

Gardening Basics

Manitoba Agriculture, Food and Rural Initiatives

Growing a garden can be an enjoyable hobby. It also can provide a family with fresh, delicious produce that can be enjoyed year round. The following information will give you the basic information you need to succeed at gardening.

Garden Location:

For convenience, the garden should be near the house. It should be in a sunny location away from tree roots. Vegetables cannot compete with shade trees for food and moisture.

Planning the Garden

Once you have chosen the location for your garden plot, draw of it and map out where you will plant each crop (see sample Diagram).

Each vegetable needs a certain amount of growing space. Do not try to crowd plants into less space than they need (see table on back page). Cucumbers, squash, and melons often grow for yards in all directions. Radishes need very little space. Corn, asparagus, and pole beans grow tall. Their height makes it necessary to plant them where they will not shade other plants. Brussels sprouts and cabbage grow to a hefty size and need plenty of room.

Fast maturing crops (see table on back page) can be planted throughout the summer. A long row of lettuce planted all at once will produce more salad than you can possibly eat. It is more practical to plant short rows of fast-maturing vegetable and to make successive plantings at two or three week intervals.

Gardening Calendar	
Time	Task
Jan/Feb	Receive/order seed catalogues and plan for ordering and spring planting
February	Order seeds and plants from seed company
March/April	Plant bedding plants if growing own ex: cabbage, tomatoes, peppers, flowers, etc.
Early May	Buy any additional seeds Till garden and prepare for planting Clean last season's vegetables out of storage area
May/June	Plant garden when frost danger is past Cover any bedding plants that are susceptible to frost
Summer	Thin plants if needed ex: carrots, radishes, lettuce Water garden during dry periods – 1 inch water/week Weed garden regularly, hill potatoes Check for insects Stake tomatoes and peas Plant another set of quick growing vegetables ex: lettuce and radishes Enjoy vegetables in meals and snacks
August/September	Harvest garden Store/preserve vegetables Clean waste off garden Till garden in preparation for spring planting
Winter	Check stored vegetables for signs of spoilage and discard any that are spoiled (rotten, mouldy, etc.) Enjoy stored vegetables in meals and snacks

Example Garden Layout

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Tall Plants i.e. Corn, Staked Tomatoes, Pole Beans, Potatoes			
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Perennials, Vegetables & Bush Fruits i.e. Asparagus, Rhubarb, Dill, Raspberries	Perennials, Vegetables & Bush Fruits	Perennials, Vegetables & Bush Fruits	Main Crop Vegetables i.e. Beans, Onions, Beets, Carrots, etc.
			Early Vegetables i.e. Lettuce, Radish
			Vine Crops i.e. Peas, Cucumbers, etc.
			Early Vegetables i.e. Lettuce, Radish
			Main Crop Vegetables i.e. Beans, Onions, Beets, Carrots, etc.
			Strawberries

If possible plan the garden so that the tall plants will be at the north side where they will not cast shade on smaller plants. It is also a good idea to run rows across a slope to help prevent water runoff and soil erosion.

To allow for cultivation, place perennial vegetables on the edge of the garden, about three feet from the grass line. Plant vine crops in the centre of the garden and the other crops on each side with two rows of early vegetables along the edges of the vine crops. These will be out of the way when the vine crops spread.

The square or almost square garden is usually easier to handle than a long narrow one, but the shape of the garden is usually determined by the area available.

If possible rotate the different plantings so that crops will not be on the same ground year after year. It is particularly important to rotate such crops as cabbages, turnips and potatoes.

Preparing the Soil:

Ideally, begin digging or tilling soil in the fall, or dig in the spring as soon as the ground is dry enough. If possible, spread rotted manure over the surface before tilling or digging. On poorer soils, commercial fertilizers with or without manure may be added. Work the garden to a depth of eight to ten inches and cover all manure or compost after thoroughly mixing it with the soil.

If fertilizer is added, scatter the fertilizer after digging, and work it well in to the topsoil with a rake. Fertilizer should never touch the roots or tops, since it may cause burning of the young plants.

Garden Tools:

Only a few simple tools are needed for a small garden – spade or shovel (for digging holes), digging fork (for turning over soil), hoe (for weeding and making seed furrows), rake (for levelling and cleaning off debris), trowel (for planting), planting line (string) and a watering can or garden hose for watering the garden. A sprayer (for insects or weeds), a tiller for larger gardens and a wheel barrow may also be useful.

Choosing the Seed

Good seed is essential for a good garden. The cost of seed, compared with the value of the vegetables harvested is a small item. Seed catalogues are an excellent source of information and can be great reading. You can get catalogues and more information from the following: Manitoba seed companies:

T & T Seeds Ph: 204-895-9964, Box 1710
Winnipeg, MB R3C 3P6 or www.tseeds.com
McFayden Seed Co. Ltd. 1-800-205-7111, 30-9th St.
Brandon, R7A 6N4 or www.mcfayden.com
Lindenberg Seeds Ph: 204 727-0575, 803 Princess Ave. Brandon, MB R7A 0P5

When choosing vegetable varieties always select types with short days to full growth. Remember—if you're planting on June 10 and the first frost is around Sept 1 that's 82 growing days.

The adjacent table lists some shorter season varieties found at T&T Seeds and retail outlets that carry Mackenzie Seeds (ex: Canadian Tire, Wal-Mart, etc.).

Always check what year the seeds were packaged. Usually seeds that are two or three years old can be sowed, but new seeds perform best. Always purchase seed that is Canada #1 Standard seed quality.

Certified seed potatoes should be used for planting instead of table stock potatoes.

Remember too, plant only those vegetables that you and your family enjoy. They're a lot of work if no one will eat them!

Preliminary List of Vegetables for Northern Gardens	
Vegetable	Variety Name (days to maturity)
Leaf Lettuce	Buttercrunch (60 days), Simpson Elite (48 days), Esmeralda (53 days), Baby Star (65 days), Grand Rapids (45 days) - make two or three successive plantings
Radish	Cherry Belle (24 days), Champion (23 days), French Breakfast (20 days), Scarlet Globe (25 days), Lobuk Sweet Radish (55 days) - make two or three successive plantings and thin
Beets	Scarlet Supreme (48 days), Ruby Queen (55 days), Yellow Detroit (55 days)
Swiss Chard	Bright Lights (40 days), Fordhook Giant (55 days), Perpetual (50 days)
Turnip	Royal Crown (55 days), Early Snowball (45 days)
Carrot	Baby Spike (55 days), Little Finger (60 days), Scarlet Nantes (68 days) - thinning required
Cucumber	Straight 8 (58 days), 702 Burpless (50 days)
Potato	Shepody, Viking, Norland—hilling required
Pea	Spring (57 days), Alaska (55 days) - use net for climbing
Onions	Dacong Tall Green Onion (65 days), Yellow Onion—Candy hybrid (85 days). Use onion sets (bulbs), pick as green onions
Tomato	Sub-Arctic Plenty (45 days), Siberia (53 days), Native Sun (50 days Yellow) - start as transplants

When to Plant

Planting and seeding dates vary depending on the location of your community. Experienced gardeners are good sources of local information. As a general guide, the following can be used.

In Central Manitoba: seed around June 1
In the Thompson area: seed around June 10
In the far North: seed around June 15

Info on the Seed Packet

Lots of books and web sites on the Internet provide information on planting instructions, but the best information sources is the seed packet. It will include how long it will take your plants to germinate, what zone they'll grow in, how long until harvest, planting depth, distance apart and general planting information and other useful information.

Sowing the Seed

Consult the planting guide table on the back page for depth to plant and spacing of rows.

Stretch garden line tightly between two stakes and mark a row by drawing the corner of a hoe along the line to the required depth. Make the row an even depth so that uniform germination of the seed will be obtained.

Place large seeds, such as beans and peas, individually at the specified distances. Sow small seeds such as carrots and lettuce, by tearing off a corner of the envelope, holding the packet horizontally and gently tapping your finger as it is moved along the row. Press the soil firmly over the seeds after the seed has been sown. Mark each row with a plant label.

Seeds must have continuously moist soil around them until they sprout. Check for moisture every day and water as needed. Do not over water - soggy soil can cause the larger seeds to rot.

Watch for germination. Cold soil and cool weather slow down seed sprouting. Check the table on the back page to see when you can expect plants to emerge. Some plants can take as much as two weeks to emerge. However, if after three weeks, nothing has happened, plant a new row. Perhaps the soil was too dry or too cold, the furrow was too deep or the surface had a crust too hard for seedlings to push through.

To extend the crop season of beans, lettuce, peas and radishes, make two or three sowings. When the seedlings are well up, thin the plants to the distances recommended in the table. Do this on a non-sunny day or in the evening when the soil is somewhat moist.

Cultivating

Begin weeding as soon as the rows of young seedlings appear or immediately after the young plants are set out. Kill the weeds when they are small before they can use up plant food and moisture. For good results cultivate the ground once a week to a depth of one or two inches.

As the plants increase in size and cover the earth, hoe less of the space between the rows and decrease the depth of cultivation to avoid injuring the roots.

Potatoes will require hilling. Top up the dirt as the plant grows to ensure the tubers are not exposed to sunlight.

Thinning

It can seem wasteful to destroy perfectly good seedlings, but it must be done. If left unthinned, radishes will not form bulbs. Carrots will not grow or will grow twisted together. Lettuce will form small heads.

Thin seedlings when they are about one or two inches high (see table on back). Do not try to thin seedlings

all at once. A thick row of leaf lettuce can be thinned at first by removing every other plant. Plan on thinning plants more than once. Thin again when the lettuce will be large enough to eat. When thinning a thickly seeded row, pull each plant out carefully, lifting straight up. This will prevent disturbing the roots of neighbouring plants.

It is possible to transplant well grown seedlings from a thinned row if you take steps to avoid damaging their roots or stems. Use a small trowel or label stake to dig them up along with a small clump of soil surrounding their roots and handle them gently. When transplanting small seedlings, move them into soft, fine, moist soil and shade them with a loose canopy of newspapers or grass clippings.

Watering

The garden needs about one inch of water per week. If there's not enough rainfall, you'll need to water with a hose or watering can. Thorough deep watering is more effective than brief shallow ones. Mere sprinkling encourages plant roots to stay on the surface where they are susceptible to hoeing damage and to the drying heat of the sun.

To check how much you've watered, set out an open container in your garden, marked off in half inches. Aim for your garden to get 1 – 1.5 inches of water a week. Schedule your watering for the mornings or early afternoon, so that leaves can dry off before nightfall. Wet leaves are more susceptible to fungus diseases. Overcast days are better than sunny days, because the water will evaporate less quickly.

Hints for a Healthy Garden:

To protect vegetables from diseases and discourage pest infestations, here are a few simple rules to follow:

- Choose seeds of disease-resistant varieties whenever you can.
- Inspect store-bought plants carefully. Spotty or discoloured leaves may be signs of damage, insufficient nutrients or disease.
- Pull up and throw away any diseased plant. Do not compost it.
- Rotate crops (especially cabbage, its many relatives and potatoes) to prevent the spread of soil-borne diseases.
- Weed often and dispose of any weeds that harbour plant-eating pests.
- Do not work in your garden immediately after a rainstorm. Wet leaves are more vulnerable to damage and disease and walking over rain-soaked soil will harden it.
- After harvesting each crop, destroy plant remains. If they were healthy, compost them.

PLANTING GUIDE FOR THE HOME VEGETABLE GARDEN

Kinds	Distance between Rows, Feet	Distance within rows, inches	Amount of seed, or # of plants per 50-foot row	Depth to cover, inches	Days to Emergence (good temp and moisture)	Number of days seeding to harvest	Approximate yield per 50-foot row	How to use or store
Bean (bush) (pole)	2 2	2-3 8-12	4 oz. 4 oz.	1 1/2 - 2 1 1/2 - 2	7-10	52-70 65-70	30-50 qt.	Fresh, fresh frozen, canned, pickled
Beet	11/2	1-3	1/2 oz.	1/2	4-10	55-70	250 roots	Fresh, pickled, canned, cool cellar
Broccoli Early Late	21/2 21/2	18 18	1 packet 1 packet.	transplants 1/2	4-10	60-80	30-40 qt.	Fresh, fresh frozen
Cabbage Early Late	21/2	18	1 packet.	transplants 1/2	4-10	60-80 100-105	30 heads	Fresh, raw, kraut, or storage
Carrot	11/2-2	1-2	1/4 oz.	1/2	6-18	60-75	30-75 lb.	Fresh, raw, canned, cool cellar
Cauliflower	21/2	18	1 packet.	transplants	5-10	60-80	30 heads	Fresh, fresh frozen
Chard, Swiss	2	8-12	1/2 oz.	1/2	4-10	50-60	Use all season	Fresh
Corn	21/2-3	12-18	2 oz.	1-2	5-8	64-100	45-75 ears	Fresh, fresh frozen, canned
Cucumber Slicing Pickling	4 4	12-24 12-24	1/8 oz. 1/8 oz.	1/2-1 1/2-1	6-10	65-75 60-70	100-150 50-150 fruits	Raw, Pickled
Lettuce (leaf) (head)	11/2 11/2	6 12	1 packet. 1 packet.	1/4 1/4	6-8	40-50 50-75	100 50 heads	Raw Raw
Onion Transplants Seeds or sets	11/2 11/2	3 2-3	1 packet of Seed, 1/2 lb sets	transplants seed 1/2 sets 1	6-10	115-135 95	50-75 lb.	Raw, fresh, dry dark cool storage
Parsnips	11/2-2	2-4	1/4 oz.	1/2	14	120-150	150-300 roots	Store sand, moss, sawdust; or leave in ground over winter
Pea	11/2-3	2	4 oz.	11/2-2	6-10	60-80	20-40 qt. pods	Fresh, fresh frozen, canned
Potatoes	2-3	12	5 lbs cut to 1.5 oz.	4	4-11	As soon as big enough	60-100 lbs	Fresh, stored
Pumpkin	6-8	36-48	1 oz.	1	4-10	110-130	30-50 fruits	Fresh, store dry
Radish	1	1	1/2 oz.	1/4	4-10	25-35	30-100 bunches	Fresh
Rutabaga	2	6	1/2 oz.	1/4	4-10	110-130	100 lb.	Fresh, stored
Spinach	11/2	4-6	1/2 oz.	1/2	5-12	40-45	1-2 bu.	Fresh, fresh frozen
Squash	6-8	36-48	1 oz.	1	4-6	90-115	100 fruits	Fresh, store dry
Tomato Staked Not Staked	2 3	18-24 36	25-33 plants 17 plants	transplants	6-12	100-130	150-300	Fresh, canned
Turnip	11/2-2	3-4	1/2 oz.	1/4	3-8	50-70	150 roots	Fresh