

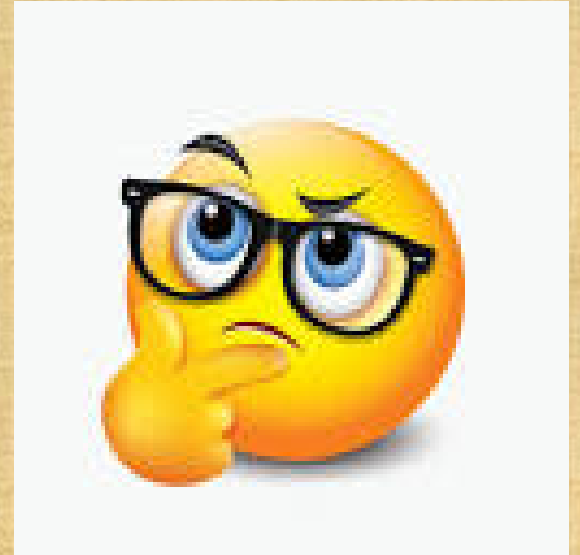
NB Chg
Gardening for change
Lets Get Growing With
Winter Warmups!





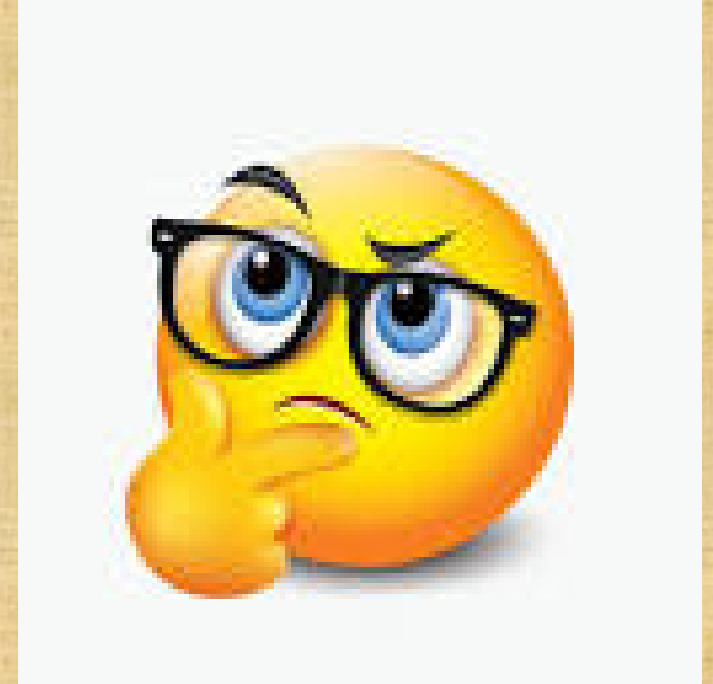
Planning Saves Effort

- Do your homework:
 - Know your growing zone,
 - what grows where you live,
 - usual first and last frost dates,
 - usual rainfall,
 - what perennials survive over winter in your zone
- Where are you going to make your garden
 - starting from scratch,
 - community garden,
 - existing garden

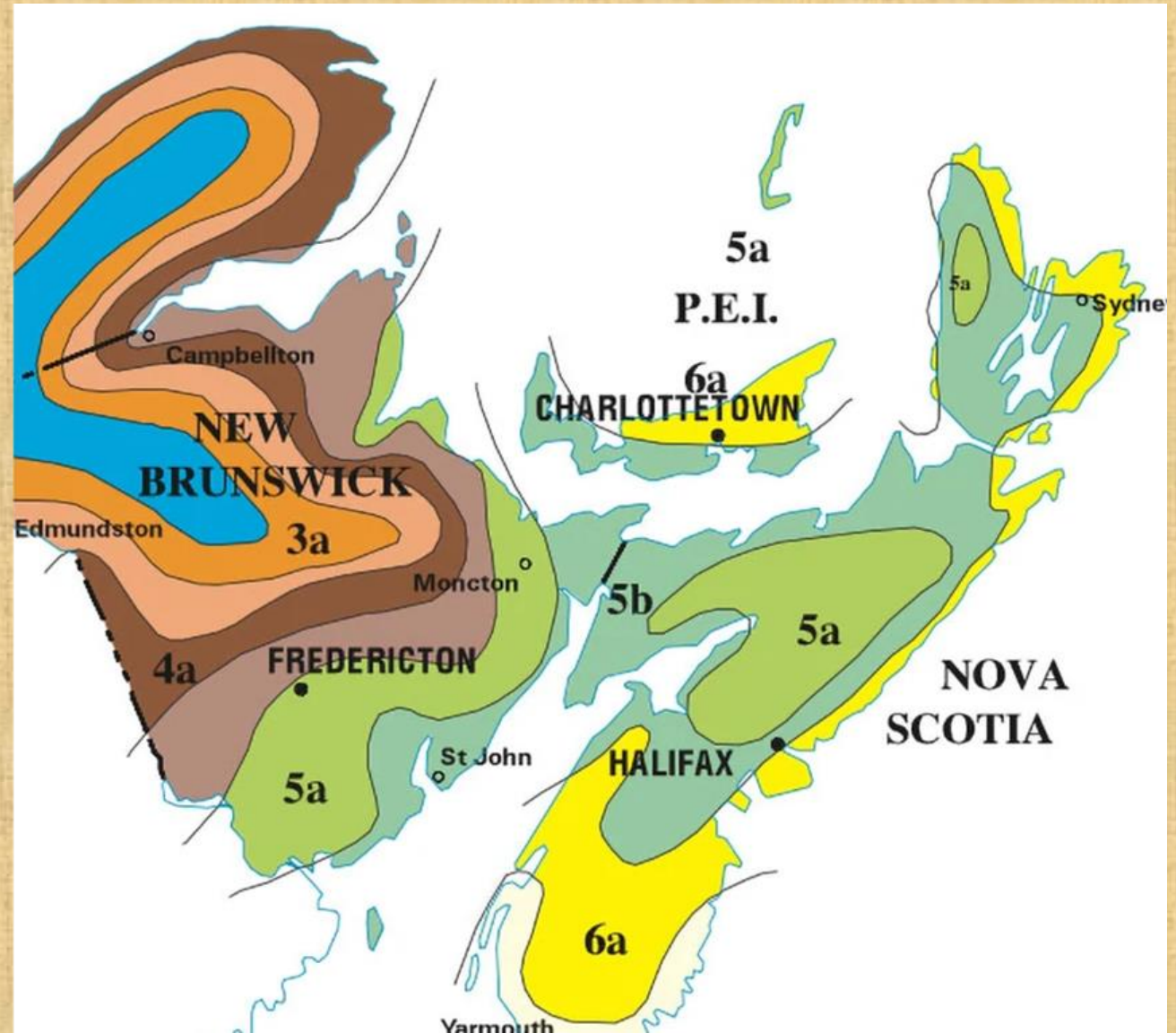


Planning Saves Effort

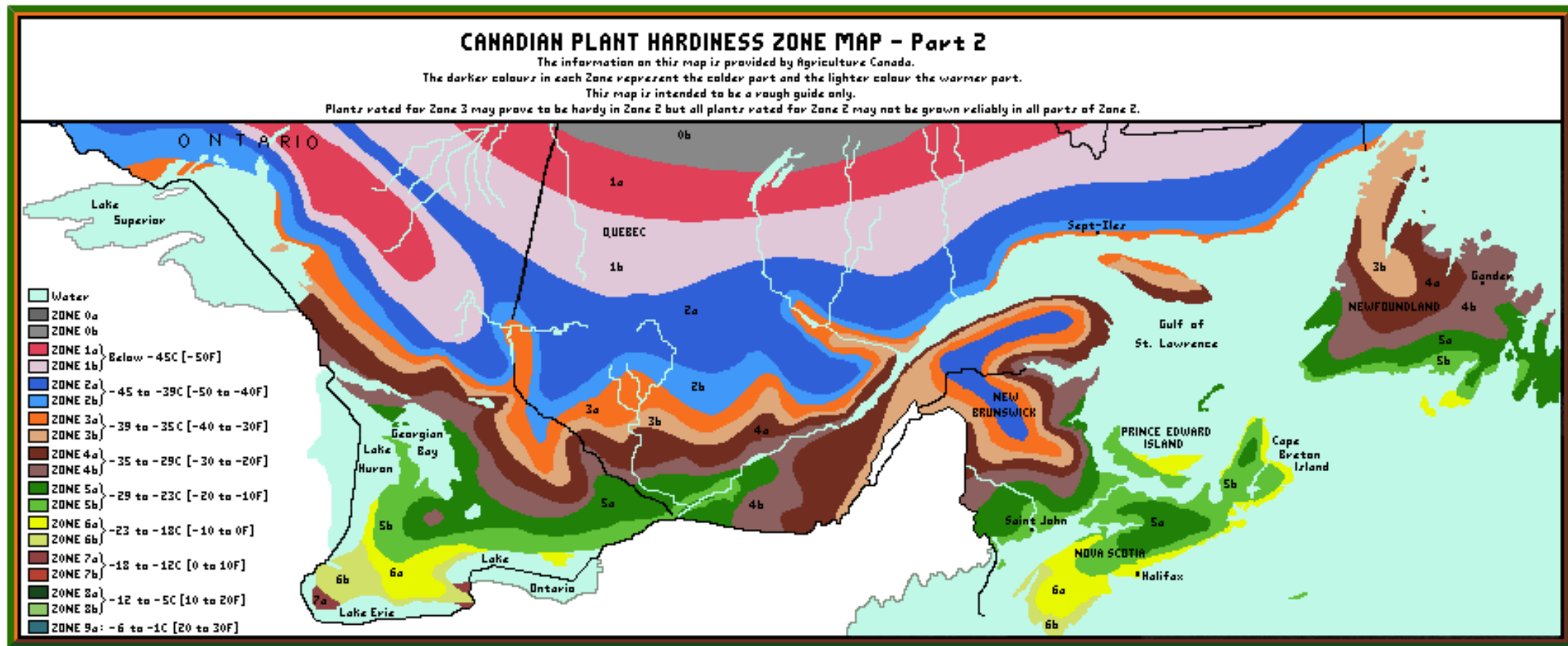
- What do you eat
 - be realistic,
 - grow what is costly to buy in growing season
 - potato/ cabbage easy to obtain, in expensive
- Know your soil... and how to improve it
- Know and avoid or remedy wet areas



- Fredericton on the edge of 5b and 4a
- Average Last spring frost May 11-20
- Average First Fall Frost September 21-30
- 120-125 growing days



Zone map for Eastern Canada



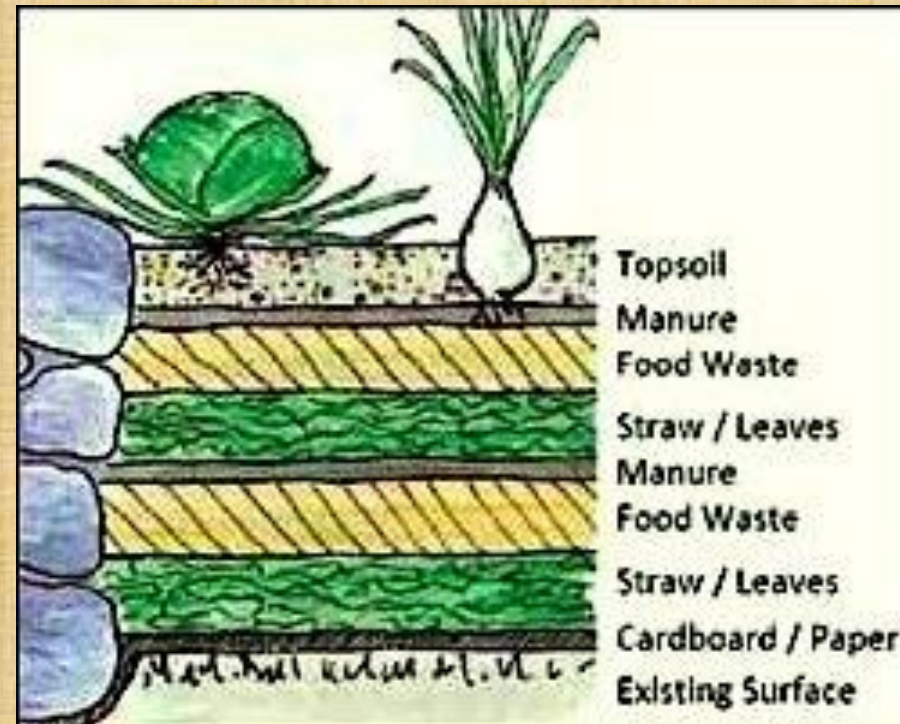
Where to locate your garden

- In chosen location: look at sun light, air circulation and wind, water availability, drainage, proximity to home, wildlife
- Ideally a southerly exposure with at least 6-8 hours of sun during the day.
- Determine which direction is south, look for trees etc. that will shade your garden, and locate the sunniest spot
- Flat is best, near to water source and avoid trees like walnut that affect growth.
- Rows are best north to south (best sun exposure, tall plants to the north) or with problem soil: planned to best deal with rain (high to low for clay soil) or across slope to trap water (sandy soil)



Starting from scratch?

- Remove the grass, don't till it in (avoids weed) compost the grass sods , use another year
- start lasagna garden (cardboard bottom row then layer compost, leaves, grass clippings, etc.) don't have to remove grass



Already have an existing garden?

No Till Preparing the bed

- Insert a large garden fork (spade) into soil, lever to one side, lift soil and remove. Loosens soil. Remove weed with the root.
- Research shows turning the soil disturbs the microorganisms
- Remove all weeds and big rocks ,don't turn in or pull off tops of weeds
- Form into wide raised rows, better for maintenance, less weeding. Add any amendments needed (lime, sand, compost, used small animal bedding, leaves, leaf mold) to improve soil condition



Already have an existing garden?

No Till Preparing the bed

- Plan to never rework whole bed. Leave pathways in place and never step on planting surface, rake bed flat
- 2 weeks later use a hoe to disturb any newly germinating weeds, dig out any bigger weeds, reform bed. Bed should now be ready for planting
- Covering the bed in fall slows new weed seed germination in spring



Designing a planting plan

What ever method works best for you and your garden

- Row planting
- Wide row planting
- Square foot planting
- Hill planting
- Container growing
- 3 Sister



Single row planting, lots of unplanted soil to keep weeded, wasteful use of space





Wide row planting, much less walkway to weed






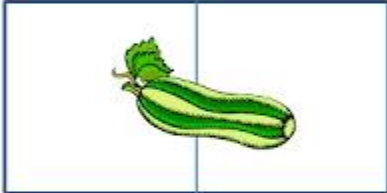


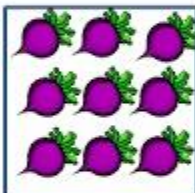






Square foot gardening

For true square foot gardening you need perfect soil, using Mels mix, if you want to grow plants as close together as the literature says. Can be used by average gardener with reduced number of plants per square. The planting number works with wide row planting as is walkway give plants more growing room



Square foot gardening.

Number of plants that can grow in 1 square foot indicated by the number in the picture

XL <i>1 plant per 2 square feet</i>	L <i>1 plant</i>	M <i>4 plants</i>	S <i>9 plants</i>	XS <i>16 plants</i>
Watermelon 	Tomato 	Lettuce 	Bush bean 	Radish 
Zucchini squash 	Eggplant 	Basil 	Beet 	Carrot 
Pumpkin 	Broccoli 	Marigold 	Spinach 	Onions 
Melon Winter squash Summer squash	Cabbage Cauliflower Cucumber Okra Pepper	Corn Parsley Potato Strawberry Turnip		

Hill Planting, often used for squash





Container Gardening

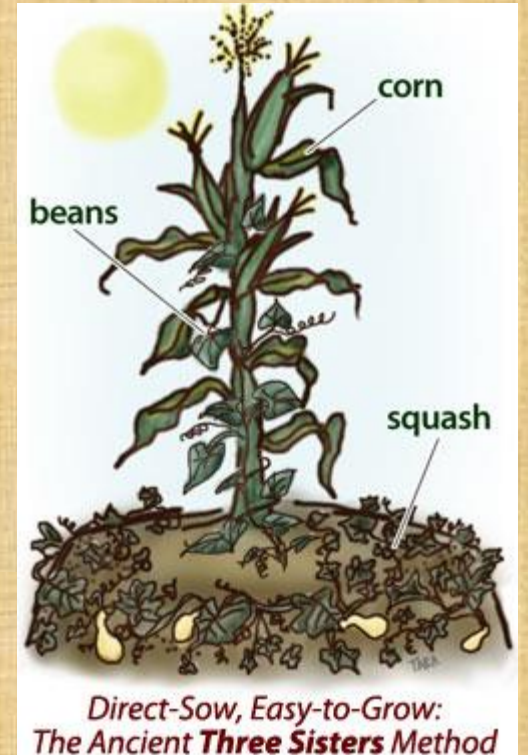
Any large container with drainage will work,
Soil must be very good, and containers need
Consistent watering.

National Garden Bureau

Traditional Indigenous 3 sisters planting

The basic message of companion planting is community and co-operation between plants, how one cannot exist without the other. In our human communities each individual has talents and needs so do the plants and animals around us.

- The Three Sisters method is companion planting at its best, with three plants growing symbiotically to deter weeds and pests, enrich the soil, and support each other.
- Together, the sisters provide a balanced diet from a single planting.
- As older sisters often do, the corn offers the beans necessary support, sunflowers and sunchokes are two additional sisters that are sometimes used.
- The pole beans, the giving sister, pull nitrogen from the air and bring it to the soil for the benefit of all three. They hold the 3 sisters together.
- The large prickly squash leaves protect the threesome by creating living mulch that shades the soil, keeping it cool and moist and preventing weeds and also keep away raccoons and other pests,



Tips for planting the 3 sisters

- Do what works for you, with the space you have, the idea is to use the corn for the beans to climb on, and the squash to cover the ground.
- Mound the soil (up to you) 4-12 inches high, approximately 36 inches in diameter with a flat top. Additional mounds can be made at 4-6 foot distances (from the center of each mound)
- Plant 4-6 corn seeds in a circle in the center(or sunflowers), seedlings work well, use a tall corn, flint or sweet **not dwarf variety**.
- When corn is about 4-6 inches tall, plant 2-4 pole bean seeds around the base of each corn plant. It is difficult to harvest fresh snap beans from such a planting, best to use a dry soup type beans h bean, **not a bush bean**.
- Plant 3-4 squash seeds or plants 18 to 24 inches from the center of the mound evenly spaced. Train squash to vine away from the corn and beans to fill in all spaces.
- Summer squash needs frequent harvesting, it is important to plant a full season winter type squash to harvest after frost.

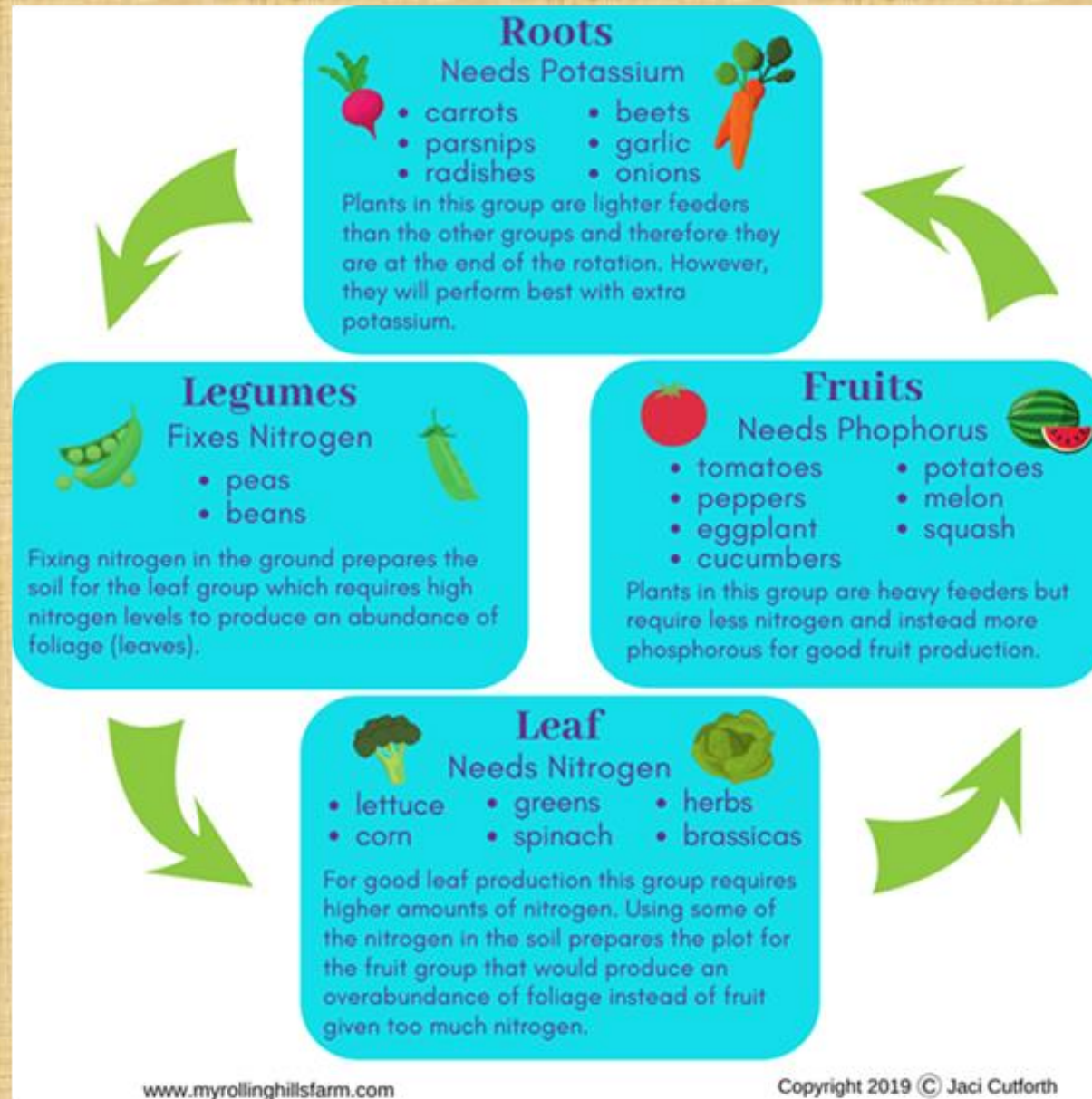
Choose plants
according to sunlight
requirement



Plan to Rotate your Crops

- Important to lessen risk of disease, even insect infestation
- Different crops have different nutrient requirements, lack of rotation severely diminishes ability of soil to support crop
- Regeneratively speaking, for the soil to stay healthy, a variety of crops need to be grown year to year. Different crops= greater diversity of microorganisms in soil

Best method to rotate your crops yearly



Ins and outs of crop rotation

Each plant in your garden had different nutritional needs, this is why rotating your crops is so important

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

COMPANION

FOOD GARDENING NETWORK
Creating Good Food at Home

PLANTING CHART

PLANT	PARTNERS
Tomatoes	Basil, Asparagus, Broccoli, Garlic, Carrots, Celery, Dill
Beans	Corn, Squash, Radish, Beets, Spinach, Cucumber, Potato
Peppers	Basil, Onion, Garlic, Spinach, Tomatoes
Carrot	Chives, Dill, Leeks, Tomatoes, Rosemary, Coriander, Lettuce, Radish
Lettuce	Mint, Chives, Dill, Beans, Beets, Onion, Broccoli
Potatoes	Corn, Cabbages, Peas, Squash, Beans
Onions	Carrots, Parsnips, Lettuce, Cabbage, Beets, Tomatoes, Rosemary
Cucumber	Corn, Cabbage, Beans, Radish, Celery, Lettuce
Squash	Corn, Peas, Radish, Dill, Beans
Corn	Beans, Cucumbers, Pumpkins, Melons
Peas	Cauliflower, Garlic, Turnip, Radish, Potato, Cucumber, Corn, Beans

Companion planting, Polyculture, Plant Families

Benefits of companion planting

Crop Protection – Let tough plants take the brunt of weather that more delicate plants can't. Plant tough varieties that take sun and wind and act as a natural defence against harsh conditions.

Limiting Risk – There are things outside your control (ie. weather) that can take a bite out of your production. Increasing your chances at higher yields can make up for any losses and give you a net gain in production.

Positive Hosting – Nothing invites the insects to want into your garden better than growing all their favourite things. Plants that produce a surplus of nectar and pollen beneficial insects like can keep them around and ultimately help manage harmful pests.

Trap Cropping – The best offence is a good defence. Protect the plants insects love by positioning next to plants they just can't stand.

Confuse Pests- Growing many different plants together makes it difficult for pests to locate their favorite food.

Companion Planting

Follow these guidelines to best structure the layout of your garden



Beans

Friends	Foes
Radish Eggplant Potatoes Cucumber	Onions Peppers Garlic



Beets

Friends	Foes
Lettuce Bush Beans	Pole Beans



Broccoli

Friends	Foes
Spinach Onions	Peppers Tomatoes Squash



Cabbage

Friends	Foes
Potatoes Onions Lettuce Cucumber	Tomatoes



Carrots

Friends	Foes
Beans Onions Lettuce Peas	Dill



Cucumber

Friends	Foes
Beans Cabbage Lettuce Peas Radish Tomatoes	Aromatic Herbs



Eggplant

Friends	Foes
Beans Peppers	Fennel



Kale

Friends	Foes
Onions	Peppers Tomatoes Squash



Lettuce

Friends	Foes
Beets Carrots Cabbage Cucumber Onions Radish Squash	None



Onions

Friends	Foes
Broccoli Cabbage Carrots Kale Lettuce Peppers Tomatoes	Peas Beans



Peas

Friends	Foes
Carrots Cucumber Radish Tomatoes	Onions



Peppers

Friends	Foes
Eggplant Onions Tomatoes	Beans Broccoli Kale



Potatoes

Friends	Foes
Beans Cabbage	Tomatoes



Radishes

Friends	Foes
Peas Lettuce Cucumber Beans	Kohlrabi



Squash

Friends	Foes
Lettuce	Broccoli Kale



Tomatoes

Friends	Foes
Cucumber Onions Peppers	Cabbage Corn Broccoli Kale Potatoes



Turnips

Friends	Foes
Peas	Eggplant



COMPANION PLANTING

Plant Type	Compatible	Incompatible
Beans	Potato, Celery, Cucumbers, Corn, Strawberry, Summer Savory, Carrots	Onions, Fennel, Sage
Beets	Bush beans, Lettuce, Onions, Kohlrabi, Cabbage, Mint, Carrots	Pole Beans, Mustard
Broccoli	Marigold, Sage, Beets, Nasturtium, Lettuce	Tomatoes
Cabbage	Celery, Onions, Potatoes, Aromatic Herbs, Beets, Chamomile, Spinach, Chard	Strawberries, Dill, Tomatoes, Pole Beans
Carrots	Lettuce, Radish, Onions, Tomatoes, Peas, Rosemary, Sage, Leeks, Beans	Dill, Anise
Celery	Onions, Tomato, Cabbage, Bush Beans, Nasturtium, Leeks	
Corn	Pumpkins, Sunflower, Peas, Beans, Cucumbers, Potatoes, Squash	Tomatoes
Cucumbers	Corn, Peas, Radishes, Beans, Sunflowers, Cabbage	Aromatic Herbs, Potatoes, Sage
Lettuce	Onions, Strawberries, Beans, Carrots, Radishes, Peas, Cucumbers, Cabbage, Broccoli, Tomatoes	

Plant type	Compatible	Incompatible
Onions, Garlic, Leeks	Lettuce, Beets, Carrots, Strawberries, Tomatoes, Cabbage, Summer Savory	Peas, Beans, Sage
Peas	Carrots, Cucumbers, Corn, Turnips, Radishes, Beans, Tomatoes, Potatoes, Aromatic Herbs	Onions, Garlic, Leeks, Shallots, Gladiolus
Peppers	Tomato, Basil, Parsley, Petunias, Carrots, Onions, Okra, Marigolds, Cilantro, Catnip, Tansy, Nasturtium	Fennel, Kohlrabi, Beans
Potatoes	Beans, Corn, Cabbage Family, Marigolds, Horseradish, Lettuce, Radishes, Scallions	Pumpkin, Squash, Tomatoes, Cucumber, Sunflower, Chard, Raspberries
Radishes	Beets, Carrots, Spinach, Parsnips, Cucumbers, Beans, Lettuce, Peas, Kohlrabi, Nasturtium, Peas	Cabbage, Cauliflower, Brussels Sprouts, Broccoli, Kohlrabi, Turnips, Hyssop, Grapes
Rutabaga	Mint, Sage, Thyme, Marigolds, Nasturtium, Cabbage, Brussels Sprouts, Cabbage	Grapes, Strawberries, Tomatoes, Pole Beans, Dill
Spinach	Celery, Eggplants, Cabbage, Peas, Onions, Brussels Sprouts, Peppers	
Squash	Radishes, Cucumbers, Corn, Nasturtium, Mint, Aromatic Herbs	Potatoes, possibly Tomatoes
Tomatoes	Carrots, Onions, Nasturtium, Asparagus, Cucumber, Aromatic Herbs (Parsley, Dill, Lovage, etc.), Spinach, Basil	Cabbage, Cauliflower, Fennel, Potatoes, possibly Squash

Polyculture/ Intercropping

Polyculture planting

- simultaneously grow different crops at once in the same area
- pairing complementary plants stops competition of resources and nutrients
- Increases biodiversity, better productivity, fewer pests, and better soil.
- An insurance plan- if one crop fails, there's another to harvest.

Polyculture or Intercropping practices

(an advance on companion planting)

- Planting vegetables that are ready for harvest at different times,
- succession planting, ie lettuce every 2weeks continual crop supply through season
- sowing multiple varieties of each vegetable insurance against crop failure



Polyculture/ Intercropping

Tips for creating biodiversity of plants

- Sow seeds densely and eat what you thin.(root crops esp)
- Plant several varieties. One or two may perform better than others.
- Plant fast-growing plants with slow to mature side by side
- Plan varieties to ripen at different times to extend the harvest.
- Plant early and late-season varieties.
- Sow seed varieties that mature at the same time two weeks, so they are ready for harvest every 2 weeks
- Plant groundcovers (help prevent bare earth, suppress weeds) below tall sun-loving plants.
- Plant varieties that help each other grow, ripen, or stay safe from pests and disease.
- Plant deep-rooted plants with shallow-rooted plants.
- Mix plant families and species to discourage disease and pests from coming back in future years.
- Three Sisters method of growing beans, corn, and squash together. The corn provided support for the beans to grow upwards, beans provided nitrogen, and squash covered the ground to prevent weeds and retain moisture.



Sample Hayes Farm Plan

- Calendula between A and B sections of row
- Marigold, Basil, other herbs/ flowers scattered at ends of rows and in holes

		Wide rows	
1	A	25	middle row beets early, 2 rows beans, late season replant with lettuce/ late onions
	B	25	3 rows carrots w 2 rows summer turnip, as holes develop, replant peas for ground cover
2	A	30	double row peas with greens on outer edge, when peas finished, replant with late cabbage and daikon radish
	B	30	double Parsnip wh onion on outer rows fr radish down middle
3	A	25	Potato crop followed then plant daikon radish, fall turnip, radish, beets
	B	25	middle row beets early, 2 rows beans, late season replant with lettuce/ late onions 2 weeks after row 1

Table 1: Some plants that can be grown in different layers of the polyculture

Layer	Brassicas (cabbage family)	Legumes (pea family)	Allium (onion family)	Spinach	Composite (daisy family)	Umbellifers (carrot family)	Cucurbite (squash family)	Nightshades	Others
Canopy	Cabbage Cauliflower Broccoli Kale	Broad beans Runner beans Peas	Leek	Amaranth	Sunflowers	<i>Lovage</i>		Tomato	Sweetcorn
Climber		Runner beans					Cucumber Small squashes		Nasturtium
Understorey	Pak Choi Kohlrabi	Dwarf beans Chickpeas	Chives Onions Garlic	Spinach Chard	Lettuce <i>Marigold</i>	Coriander Fennel Dill			Claytonia (Miner's lettuce)
Ground cover (planted early)	Rocket Mustard Landcress Oriental greens	fenugreek		Amaranth	Young lettuce Lambs lettuce		Squash (late crop)		Buckwheat
Root crop	Radish Turnip		<i>Onion</i> <i>Garlic</i> <i>Spring onion</i>	Beetroot		Carrot Parsnip		Potato	

Plants shown in italics are good to plant along the edge as well to protect the patch from pests.

Other crops may be possible too - these are just a few examples. Feel free to experiment! Write successes on here - and please let us know.

MEMBERS OF COMMON VEGETABLE FAMILIES

<i>Alliaceae</i>	Cauliflower	Spinach
Chive	Kale	Swiss chard
Garlic	Kohlrabi	<i>Solanaceae</i>
Leek	Radish	Eggplant
Onion	Rutabaga	Pepper
<i>Cucurbitaceae</i>	Turnip	Potato
Cucumber	<i>Fabaceae</i>	Tomato
Melon	<i>(Leguminosae)</i>	<i>Apiaceae</i>
Pumpkin	Beans	<i>(Umbelliferae)</i>
Squash	Peas	Carrot
<i>Cruciferae</i>	<i>Poaceae</i>	Celery
Broccoli	<i>(Gramineae)</i>	Dill
Brussels	Corn	Fennel
sprouts	<i>Chenopodiaceae</i>	Parsley
Cabbage	Beet	Parsnip

Plant families

Each family has similar growing needs and pests. Seeds also form the same way. Caution when saving seeds from the same family.

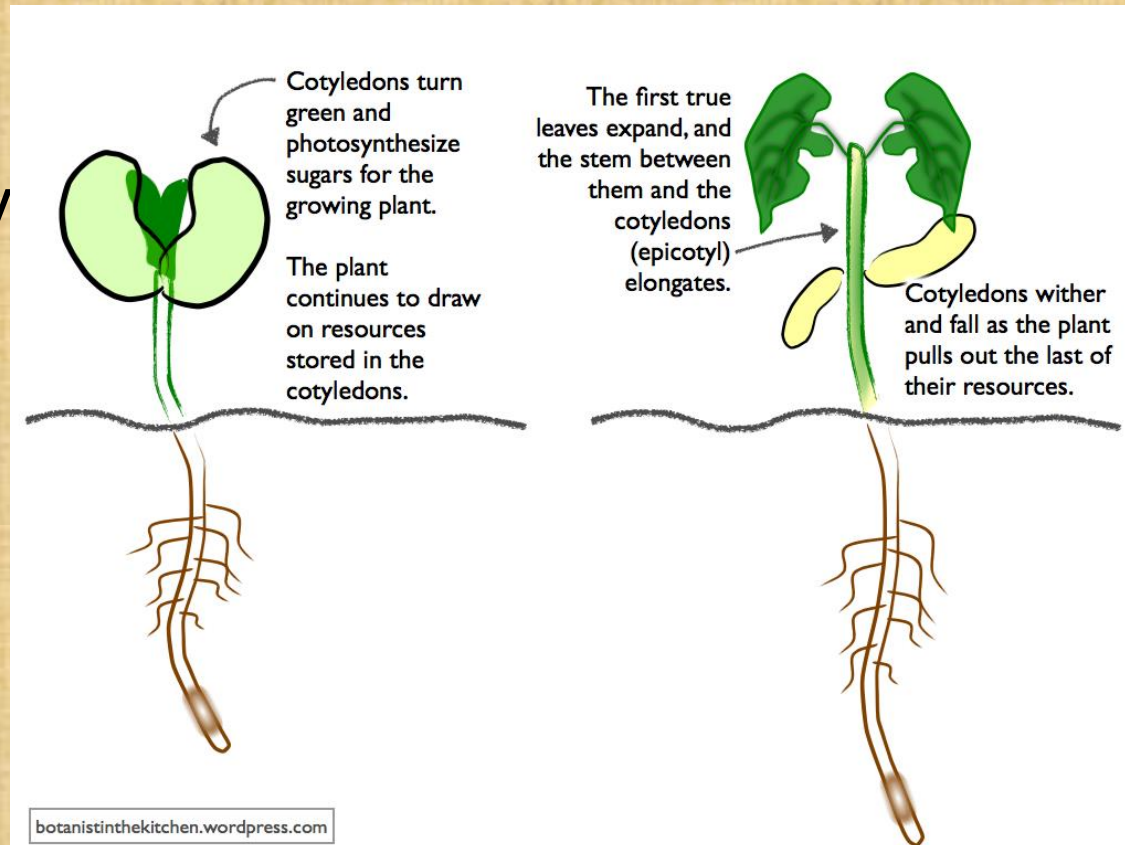
Best Strategies for choosing your seeds

- What are seeds
- Reading the seed packet
- Growing Resources

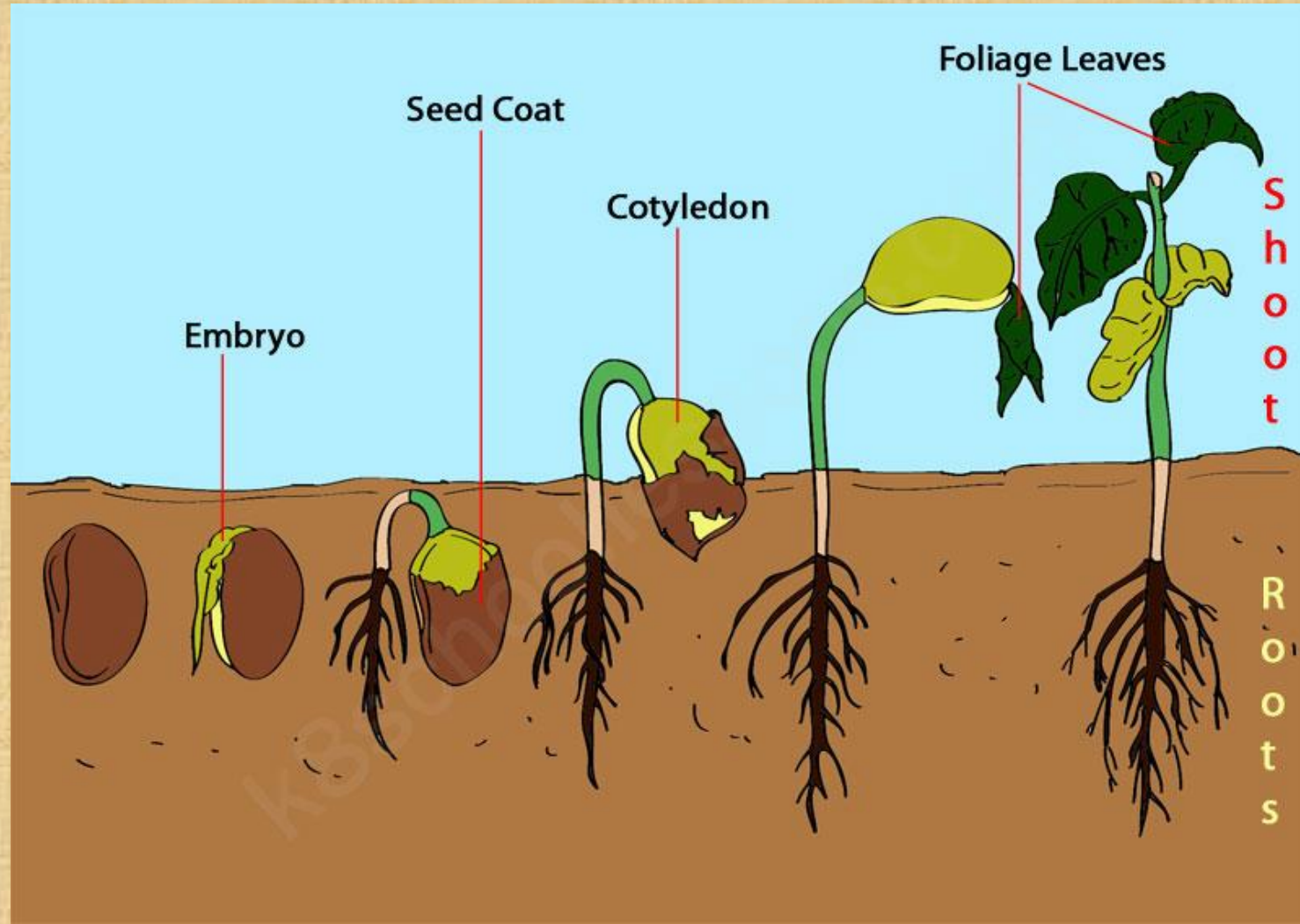


What are seeds

- **Seeds** are living, hibernating embryos. They have a life span and survive longest if kept cool, dark and dry.



Initial seed growth



- *An annual plant* requires only one growing season to complete its lifecycle. Examples include corn, beans, squash, tomatoes, and broccoli.



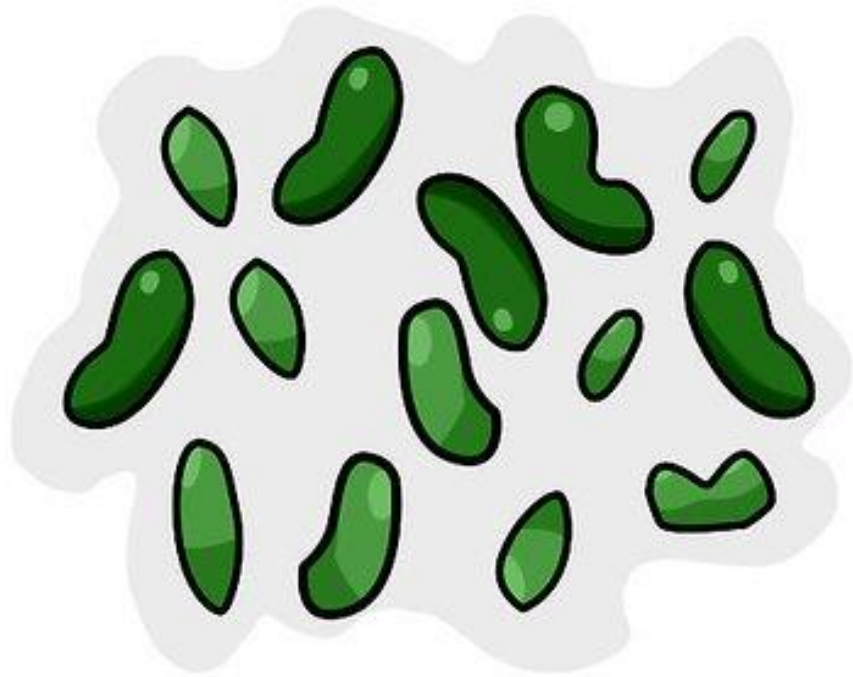
- *A perennial plant* requires at least 2 or more growing season to produce food. The plant will continue to survive and be productive for many seasons (Jerusalem artichokes, asparagus, many herbs, rhubarb)



- Open Pollinated: varieties produce offspring that closely resemble the parent. Open-pollinated varieties are stable varieties resulting from the pollination between the same or genetically similar parents
- Hybrid varieties result from the controlled crossing of genetically distinct parents. They produce offspring very different than their parents.



How to choose your seeds



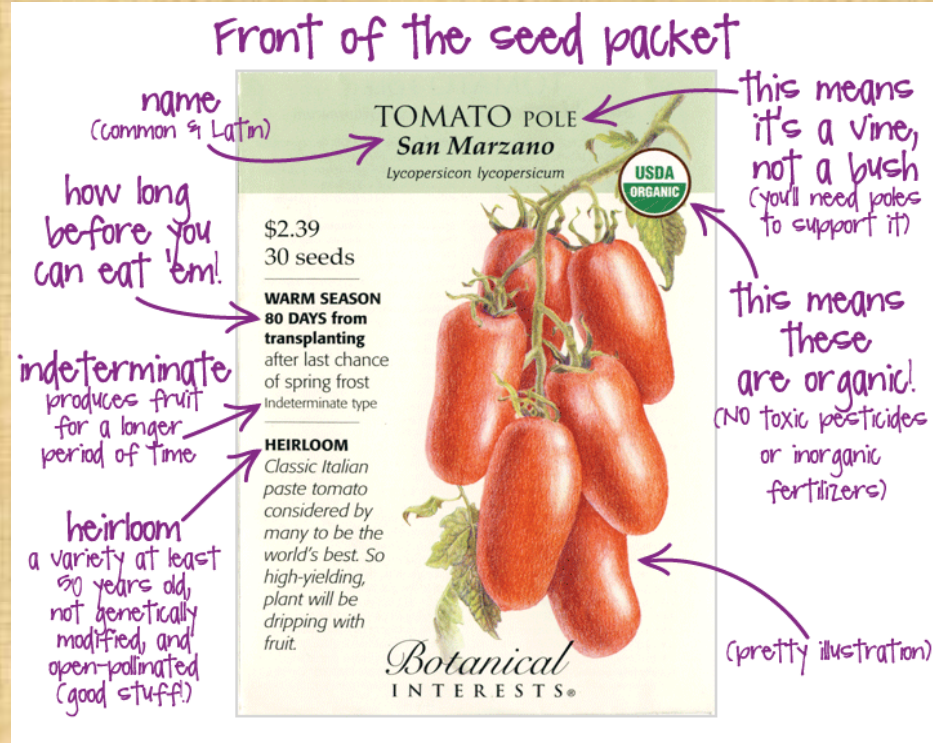
Good Seeds

- ✓ Suitable for your growing skills
- ✓ Suitable for Your Growing Region
- ✓ From a Reputable Source

Seed Sources

- Your local seed library, friends and family in your area
- Seed companies in your province or region
- Look for safe seed pledges, non GMO, organic is best but not necessary.
- if you want to save seed, make sure you know if your choice is hybrid or not.
- Hybrid usually are expensive for only a few seeds (F1, hybrid)

Seed Packets: Front








- Basic information about the plant the seeds will grow into
- Description: including the common name and/or Latin
- Indeterminate / Determinate
- Vine or pole / Bush:
- Annual / Perennial/ Hybrid
- Heirloom
- Organic certified



Seed Packets: Back





Scarlet Nantes
CARROT

The classic flavor favorite. Almost coreless, 6-inch roots with bright red-orange color throughout. Crisp texture and an abundant producer. Keeps and freezes well. Harvest in 55 days. Packet plants 40 ft.

				
Light	Row Spacing	Plant Spacing	Planting Depth	Days to Germination
Full Sun	12 in.	2 in.	1/4-1/2 in.	14-21

Gardener's Notes: Sow seed directly in the garden in spring. Carrots need light, well-drained, sandy soil. Sprinkle seeds evenly in the row, about 3-4 per inch. Keep soil moist during germination and growth. Thin young seedlings. Sow every 2-3 weeks until early summer for continuous supply. Harvest when rounded, orange tops appear. For easier harvest, moisten soil. In mild climates, plant again in fall and winter.

part when seedlings are 1-2" high.

Full Sun	1/2 in.	12 in.	45 days
			
Pleno Sol	1 cm	30 cm	45 dias


Las hojas de intenso color rojo burdeos tienen

This variety is noted for its medium deep green, very tender, ribbed pods. Produces abundant crops with regular picking. A Cajun cooking favorite.

Days to Germinate	Depth To Sow	Seed Spacing	Row Spacing	Days To Harvest
7-14	1"	1 in	3 ft	55-60

Sow in sunny location, after danger of spring frost. Thin seedlings when they are 2-3 inches in height, with the final spacing of the plants 12 inches apart.


Garden Hints: Pick pods when young and tender.



OUTDOOR PLANTING DATES

Zone 1	Sept-Feb
Zone 2	March-Feb
Zone 3	April-June
Zone 4	May-June

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Planting Depth	Soil Temp. for Germination	Days to Germination	Plant Spacing After Thinning	Days to Maturity	Sun	Water
1/4"	70-85°	6-10	18-24'	80-90		

Seed Packet information

- **Propagation:** How to start the plant, if it will or will not transplant, timing of planting, growing/planting info.
- Common phrases: “As soon as the ground can be worked” , “Early spring”, “After last frost” or “X weeks after last frost”, “Directly in garden”, “When ground has warmed to X degrees”, “Harden off”.
- **Soil and water:** any special water or soil needs, not always present. le: drought tolerant, water regularly, well drained soil, clay soil
- **Planting Depth:** how deep the seed goes in the ground
- **Germination temperature:** Not all packets include this information- common phrases “when soil warms” or “early spring” spinach won’t germinate in warm soil.
- **Days to Germination:** Under good conditions how long it takes to see sprouting



Seed Packet information

- **Plant Spacing:** Optimum spacing between plants, for good growth. Spacing too far apart wastes garden space and requires more weeding.
- **Plant Spacing After Thinning:** Many tiny seeds are planted then extra plants are removed to the indicated spacing by pulling out or snipping off.
- **Days to Maturity:** How long it takes the vegetable to be at the point where you can harvest it. Sometimes indicated as time after transplanting in the garden.
- **Sun/ Light:** This tells generally how much sun a vegetable requires. Full sun is considered 6-8 full hours without shade. Plants generally won't grow when our days get less than 10 hours long ie October
- **Pelleted Seed and Disease Resistance**



Maritime Local Sources from ACORN

NB	Culberson Produce	Seed Farm
	Ferme Spirale Farm	Seed Farm
	Mapple Farm	Seed Farm
	Rainbow Seeds	Seed Farm, Imported Seed
NS	Annapolis Seeds	Seed Farm, Local Seed, Bulk Seed
	Cochrane Family Seeds	Seed Farm, Local Seed, Imported Seed, Certified Organic Seed Bulk Seed
	Halifax Seed	Imported Seed, Certified Organic Seed Selection, Bulk Seed
	Hope Seeds	Seed Farm, Local Seed, Imported Seed, Certified Organic Seed Selection, Bulk Seed
	La Finquita	Seed Farm
	Seed and Scarecrow Farm	Seed Farm
	The Incredible Seed Company	Seed Farm, Local Seed, Imported Seed, Bulk Seed
	Twisted Brook Farm	Seed Farm
	Yonder Hill Farm	Seed Farm, Bulk Seed
PEI	Emmerdale Eden Organic Farm	Seed Farm, Local Seed, Certified Organic Seed 100%
	PEI Seed Alliance	Local Seed, Certified Organic Seed Selection, Bulk Seed
	Pembroke Farm	Seed Farm
	Veseys Seed	Local Seed, Imported Seed, Certified Organic Seed Selection

Prepare your seeds

- **Improve** germination rates of seeds hard coats by:
- **Scarification:** *An example of over coatings, scratch seed coating allowing water to penetrate, don't go too deep and damage the seed. (Gourd)*
- **Stratification:** *Natural chemicals in these seeds prevents germination. They need to be chilled and warmed, soak in water at least 24 hours. Place in peat moss, soil, or vermiculite in a sealed bag in fridge for a period of time, then plant as normal.*
- **Soaking:** *Helps soften up protective cover, best for seeds like beets, chard, peas, and parsley, seeds in tepid water for a minimum of four hours, and up to 24 hours, sow these seeds immediately, but be sure to skim off any seeds that are floating (as they probably aren't viable).*



Handy Planting Resource from Hope Seeds

Common Name	Germination		Planting				Harvest
	*Ideal Soil Temp.	Days to Germ.	Planting Directions	Depth	Final space between plants	Space between rows	Days until maturity
Beans	15-25°C	5-10	Direct Seed AFF.	1 ½" - 2"	4" bush; 8" pole	20"	50-70 snap; 70-120 dry
Beets	10-30°C	7-10	Direct Seed ASAP; Frost-hardy.	½" - 1"	2-4"	15"	50-60
Broccoli	10-30°C	7-10	Start 4-6 weeks & T/P AFF; Frost-hardy full grown.	¼" - ½"	8"	18"	60
Brussels Sprouts	15-25°C	7-10	Direct Seed <i>or</i> Start 4-6 weeks & T/P ASAP (before hot weather).	¼" - ½"	20"	25"	96
Cabbage	10-30°C	7-10	Direct Seed <i>or</i> Start 6 weeks & T/P AFF.	¼"	15"	25"	62-100
Carrot	10-30°C	14-21	Direct Seed ASAP.	¼" - ½"	1-2"	20"	55-75
Cauliflower	10-30°C	7-10	Direct Seed <i>or</i> Start 4-6 weeks & T/P AFF.	¼" - ½"	15"	18"	60
Celery / Celeriac	10-20°C	10-20	Start 10-12 weeks, plant early June.	1/8"	8"	2-3'	100
Chard	10-30°C	4-10	Direct Seed ASAP; Frost-hardy.	½"	4"	2"	45-50
Corn	12-35°C	4-10	Direct Seed <i>or</i> T/P AFF; Killed by frost.	1 - 2"	1'	3'	65-90
Cucumber	18-35°C	4-10	Direct Seed <i>or</i> Start 3-4 weeks & T/P AFF; Killed by frost.	½ - 1"	12"	4'	55-65
Eggplant	20-30°C	7-14	Start 8-12 weeks & T/P AFF; Killed by frost.	¼"	22"	25"	82-85
Ground Cherry & Tomatillo	15-30°C	7-21	Start 4-6 weeks & T/P AFF; Killed by frost.	¼"	14"	5'	75
Greens & Mustard	12-30°C	3-7	Direct Seed; Most are frost-hardy.	1/8" - ½"	4-10"	12 - 24"	Most 21 baby, 45 mature
Kale	15-25°C	3-19	Direct Seed; Frost-hardy.	¼" - ½"	3" or 12"	2'	Most 21 baby, 50 mature

Kohlrabi	15-25°C	3-10	Direct Seed <i>or</i> Start 4-6 weeks & T/P ASAP; Frost-hardy.	¼"	4"	15"	50
Leek	20-25°C	7-14	Start 10 weeks & T/P ASAP; Frost-hardy; Can be over-wintered.	¼" - ½"	6"	24"	75-110
Lettuce	10-20°C	7-10	Direct Seed <i>or</i> Start 4-6 weeks & T/P ASAP; Frost-hardy.	1/8"	10"	15"	Most 28 baby, 50-65 mature
Melon	20-30°C	4-15	Start 3 weeks & T/P AFF; Killed by frost.	½" - 1"	15"	5' - 6'	75-85
Onion	10-35°C	7-20	Start 12 weeks & T/P ASAP; Frost-hardy.	½"	4-6"	15"	98-110 (57 bunching)
Parsnip	10-30°C	14-28	Direct Seed ASAP; Mark your rows.	½"	3"	16"	54
Peas	6-24°C	7-10	Direct Seed; Killed by frost.	½"	1 ½ - 3"	4'	55-70
Peppers	20-30°C	14-20	Start 6-8 weeks & T/P AFF; Killed by frost.	¼"	12" - 18"	1 - 2'	57-75
Pumpkins	15-25°C	7-12	Direct Seed <i>or</i> Start 3-4 weeks & T/P AFF; Killed by frost.	1"	4"	60"	80-100
Radish	5-30°C	3-7	Direct Seed; Frosty-hardy.	¼" - ½"	1-2"	12"	25
Spinach	4-15°C	8-20	Direct Seed spring or fall; Frost-hardy.	½"	2-4"	14"	40-60
Squash, Summer	20-32°C	5-12	Direct Seed <i>or</i> Start 3-4 weeks & T/P AFF; Killed by frost.	½" - 1"	5'	5'	45-70
Squash, Winter	20-32°C	5-12	Direct Seed <i>or</i> Start 3-4 weeks & T/P AFF; Killed by frost.	½" - 1"	24" - 36"	5'	80-105
Tomato	15-30°C	6-14	Start 6-8 weeks & T/P AFF; Killed by frost.	¼"	18"	3'	65-85
Turnip & Rutabaga	15-35°C	5-10	Direct Seed; Frost-hardy.	½" - ¾"	3" - 8"	20"	60 & 100

* Seeds usually need higher temperatures to germination than they need to grow

** ASAP = Plant as soon as soil can be worked; T/P = Transplant; AFF = After fear of frost

*** A good rule of thumb is to sow at 3x the depth of the seed (i.e., the diameter of round seeds, ¼" deep for thin seeds like carrots)



West Coast Seeds

HELP REPAIR THE WORLD

Gardening Guide 2023






West Coast Seeds™

Untreated seeds for organic growing, non-GMO!

Vegetable Planting Chart

CANADIAN MARITIMES

Vegetables 	WINTER			SPRING			SUMMER			FALL		
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Artichoke		*****				**						
Arugula					—————	—————	—————					
Asparagus		*****	*****	*****	*****	***						
Broad beans					—————	—————			—————			
Soya beans						—————						
Beans, bush & pole						—————	—————					
Beets						—————	—————	—————				
Broccoli				*****	**	—————	—————					
Broccoli, overwinter						—————	—————					
Brussels sprouts					****		**					
Cabbage				*****	**	—————	—————					
Cabbage, overwinter						—————	—————					
Carrots					—————	—————	—————					
Cauliflower				*****	**	*****	**					
Cauliflower, overwinter						***	**					
Celery/Celeriac				*****		**						
Corn						—————						
Corn salad					—————	—————	—————					
Cucumbers					***	—————	**					
Eggplant					*****	**						
Endive/Radicchio					—————	—————	—————					
Fennel					—————	—————	—————					
Garlic									—————			

LEGEND

***** Start Indoors

————— Direct-sow

*** Transplant

⌒ Cover

** Transplant & Cover



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Vegetable Planting Chart

CANADIAN MARITIMES

Vegetables	WINTER			SPRING			SUMMER			FALL		
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Kale & Collards					—	—	—					
Kohlrabi					—	—	—					
Leeks			**	—						
Lettuce					—	—	—				
Melons					**	***						
Onions, sweet				**							
Onions, storage				**							
Onions, overwinter							—					
Onions scallions					—	—	—	—				
Pac choi & choi sum				—	—					
Parsley				**	—			—			
Parsnips					—	—						
Peas				**	—	—						
Peppers					**	*					
Pumpkin					—						
Radish				—	—			—			
Rutabaga					—	—						
Spinach				—	—		—	**			
Squash					—						
Swiss chard					—	—	—					
Tomatoes					**	*					
Turnips					—	—	—					

Fredericton	May 17 - Sept. 25	(130 days)	Halifax	May 7 - Oct. 18	(163 days)	Charlottetown	May 16 - Oct. 17	(153 days)
Moncton	May 22 - Oct. 18	(134 days)	Yarmouth	April 27 - Oct. 10	(176 days)	St. John's	May 30 - Oct. 17	(139 days)

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Warehouse: 5300 34B Avenue, Delta, BC, V4L 2P1

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A good tool but a bit more information than most folks need for home gardening



West Coast Seeds

Crop Planning Tool

CROP	APPROX. # SEEDS PER 100' ROW	APPROX. # SEEDS PER ACRE	POTENTIAL HARVEST PER 100' ROW	OPTIMUM SOIL TEMPERATURE	DAYS TO GERMINATION	SEED DEPTH	PLANT SPACING	ROW SPACING	IDEAL PH RANGE
Amaranth, grain	1.5M	392M	10 lbs	18-24°C/64-75°F	4-10	5mm (¼")	25-35cm (10-14")	50cm (20")	6.0-7.5
Artichoke*	N/A	N/A	35+ heads	21-27°C (70-80°F)	10-21	5mm (¼")	90-120cm (36-48")	180cm (72")	5.6-6.6
Arugula	1.2M	348M	27 lbs	4-12°C (40-50°F)	4-8	5mm (¼")	10-15cm (4-6")	45-60cm (18-24")	6.5-7.0
Asparagus*	N/A	N/A	40 lbs	21-30°C (70-85°F)	14-56	1cm (½")	45-60cm (18-24")	90-120cm (36-48")	6.5-7.0
Beans, Broad	450	98M	12 lbs shelled beans	10-21°C (50-70°F)	10-14	5cm (2")	10-15cm (4-6")	60-90cm (24-36")	6.0-6.5
Beans, Bush	800-1M	232M-290M	80-100 lbs	21-32°C (70-90°F)	6-10	2-5cm (1-2")	5-10cm (2-4")	45-60cm (18-24")	6.0-6.5
Beans, Pole	400	43.5M	150 lbs	21-32°C (70-90°F)	6-10	2-5cm (1-2")	15-20cm (6-8")	45-60cm (18-24")	6.0-6.5
Beans, Soya	800	174M	20 lbs	21-32°C (70-90°F)	8-16	2-5cm (1-2")	5-10cm (2-4")	60cm (24")	5.8-6.2
Beets	600-1M	436M	40 lbs greens or 100 lbs roots	10-26°C (50-80°F)	5-12	1cm (½")	5-10cm (2-4")	30-45cm (12-18")	6.0-6.8
Broccoli	170	30M	75 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-6.8
Brussels sprouts	170	30M	60 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-7.5
Cabbage	200	44M	150 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	60-90cm (24-36")	6.5-7.0
Carrots	2.4M	1,044M	100 lbs	7-30°C (45-85°F)	14-21	5mm (¼")	4-10cm (1½-4")	30-45cm (12-18")	6.0-6.8
Cauliflower	200	44M	90 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-6.8
Celery/Celery*	N/A	N/A	200 lbs	15-24°C (60-75°F)	20-30	5mm (¼")	30cm (12")	45cm (18")	6.0-6.5
Collards	170	30M	50 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-6.8
Corn	400	87M	up to 100 ears	15-30°C (60-85°F)	7-10	2-5cm (1-2")	20-25cm (8-10")	60-90cm (24-36")	5.8-6.8
Cucumbers	240	35M	120 lbs	15-30°C (60-85°F)	7-10	2cm (1")	23cm (9")	90cm (36")	6.0-6.8

Eggplant*	N/A	N/A	100 lbs	24-32°C (75-90°F)	7-12	5mm-1cm (¼-½")	45-60cm (18-24")	60-90cm (24-36")	5.5-6.0
Endive/Radicchio	140	40.6M	100 heads	10-22°C (50-72°F)	2-15	5mm (¼")	30-45cm (12-18")	45cm (18")	6.0-6.5
Fennel, bulbing	240	53M	300 lbs	10-25°C (50-75°F)	10-14	1cm (½")	15-30cm (6-12")	60cm (24")	5.5-7.0
Kale	170	30M	75 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	30-45cm (12-18")	75-90cm (30-36")	6.0-6.8
Kohlrabi	360	104M	50 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	10-15cm (4-6")	30-45cm (12-18")	6.0-6.8
Leeks	240	70M	150 leeks	10-25°C (50-75°F)	10-12	5mm (¼")	15-20cm (6-8")	45cm (18")	5.5-6.5
Lettuce, Head	200	58M	100 heads (50 lbs)	10-22°C (50-72°F)	7-10	5mm-1cm (¼-½")	30cm (12")	45-90cm (18-36")	6.0-6.5
Lettuce, Leaf	1.2M	348M	50 lbs	10-22°C (50-72°F)	7-10	5mm-1cm (¼-½")	2-12cm (1-5")	45-90cm (18-36")	6.0-6.5
Melons	60	5.2M	100 melons	20-25°C (68-77°F)	5-10	1cm (½")	60-90cm (24-36")	1.5-2m (5-6')	6.0-6.8
Mustard	400	174M	100 lbs	21°C (70°F)	5-10	5mm-1cm (¼-½")	10-15cm (4-6")	30-45cm (12-18")	6.0-6.5
Onions, bulbing	260	76M	100 lbs	21-25°C (70-75°F)	10-14	5mm-1cm (¼-½")	12-15cm (5-6")	45-75cm (18-30")	5.5-6.5
Onions scallions	1.2M	1,045M	100 lbs	21-25°C (70-75°F)	10-14	5mm-1cm (¼-½")	2-5cm (1-2")	15cm (6")	6.0-6.8
Pac choi & choi sum	260	114M	100 lbs	20-25°C (68-77°F)	5-10	5mm-1cm (¼-½")	15-20cm (6-8")	30-45cm (12-18")	6.0-6.8
Parsnips	440	128M	75 lbs	21°C (70°F)	14-21	5mm-1cm (¼-½")	7-10cm (3-4")	45-90cm (18-36")	6.0-6.8
Peas	1.2M	260M	20 lbs (shelled)	18-21°C (65-70°F)	7-14	2cm (1")	2-7cm (1-3")	60-90cm (24-36")	5.8-7.0
Peppers*	N/A	N/A	50 lbs	25-29°C (78-85°F)	10-21	5mm-1cm (¼-½")	30-60cm (12-24")	45-60cm (18-24")	5.5-6.0

*Not direct sown

M=1,000

1 acre = 43-560 sq. feet

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CROP	APPROX. # SEEDS PER 100' ROW	APPROX. # SEEDS PER ACRE	POTENTIAL HARVEST PER 100' ROW	OPTIMUM SOIL TEMPERATURE	DAYS TO GERMINATION	SEED DEPTH	PLANT SPACING	ROW SPACING	IDEAL PH RANGE
Potatoes	100 seed potatoes (~8 lbs)	21,800 seed potatoes (~1,800 lbs)	100 lbs	min. 6°C (43°F)	N/A	7-10cm (3-4")	30cm (12")	60cm (24")	4.5-6.5
Pumpkins	60	6.5M	300 lbs	21-25°C (70-75°F)	7-10	2cm (1")	60-120cm (24-48")	120-180cm (48-72")	6.0-6.8
Quinoa, grain	160	42M	10 lbs	18-24°C (65-75°F)	4-10	5mm (¼")	25-35cm (10-14")	50cm (20")	6.0-7.5
Radish	1.2M	522M	100 bunches	18-24°C (65-75°F)	5-7	5mm (¼")	2-5cm (1-2")	30-45cm (12-18")	6.0-6.8
Radish, Daikon	300	87M	200 roots	18-24°C (65-75°F)	5-7	5mm (¼")	10-15cm (4-6")	45-60cm (18-24")	6.0-6.8
Rhubarb*	N/A	N/A	250 lbs	16-25°C (50-75°F)	5-10	2cm (1")	60-120cm (24-48")	100-120cm (36-48")	6.0-6.8
Rutabaga	300	65.4M	150 lbs	18-21°C (65-70°F)	7-15	5mm-1cm (¼-½")	10-15cm (4-6")	60-75cm (24-30")	6.0-6.8
Salsify	1.2M	522M	60 lbs	21°C (70°F)	7-21	1cm (½")	5-10cm (2-4")	30-45cm (12-18")	6.0-6.8
Spinach	400	174M	40 lbs	21°C (70°F)	7-14	2cm (1")	7-15cm (3-6")	30-45cm (12-18")	6.0-6.5
Spinach, New Zealand	120	26M	50 lbs	25°C (75°F)	10-15	5mm-1cm (¼-½")	30-45cm (12-18")	60cm (24")	6.0-6.
Squash, Summer	60	8.7M	200 lbs	24-30°C (75-85°F)	7-14	2cm (1")	45-60cm (18-24")	90-120cm (36-48")	6.0-6.8
Squash, Winter	60	6.5M	200 lbs	24-26°C (75-80°F)	7-14	2cm (1")	90-120cm (36-48")	120-180cm (48-72")	6.0-6.8
Sui Choi (napa cabbage)	200	44M	60 heads	20-24°C (68-75°F)	5-10	5mm (¼")	45-60cm (18-24")	60-90cm (24-36")	6.0-6.8
Sunflower	140	31M	120+ heads	12-21°C (55-70°F)	10-14	1cm (½")	30-45cm (12-18")	60-75cm (24-30")	6.5-7.0
Swiss chard	220	64M	80 lbs	21-25°C (70-75°F)	7-14	1cm (½")	15-30cm (6-12")	45cm (18")	6.0-6.5
Tomatoes*	N/A	N/A	150 lbs	24-26°C (75-80°F)	7-14	5mm-1cm (¼-½")	60-90cm (24-36")	90-120cm (36-48")	6.0-6.5
Turnips	300	87M	100 lbs greens or 50 lbs roots	18-21°C (65-70°F)	7-14	5mm-1cm (¼-½")	10-15cm (4-6")	45-60cm (18-24")	6.0-6.8

*Not direct sown

M=1,000

1 acre = 43-560 sq. feet

Basic Tools you may need



SAVE NOW TO USE FOR YOUR GARDEN LATER

- **Eggshell:** They break down to give your plants calcium. 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
- **Coffee Grounds** add nitrogen to the soil. 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.
- **Bananas Skins** give your plants potassium as they break down. This makes your plants strong and healthy to fight off pests. To save them simply chop them up and freeze them, or dehydrate them in the air, a dehydrator, or the oven.

SAVE NOW TO USE FOR YOUR GARDEN LATER

- **Big Cardboard boxes** can be used to cover the ground to prevent weeds from growing, the bigger the better, make sure to overlap them so light doesn't get to the soil, then cover with woodchips, a mulch, or hold in place with heavy objects.
- **Newspaper** can be used in the same way, several layers thick and overlapped, shredded it can also be used as a mulch around your plants.
- **Fireplace Ash** will supply potassium and calcium carbonate to the soil, it will also increase the pH of your soil so don't use too much in NB as our soil is usually acidic anyway. Make sure you use ash from untreated wood.
- **Epsom Salts** add magnesium and sulphate to the soil, very important for tomatoes and potatoes. Add directly to the soil or dilute in water.
- **Pine needles** will slowly break down to add nutrients to the soil and can be used as a mulch, but over time can make the soil more acidic. Best used for plants that love acid soil like blueberries.

Things to save

Milk cartons, coffee cups, take home containers (seed starting)
disposable cutlery (label plants)

mushroom containers, margarine containers with lids, milk containers, egg
cartons (hayes farm)

Useful website

<https://harvesttotable.com/>

<https://awaytogarden.com/when-to-start-seeds-calculator/>