, motion detector light, radios, need to vary and move around G D S R
- **Appropriate fencing (secure)** electric fence, 2 lines if in open area, 6-8 feet for deer, into ground for digging animals

Protection from insect crop damage

Slugs and Snails

-keep gardens clean and free of places where snails/ slugs can hide

-Slug traps (cabbage leaves,grapefruit rinds,boards)—in garden; remove bugs found under these hiding places.

-diatomaceous earth

Cut Worms

-damage looks like someone snipped off the young plant at soil level

-cutworm collars made from cardboard tissue rolls help protect from cutworm damage, or place a nail, toothpick, or bamboo skewer into the soil alongside the plant stem.

-diatomaceous earth

Cucumber Beetles/ Squash bugs

-cleanup of all plant material in fall removes overwintering spots

-cover plants lightly while small to keep beetles from reaching the small plants

-Try adding a handful of onion skins around the plants.

Protection from insect crop damage

Corn Pests: Add vegetable oil or a pinch of cayenne pepper on the silks

Ants:

- Baking soda with icing sugar (½ ½) as a bait to take to colony, will kill them
- Cayenne pepper or coffee grounds– spread around plants you want to protect

IMPORTANT: Ants are aphid predators – keep some, just control areas of concern

Adult moths: trap with solar light (or electric) hanging over pail of soapy water

Flea Beetle

- DIY alcohol spray or DE, cover very early in season, or use a trap crop.
- white or yellow sticky traps

Lady beetles: beneficial , eats aphids among others, important to identify eggs and larvae

Potato Beetles

- hill and cover leaves for as long as possible
- pick beetles/ eggs from plants and put into soapy water.

Natural Insecticidal Soap spray
aphids, mites, white flies, thrips, and mealy bugs:
1 1/2 tablespoons of liquid soap (biodegradeable)
1 quart of water
Mix and spray on affected plants

Baking Soda Spray
1 tablespoon of baking soda
1/2 tablespoon of oil
2 quarts of warm water
for treating plants with fungal diseases on leaves, mix and use immediately

Japanese Beetles, borers, leafhoppers and slugs
Garlic also deters larger pests like deer and rabbit.
-Natural Insecticidal Soap Spray (from recipe above)
-1 tbsp chili powder (or fresh or dried hot peppers)
-5 cloves of garlic, crushed
Allow garlic and chili powder to steep overnight. Strain and pour into a spray bottle. Add Natural Insecticidal Soap Spray. Will keep for a couple weeks.

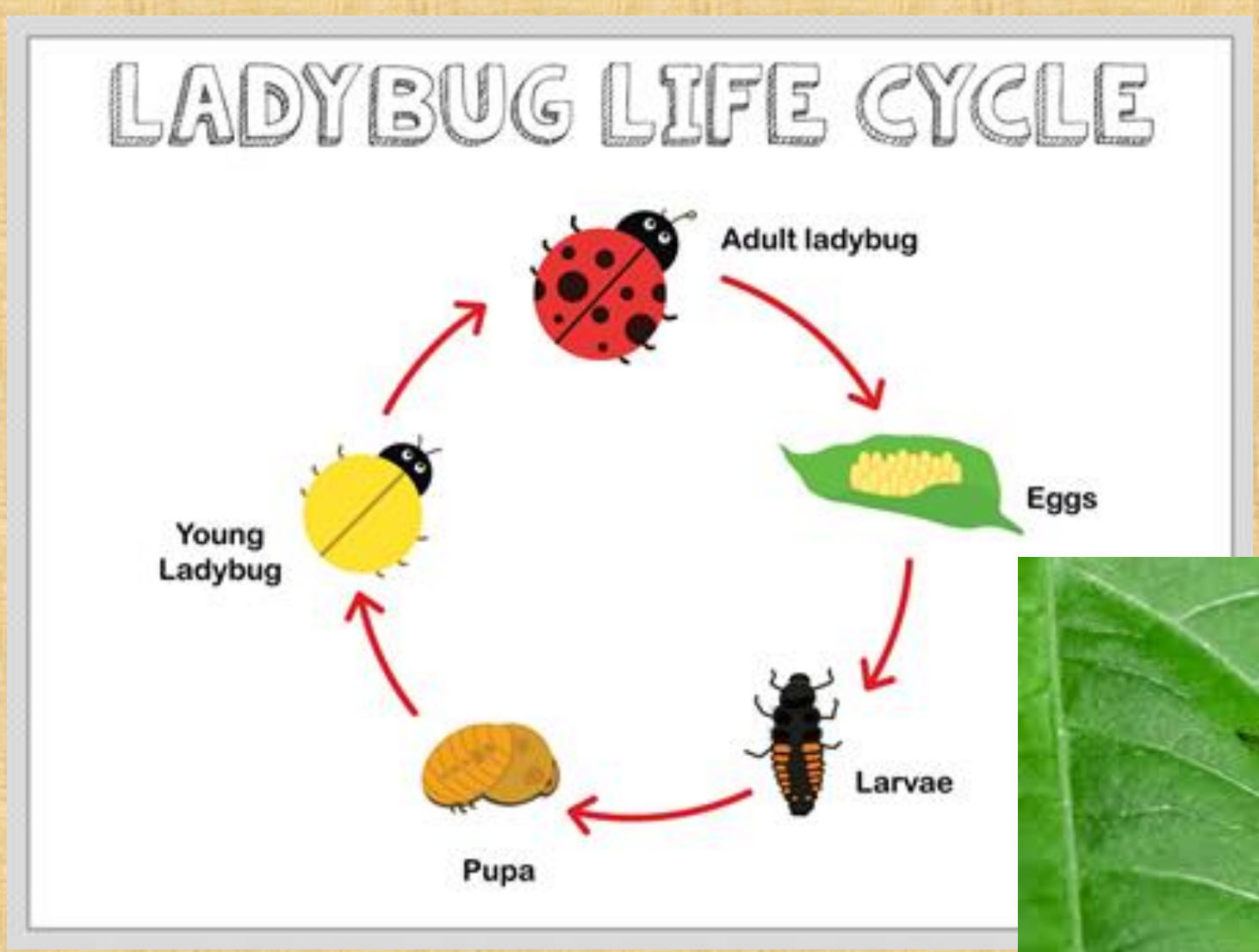
Thrips, aphids, grasshoppers, chewing and sucking insects
Garlic, Peppers & Onion Insecticide
2 hot peppers 1 whole bulb of garlic
1 large onion 1/4 cup water
Toss in the food processor and add water, blend until a mash is made. Cover mash with 1 gallon hot (not boiling) water and let stand 24 hours. Strain. Spray on roses, azaleas, vegetables to kill bug infestations. Bury mash in ground where bugs are heaviest.

Household Items for disease prevention or treatment

baking soda/ milk

- Baking soda: fungicide, mix 4 teaspoons of baking soda with a gallon of water. Use as a preventative rather than treatment on powdery mildew or other fungal diseases on tomatoes, cucumbers, roses, grapes
- spray recipe: combine these ingredients: 1 gallon of water, 1TBSP baking soda, 2 1/2 TBSP vegetable oil, 1/2 tsp of dish soap

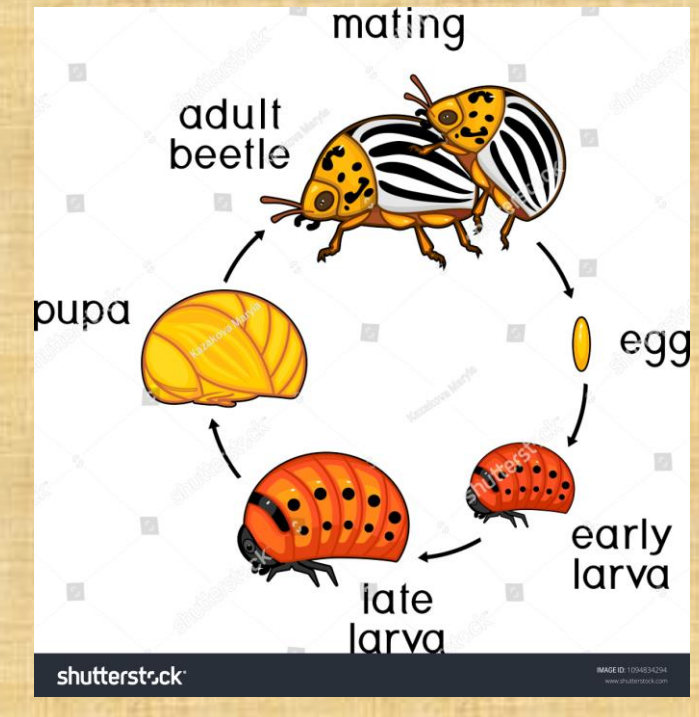
- Milk can work the same way baking soda can on powdery mildew, use preventively, must be applied in bright light, repeat every 10 days or so.
- Dilute milk 40% milk 60% water, spray to wet both sides of the leaf until it's dripping, and usually spray in mid to late afternoon on a sunny day.


LADYBUG LIFE CYCLE
Adult ladybug
Eggs
Larvae
Pupa
Young Ladybug

Dealing with Potato Beetles

Potato Beetles

-Hill the plants to cover leaves as long as possible, then hand pick beetles and place in soapy water, or try growing cilantro with the potatoes

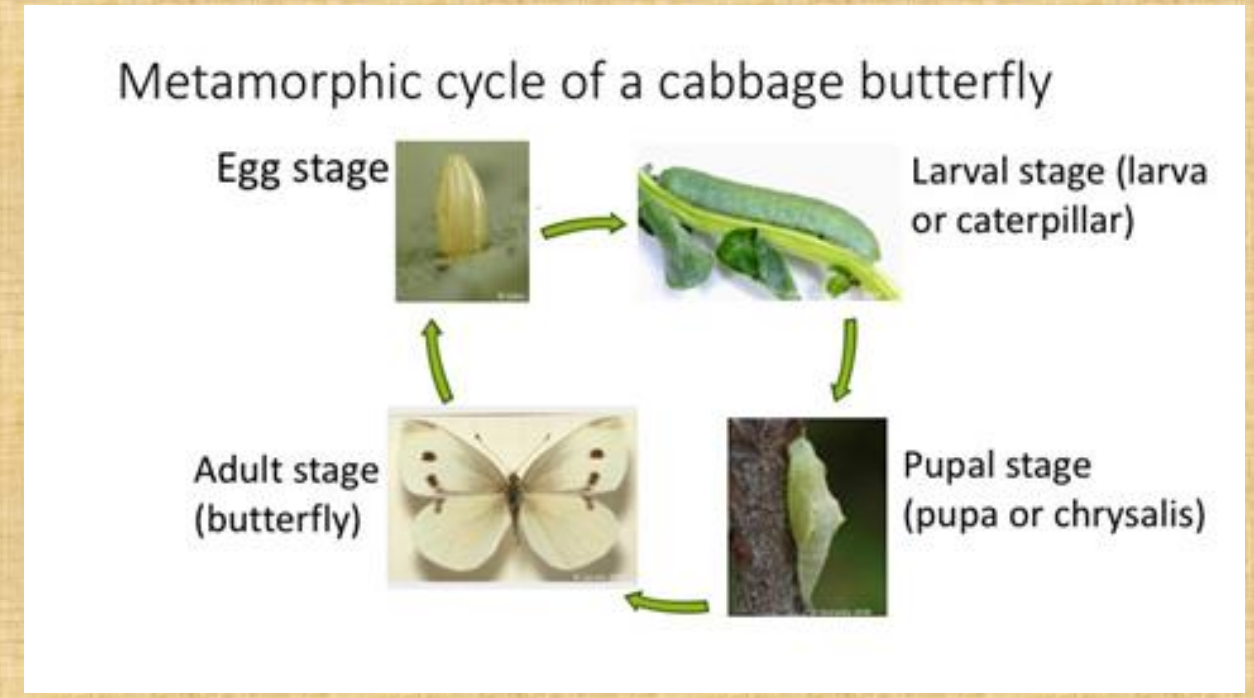


Dealing with Cabbage Moths

Cabbage Moth

-pour soured milk over the young cabbages, etc. keep them away

-covering is the easiest method especially for cabbage and broccoli



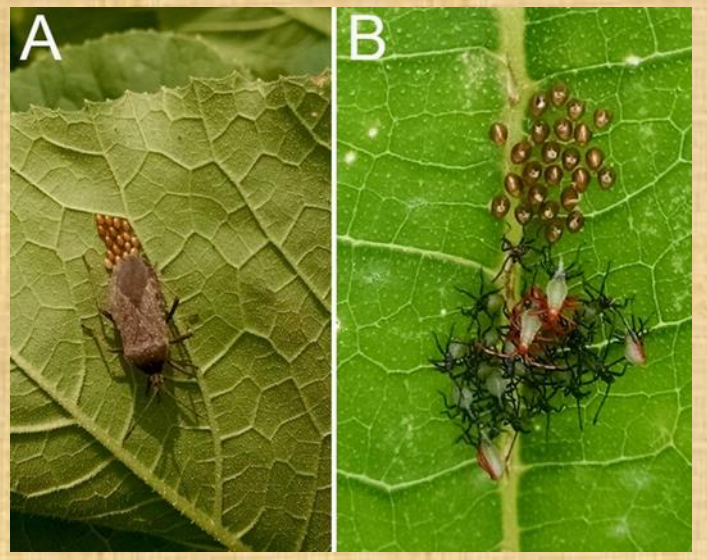
Dealing with Squash Bugs and Cucumber Beetles

Squash and cucumber beetles

-Covering plant at transplanting or seeding is easiest method, cover until plant is flowering

-remove leaves with eggs, or infested with insects, destroy/ drown, don’t compost

-sprays may help but need to be reapplied after rain



Principles of companion planting for Pest Control

Greater diversity= fewer pests

- When planning or planting your garden, chose a wide variety of crops and mix them around, encourages good bugs and confuses bad

Grow plants that help with pest issues

- ***Herbs to Deter Pest***: mint (in a pot), catnip, dill, parsley, fennel, and cilantro, basil.
- ***Flowers for Pest Control***: Nasturtium:(deter pests and a trap crop), Marigold/ Cosmos/ Allyssum (attracts beneficial insects)

Principles of companion planting for Pest Control

Target specific pests (may not work with every garden)

- Repel ***Squash Bug*** with marigold
- ***Cabbage Worm*** can be repelled with thyme, also onions and nasturtium
- ***Tomato Pests***: basil, dill, borage or thyme
- ***Potato Beetle***: try cilantro
- ***Ants:*** Calendula, marigold, and Chives
- ***Flea Beetles:*** repelled by catnip and basil, attracted by nasturtium and radishes

Avoid using pesticides where possible (even organic solutions)

- Organic sprays may affect good bugs as well as bad (keep them away, or deny food sources)
- Never use DE (diatomaceous earth) on flowering plants

Companion Planting

Follow these guidelines to best structure the layout of your garden

Cucumber

Friends	Foes
Beans	Aromatic Herbs
Cabbage	
Lettuce	
Peas	
Radish	
Tomatoes	

Peppers

Friends	Foes
Eggplant	Beans
Onions	Broccoli
Tomatoes	Kale

Beans

Friends	Foes
Radish	Onions
Eggplant	Peppers
Potatoes	Garlic
Cucumber	

Eggplant

Friends	Foes
Beans	Fennel
Peppers	

Potatoes

Friends	Foes
Beans	Tomatoes
Cabbage	

Beets

Friends	Foes
Lettuce	Pole Beans
Bush Beans	

Kale

Friends	Foes
Onions	Peppers
	Tomatoes
	Squash

Radishes

Friends	Foes
Peas	Kohlrabi
Lettuce	
Cucumber	
Beans	

Broccoli

Friends	Foes
Spinach	Peppers
Onions	Tomatoes
	Squash

Lettuce

Friends	Foes
Beets	None
Carrots	
Cabbage	
Cucumber	
Onions	
Radish	
Squash	

Squash

Friends	Foes
Lettuce	Broccoli
	Kale

Cabbage

Friends	Foes
Potatoes	Tomatoes
Onions	
Lettuce	
Cucumber	

Onions

Friends	Foes
Broccoli	Peas
Cabbage	Beans
Carrots	
Kale	
Lettuce	
Peppers	
Tomatoes	

Tomatoes

Friends	Foes
Cucumber	Cabbage
Onions	Corn
Peppers	Broccoli
	Kale
	Potatoes

Carrots

Friends	Foes
Beans	Dill
Onions	
Lettuce	
Peas	

Peas

Friends	Foes
Carrots	Onions
Cucumber	
Radish	
Tomatoes	

Turnips

Friends	Foes
Peas	Eggplant

War on Weeds

- A weed is basically an unwanted plant growing where you don't want it to grow. Many of what we consider weeds are edible or have medicinal properties.
- Prevention is the best strategy, and the first rule is to never let your weeds go to seed, if you can't remove the weed at least remove the flowers.
- Mulch , mulch, mulch (wood chips, cardboard, newspaper), cover the soil in the rows and between plants , this stops weeds from germinating.

War on Weeds

- Cover crops in spring or fall (can choke out weeds)
- Weed 1-2 weeks before planting, and again just before planting
- Weed before the weed gets big and difficult to remove without damaging the crop
- Never turn the soil, it just brings up more weed seeds
- Mow weedy areas frequently to prevent seeding
- Don’t waste water on your weeds, water selectively

COMMON WEED
IDENTIFICATION GUIDE


Creeping Charlie


Canada Thistle


Nutsedge


Shepherd's Purse


Crabgrass


Buckhorn Plantain


Pigweed


Lambsquarter


Bindweed


Quackgrass


Chickweed


Dandelion


Purslane


White Clover


Sweet Clover


Cinquefoil


Oxalis


Dayflower


Wild Violet


Smartweed


Quickweed


Knotweed


Nettle


Pokeweed


Ragweed


Poison Ivy


Black Nightshade


Black Medic


Dock


Henbit


Salsify


Fleabane


Spurge

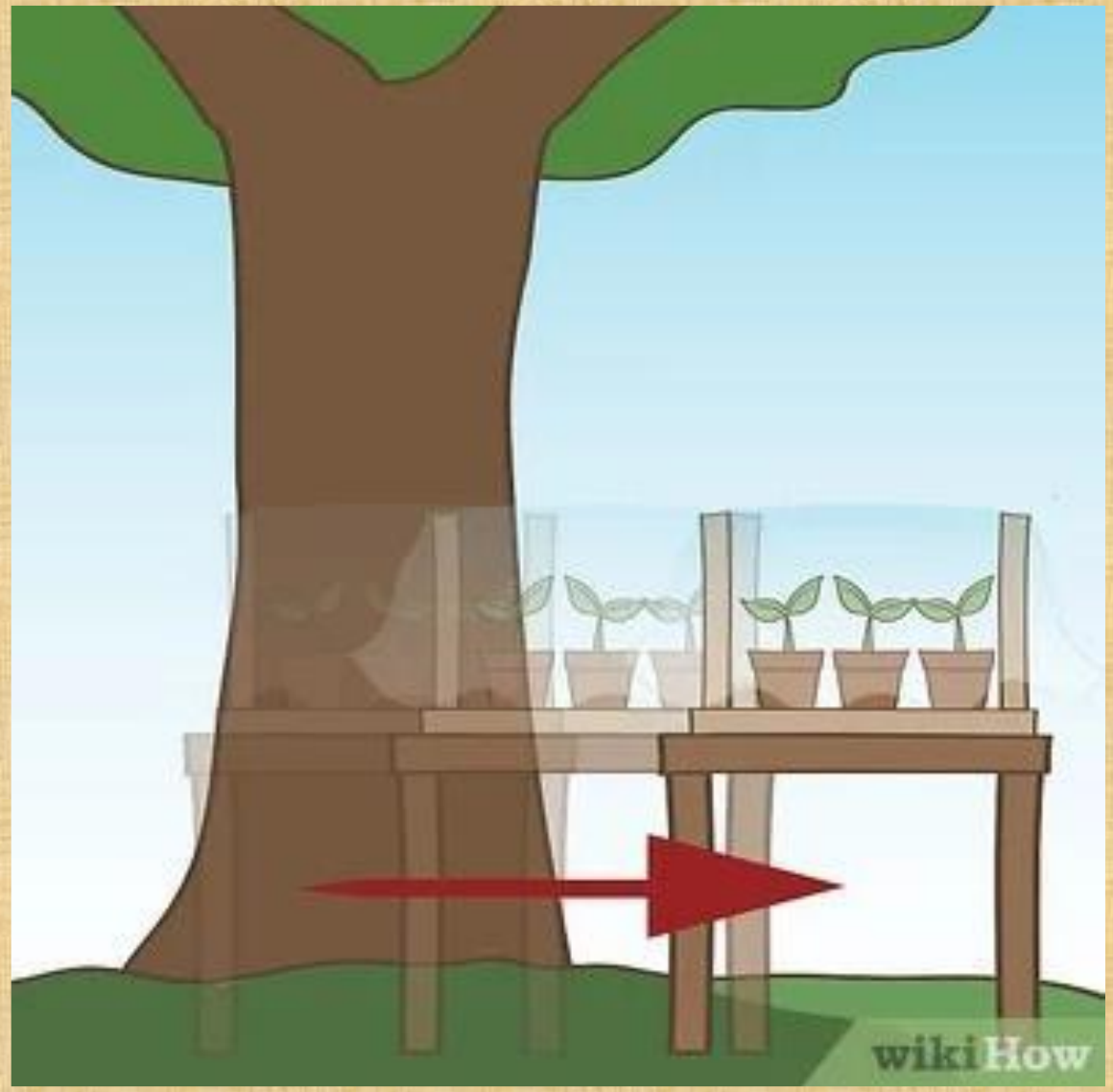

Musk Thistle

BACKYARD BOSS

Hardening off/ Preparing seedlings for the garden

HARDENING OFF:

- Plants get a shock moving from a house to the outdoors.
- Take 1-2 weeks to gradually let your plants get used to outside
- Start
  - shade and sheltered from wind
  - gradually provide direct sunlight and full exposure
- Transplant to the garden, on cloudy days



Transplanting in the garden

- transplant in the evening or on a cloudy day,
- firm soil around plants
- plants can be planted deeper than pot
- Peat or biodegradable pots: remove rim, break apart

Interplanting, companion planting and succession planting

- The goal of succession planting is to make the most of your garden space and keep the beds growing and producing fresh harvests.
- 2 crops grown together, ie a short season one with an full season crop: lettuce with chard
- Companion planting: plants planted together where one helps the other by giving shelter, food, protection from insects.

Spring Planting Outside

- The spring planting starts in late April and May with crops like onions, peas, spinach and radish. In April you don’t always gain a lot with earlier crop just saves time.
- After the initial crops you can plant lettuce, carrots, beets, chard, kale and other cold hearty crops These plants like the low temperatures do well with heavy rain, and cloudy weather.
- In the height of summer, these crops will either do very poorly, not grow at all, or bolt and go to seed. Because these plants like cool weather, many of them can again be planted in the fall.

Starting seeds indoors even in the summer

- Some seeds don’t germinate well in the heat of summer, plant late summer crops inside in a controlled environment, once germinated, keep outside, give them extra tlc, water well until big enough to transplant. (spinach, lettuce, broccoli)
- Harden off plants 2 weeks before transplanting into the garden if necessary, to gradually adjust to outdoor conditions such as wind and sun.

Label: From Experience

- One of your biggest mistakes will be not to label what you planted and where
- You won’t remember

Ready for the garden