

Northern Lights Gardening Manual

NWT Small Scale Foods Program



Canada/Northwest Territories
Growing Forward Agreement

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Introduction

The purpose of the Northern Lights Gardening Handbook is to encourage production of locally grown produce in small communities of the NWT. A successful garden brings with it the far-reaching effects of improved nutrition and eating habits and a community independence from transported foods.

In the past many people utilized gardens as part of their basic supply of food. But the lack of a clear understanding of different soils and climates in the past, made early gardening a real struggle. It was often a hit or miss situation.

Gradually, as more people came to the north, new roads were built and new means of transportation became available. As more food began to be shipped in, people began to depend on these shipments rather than growing their own, leaving us today with a great dependency on transported foods. One of the main downfalls of transported food is its high prices: especially in remote communities. Transported food is also found to have lower nutritional quality than its freshly produced counterpart.

With new growing methods, gardening in the north is becoming less risky. Aids to warm the soil and air and better seed varieties that are more resistant to frost, all help to increase chances for better northern harvests.



While this handbook provides sufficient information for basic techniques and should generally be followed, our main focus is in getting a larger number of people in the north actively participating in vegetable production by offering some basic steps.

Selecting a Site

There are 6 main factors to keep in mind when choosing a garden site.

Water

Water Source:

The site should be close to a source of water. Plants grow much better when watered with warm water (15 - 25°C; 60 -77°F). Watering by hand is difficult and sometimes inefficient. The water should be warm and under pressure. When possible, locate a site on an island, near a lake or river. The water modifies the local climate enough to extend the growing season by as much as three weeks, when compared with the climate of inland sites.

Security

Security:

When possible, a site should be near enough to one's house for supervision. Protecting the site with a fence is a good idea to deter vandalism and animals from grazing.

Soil

Soil:

The soil must be well drained. The cleared but untilled new site should have a soil depth of at least 30 cm (12") and cleaned of rocks and roots. While many materials will be added to the soil in preparing the site, the soil provides the starting point for the work to come. Sandy and other light textured soils warm faster than clay soils. Peat soils do not warm deeply, thus encouraging shallow root systems in vegetables. Therefore, pure peat soils should be used for shallow rooted vegetables such as onions, radishes, turnips, etc.



Elevation

Elevation:

Where a choice exists, choose higher rather than lower lying land for your garden site.

At best, it will have a gentle slope toward the south. Cold air flows down into low lying areas and settles, while somewhat higher ground is usually warmer and has more air movement. Also, water drainage is poorer in low lying areas.

Winds

Winds:

Exposure to high or steady winds can ruin an outdoor garden by damaging plants and drying them out.

Windbreaks provide protection from winds. These may be any combination of brush, trees, fences or buildings, as long as they are 6 m (20') away from the edge of the site. The "apron" around the site creates workspace, prevents shading by the windbreak, and limits the number of tree roots which might invade the site.

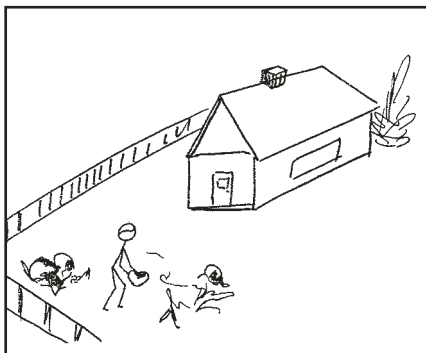
Orientation

Orientation:

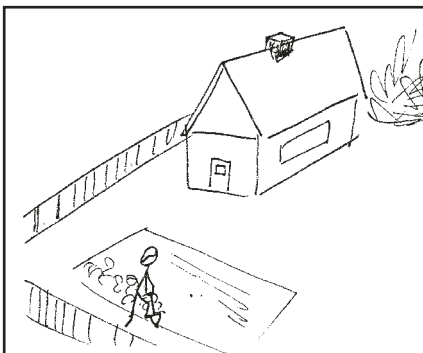
The garden site should be lined up on a north-south axis as closely as possible. Rows planted in a north-south direction have some advantage over east-west rows, as they have more exposure to sunlight.

Preparation of Garden Site

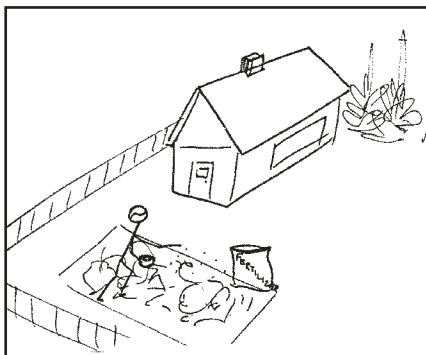
1) Clean up rocks, twigs, roots...



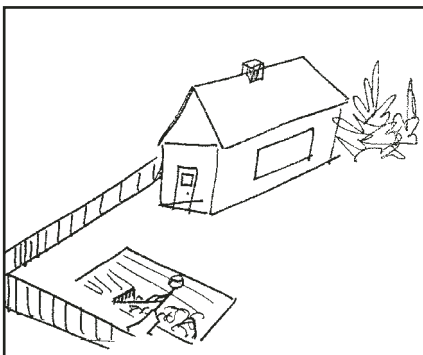
2) Dig over / till



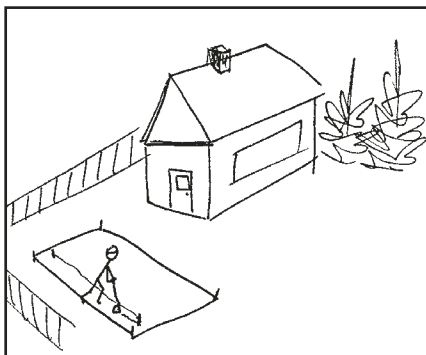
3) Fertilize



4) Smooth with rake



5) Mark rows



Ready, Set... GROW!!!

Tips for Planting

- A rule of thumb is that the seed should be planted at a depth equal to two times the seeds diameter. This means that smaller seeds will have very little soil covering them while larger seeds will have more soil coverage.
- Plant approximately 2 -2.5 feet (60 cm - 70 cm) between each garden row (enough room to walk and weed).
- Once seeds have sprouted and plants begin to grow, thinning is necessary to reduce plant crowding to allow maximum growth. Root crops, carrots, beets, radishes, and turnips all require thinning, or will grow luxuriant tops. Thinning should be a gradual process over a number of weeks beginning shortly after the first seedlings appear. The young seedlings should be thinned so the leaves do not overlap. By the last thinning the plants of root crops should be at least four inches apart.
- Seeds should be spaced apart at least four times their diameter. Don't plant too close!



Vegetable Companion Chart

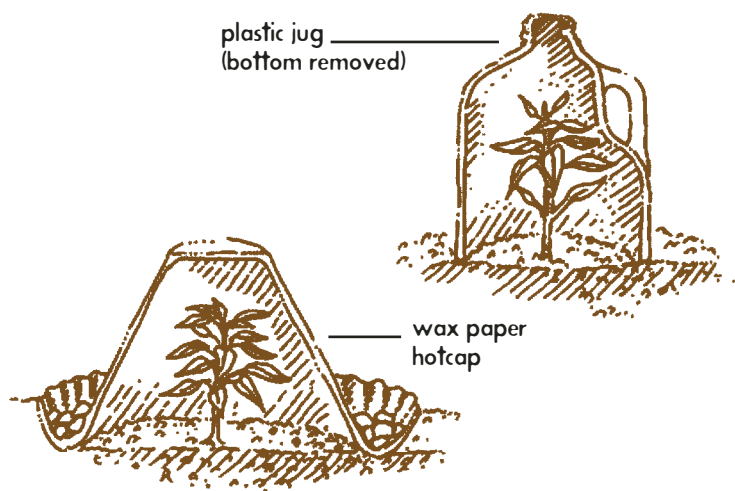
The layout of your garden can help or hinder its growth. The following is a list of good and bad companions to keep in mind when planting:

Plant	Good Companions	Bad Companions
Basil	Pepper, Tomato, Marigold	
Bush Beans	Beets, Cabbage, Carrots, Celery, Corn, Cucumbers, Eggplant, Lettuce, Strawberry, Marigold, Savory, Radish, Peas	Onion
Pole Beans	Carrot, Corn, Cucumber, Eggplant, Lettuce, Peas, Radish, Savory, Tansy	Beets, Onion
Beets	Bush Beans, Cabbage, Onion, Sage	
Cabbage Family	Bush Beans, Beets, Celery, Onion, Tomato, All Strong Herbs, Marigold	Strawberry
Carrots	Bush Beans, Pole Beans, Lettuce, Onion, Peas, Radish, Tomato, Sage	Dill
Celery	Bush Beans, Cabbage, Onion, Spinach, Tomato	
Corn	Bush Beans, Pole Beans, Cucumber, Melons, Peas, Squash	Tomato
Cucumbers	Bush Beans, Pole Beans, Corn, Peas, Lettuce, Onion, Radish, Marigold, Savory	No Strong Herbs
Eggplant	Bush Beans, Pole Beans, Spinach	
Lettuce	Bush Beans, Pole Beans, Carrots, Cucumbers, Onion, Radish, Strawberry	
Tomato	Cabbage, Carrots, Celery, Onion, Mint	Corn, Fennel
Onion	Beets, Cabbage, Carrots, Celery, Cucumber, Lettuce, Squash, Pepper, Strawberries, Tomato, Savory	Bush Beans, Pole Beans, Peas
Peas	Bush Beans, Pole Beans, Carrots, Corn, Cucumber, Radish, Turnip	Onion
Radish	Bush Beans, Pole Beans, Carrots, Cucumber, Lettuce, Peas, Squash	Hyssop
Spinach	Celery, Eggplant, Cauliflower	
Squash	Corn, Onion, Radish	
Strawberry	Bush Beans, Lettuce, Onion, Spinach	Cabbage
Parsley	Tomato	Corn, Fennel

Frost and Wind Protection

1) Hotcaps

Hotcaps are transparent paper caps reinforced with wire that act like small greenhouses. Hotcaps are used to protect seedlings from cooler temperatures. They provide 2 to 3 degrees of frost protection. Hotcaps must be removed when temperatures start to increase during the day time or when the plants have exceeded the size of the cap. Plants must be watered before covering with a hot cap. It is important to devise some sort of watering method that can be used throughout the hot-capping process. Some suggestions are using sprinklers, soaker hose, spaghetti hose, drip irrigation or watering by hand. The base of a hotcap consists of flaps. These flaps must be covered well with soil to prevent the wind from picking up the hot cap. A small cut is made on the side of each hotcap to allow for ventilation. As the plant grows and develops in the cap, the cut must be enlarged to permit more air exchange. The hotcap should be torn open first in a downward direction then upward every 10 days or so. Each time the tear or opening should be an additional 7 to 10 cm (3 to 4 in.) in length. By mid - June the hotcap should be removed and destroyed.



Frost and Wind Protection con't

2) Tunnels

Another method in protecting plants from frost and wind is known as tunneling (row coverings). In this process, clear plastic is used in place of hotcaps to cover rows of plants. To help reduce weeds, plastic mulch should also be placed on the soil's surface when tunnels are used. Clear plastic mulch works most effectively in heating soils, but aren't effective in controlling weeds. Black plastic also works well in heating soil and has the added advantage of controlling weeds. Plastic also helps heat the soil and retain moisture.



To begin creating a tunnel, plastic mulching must be laid down first. Rake and level the soil in an area equivalent to the length and width of the plastic mulch. Lay the plastic down and with a hoe make a furrow (small trench) about 7 to 10 cm (3 to 4 in.) wide and deep along the width and length of the plastic. Place the edges of the plastic in the furrow, then cover them with soil. Pull firmly on the plastic as you cover the edges, starting on one side and then moving to its opposite side. Lastly, cover the ends. The plastic mulch should be firm and lie flat on the soil's surface.



Now to plant the seeds or transplants! Use a knife to create crosscuts in the plastic at desired intervals. Plant the seeds or plants by placing your fingers through the cuts and firming the plants and seeds into the soil. Watering-in is recommended but take care not to wash away any seeds from the openings in the plastic mulch.

Frost and Wind Protection con't

2) Tunnels con't

After the planting/seeding stage, application of the row cover (tunnel) should begin. Drive a stake into each end of the plastic mulch at the point where the soil covers the ends. Next, cut sections of galvanized wire hoops and push into soil at approximately 3 ft intervals along the length of the plastic mulching. The wire ends should be pushed around 10 to 12 cm (4 to 5 in.) into the soil. The first wire closest to each stake should be doubled-up for added strength. It is easiest if the row cover is applied on a windless day. Place clear polyethylene over the support hoops and pull it tight. The poly should be about 1 foot wider than the length of the wire used to form the hoops. Tie first one end and then the other to the wooden stakes. Bury all edges and anchor firmly using soil. This will prevent wind from getting under the plastic



and blowing it away. A hot tin can can be used to provide ventilation to the row. Simply poke the hot tin can through the plastic at 1 foot intervals on the protected side of the row cover that is protected from wind. Do not use a knife to make cuts in the tunnel as the wind will tear the plastic.

When crops begin to flower, the side of the row cover (protected from the wind) can be pulled up from the soil and pinned to the wire hoops by clothespins. This allows bees to enter and pollinate flowers. At night remove the clothespins and secure the plastic. The row cover plastic is usually removed completely by the time the vines fill the tunnel. This is usually around the end of June.

Tunnels provide only one degree of frost protection. In the event of frost, throwing a blanket over the tunnel is recommended.

What Should I Plant?

There are two basic types of crops...

1) Frost - Sensitive

Frost sensitive vegetables will produce well into the fall if they are provided protection from frosts. Use of tunnels, hotcaps and coverings when cool weather sets in will extend your season.

examples:

Tomatoes

Cucumbers

Peppers

Cantaloupes

Beans

Peas

2) Frost - Tolerant

Frost tolerant vegetables can stand lower growing temperatures as well as being able to tolerate minor frost damage.

examples:

Cabbage

Cauliflower

Beets

Carrots

Turnips

Lettuce

Radishes

Onions

Potatoes

Brussel Sprouts

Many vegetable species are frost tolerant to a certain degree. This means that gardening in the north is quite plausible.

In addition to knowing which vegetables fall under which category, it is helpful to be aware of some of the recommended seed varieties for planting in the north.

Recommended Seed Varieties

When purchasing seeds/plants here are some varieties to look for:

Beans	<ul style="list-style-type: none"> - Bush Wax - Green - Pole 	<ul style="list-style-type: none"> - Pencil Pod Wax, Top Notch Golden Wax, Round Pod Kidney Wax - Garden Green, Slender Green - Blue Lake, Wonder Wax
Corn		Arctic First, Dorinny, Golden Midget, J-6 Cross, Pickaninny
Cucumber	<ul style="list-style-type: none"> - Pickling - Slicing 	Early Russian Marketer, Mincu, Straight Eight, Surecrop Hybrid
Potatoes		Norgold Russet, Norland, Warba
Squash		Buttercup, Early Prolific, Hubbard, Table Queen
Tomatoes		Early Sub-Arctic, Sub-Arctic Maxi, Sub-Arctic Plenty, Swift, Better Boy, Sugar Snacks (cherry), Cobra
Cantaloupes		Sampson Hybrid, Sugar Salmon
Peppers		Earliest Red (Sweet), Long Thick Red (Hot)
Herbs		A large number of herbs have been successful in the North including aleriac, anis, basil, caraway, catmint, chicory, coriander, dill, endive, fennel, marjoram, oregano, parsley, rosemary, sage, savory, thyme
Peas		Sugar Sprint, Little Marvel, Laxton's Progress
Radish		Cherry Belle, French Breakfast, Saxa, Scarlet Globe, White Icicle
Carrots	<ul style="list-style-type: none"> - Baby - Nantes - Danvers - Imperator 	Baby Spike, Little Finger, Minicor, Short 'n Sweet Bolero, Ignor, Nantes Coreless, Scarlet Nantes, Sweetness, Touchon Danvers Half Long, Danvers 126 Avenger, Gold Pak, Imperator 58, Legend, Orlando Gold, Tender Sweet
Turnip		Just Right, Gilfeather, Golen Ball, Royal Crown, Shogoin, Pike, Laurentain
Cauliflower		Self-blanche, Snowball Y Improved, Andes, Candid Charm, Serrano, Snow Crown, White Corona
Broccoli		Cruiser, Green Comet, Green Goliath
Cabbage	<ul style="list-style-type: none"> - Green - Red - Savory 	Cheers, Early Jersey Wakefield, King Cole Red Meteor, Ruby Ball Savory King, Savory Queen
Brussel Sprouts		Bubbles, Jade Cross, Oliver, Prince Marvel, Valiant, Rubine, Long Island Improves

Beans

Veggie Fact:

The common green bean has been cultivated in Mexico for at least 7000 years.



General Characteristics and Care

- There are two different types of beans: bush beans and pole beans. Bush beans stand without support and require the least amount of work. Pole beans need to be supported by a trellis or fence, but are easily harvested.
- Beans are very sensitive to frost and should only be planted after the danger of a frost has passed, and the soil has warmed. You can ensure a continuous supply of beans by planting more every 2-4 weeks until late August.
- Every bean seed should be planted 1 inch deep. Bush beans should be planted in rows 2-4 inches apart. The rows should be 18-24 inches apart. Pole beans should be planted 4-6 inches apart, and rows should be 30-36 inches apart.
- Bean seeds crack when soil moisture is too high, so seeds should never be soaked in water before planting. Instead they should be lightly watered after planting, or planted right before a heavy rainfall.

Problems

- **Bean Mosaic Disease:** Bean mosaic disease causes plants to turn yellow and they will not produce pods, also the leaves of the infected plant will be of an irregular shape. There is no cure for this disease, the only thing that will work is to purchase the mosaic-resistant variety.
- **Bacterial Bean Blight:** Bacterial bean blight is easy to spot in a crop. The plant's leaves will be bright yellow or brown spotted, and there will be water soaked spots on the pods. You can only prevent this disease by not planting diseased seeds, and avoiding contact with wet bean seeds.

Harvest and Storage

- Harvest beans when pods are crisp, firm, and almost fully elongated. They must be harvested before the seed inside the pod is fully developed. Bean plants will continue to grow flowers and produce if pods are picked before seeds fully develop.
- Only pick beans when there is no dew on plants and pods are fully dry. In picking wet pods, you may spread bacterial bean blight, ruining a whole crop.
- Store fresh picked, unwashed beans in plastic bags in the refrigerator for no more than 3 days. Storing washed beans will produce black spots on pods and they will decay faster than unwashed beans.
- Beans can be frozen, canned, or dried. As with all other vegetables, beans must be blanched before freezing.

Green Beans with Bacon

2 pounds fresh green beans, trimmed into 1 inch pieces
3 tbsp butter 8 slices-bacon, diced Black pepper to taste

In a large skillet melt butter, add bacon, and fry until crispy. Boil beans in a pot for about 10 minutes, drain and add to skillet. Toss well and heat until fully coated. Add pepper, serves 8.



Veggie Fact:

Beets' green tops have a higher nutritional value than their roots.

Beets



General Characteristics and Care

- Beets prefer soil that has not been recently manured or composted. Forked roots can result.
- Garden soil should be well-prepared, preferably light, well-drained, and in an open sunny area.
- Plant seeds 1/2 inch deep and 1 - 2 inches apart in the centre of a raised row of soil. Cover seeds lightly with loose soil and sprinkle with water.
- The seedlings should be thinned to 1 - 2 inches apart when the plants sprout to 3 inches tall. The removed greens may be cooked similar to spinach or used in a salad, with or without the roots attached.

Problems

- **Aphid:** Aphids are 1/8 inch long and can be green, pink, red or brown. They will make colonies on the undersides of leaves. Washing infested plants with a steady stream of warm water will wash aphids away.
- **Flea Beetle:** Flea beetles are brown-black with light markings. They jump quickly and eat holes in leaves. Onion and garlic are natural flea-beetle repellants—teas can be made from these plants and sprayed on infested plants.
- **Beet Webworm:** The Beet Webworm changes colors as it matures, beginning life as pale green larvae 1 - 2 mm in length. As the larvae develop they become olive green, then black, and finally the mature larvae have two white stripes on either side of a black stripe.

Harvest and Storage

- Beet roots are harvested by pulling them out of the ground. Harvest at any size, but for the best flavor, pull beets when they are about the size of a tennis ball.
- Beets can be stored in a dark, cool, dry place. Roots will keep 1 - 2 weeks in plastic bags in the refrigerator. Be sure to remove leaves for storage.
- Beet leaves are great to eat fresh from the garden. Use them in salads or sandwiches. Wash and place them in plastic bags in the refrigerator for 1 or 2 days.

Beet Salad

2 cups grated or cubed beet root
½ cup grated or cubed apple
¼ cup grated carrot
¼ cup raisins

Combine all ingredients and top with your favourite vinaigrette. Serves four as a side dish.



Veggie Fact:

*Just 100g of broccoli contains several times your daily recommended intake of vitamin C (provided they are not over-boiled).
Also a good source of fiber and iron, potassium, vitamin E, folate, and beta carotene.*

Broccoli



General Characteristics and Care

- Recommended planting: Start seeds indoors, then transplant to garden.
- Each plant should be placed approximately 1.5 feet apart in the row.
- Set transplants slightly deeper than seeded plants.
- When heads start to develop, provide ample soil moisture.

Problems

- **Aphids:** Aphids will make colonies on the undersides of leaves. You can rid the plant of aphids by washing with a steady stream of water, or before infestation occurs you can put a little dish soap in a spray bottle and spray plants down.
- **Cabbage Worms:** Cabbage worms attack the leaves and head of broccoli, look for punctures that look like bullet holes. Cabbage worms can ruin a whole crop if not controlled. You can use a butterfly net to catch the worms before they lay eggs.

Harvest and Storage

- Broccoli grows best in cool weather, so your garden should produce a spring and fall crop. Harvest when head is large and firm, look for small clusters of flower buds, not yet open. When the flower buds open, a yellow flower will be present and plant is too mature.
- Store broccoli unwashed in a loose plastic bag in your refrigerator vegetable crisper. Store in refrigerator for 3-5 days. By storing it longer broccoli will develop an undesirable taste. Also, you can blanch your broccoli crop, by boiling in a large pot with a tight lid for 4 minutes. Then submerge broccoli in cold water (with or without ice) for several minutes and drain. Place cold broccoli in a plastic bag, squeeze out excess air, mark the date on the plastic bag, and place in freezer. Broccoli that has been blanched can be stored up to a year.

Easy Broccoli and Cheese Sauce

2 cups steamed chopped broccoli
12 ounces-evaporated milk
1/4 cup-butter
4 ounces Velveeta cheese cubed
Salt and Pepper to taste.



Melt Butter in a sauce pan, add 1/2 of milk, add Velveeta. Stir frequently, until melted. Add more milk if you want a creamier taste. Add Broccoli, and serve!

Veggie Fact:

Brussel Sprouts are high in fiber and carbohydrates, low in sodium, fat free, and are a good source of vitamins A and C, potassium and iron.

Brussel Sprouts



General Characteristics and Care

- Recommended planting: Start seeds indoors, then transplant to garden.
- Brussel sprouts generally fair better in slightly acidic and highly organic soils.
- Each plant should be placed approximately 1.5 feet apart in the row.

Problems

- **Aphids:** Aphids can be a pest indoors on the young seedlings as well as outdoors on the transplants. Washing plant with a steady stream of warm water will wash aphids away.
- **Other pests:** Cabbage maggots, cutworms, and flea beetles can also cause damage throughout the growth of the plant. You can use a butterfly net to catch the worms and beetles before they lay eggs.
- **Top Heavy:** There is a tendency for the brussel sprout plant to become top heavy, especially during the later stages of growth. Strong winds can cause the stalk to break at the soil line. Staking these plants may be necessary during late maturation.
- **Blown Sprouts:** “Blown sprouts” (loose leaved sprouts) result when soil has been inadequately firmed or there has been a check in growth during the early stages of transplant growth. This can take the form of a cool spring, dry soil, or severe transplant shock.

Harvest and Storage

- It is important to remove the lower leaves of the plant as the sprouts begin to form heads. Harvest these heads as they enlarge from the base of the plant up. Don't wait for maximum size. Twist off the top of the plant 2-3 weeks before the first fall frost. Exposure to several mild frosts in the fall improves the taste. Brussel Sprouts can be stored slightly longer than cauliflower under similar storage conditions.

Sweet and Sour Brussel Sprouts

10 ounces steamed brussel sprouts
2 tbsp parmesan cheese
1/2 tsp salt and pepper

2 tbsp cooking oil
1 tbsp sugar
1/4 cup cider vinegar



Place sprouts in a shallow baking dish, in a bowl combine, oil, vinegar, sugar, salt and pepper. Pour over sprouts, then sprinkle with cheese. Bake at 350° for 15 minutes, or until sprouts are tender.

Veggie Fact:

Cabbage contains quercetin, an antioxidant that is a natural antihistamine that can benefit allergy sufferers.

Cabbage



General Characteristics and Care

- Recommended planting: Start seeds indoors, then transplant to garden.
- Each plant should be placed approximately 1.5 feet apart in the row.
- A hardy plant crop, cabbage is one of the first vegetables that can be transplanted into the garden, usually at the end of May or the beginning of June.
- Cabbages require a uniform moisture supply, especially in the latter stages of head formation.
- During the growing season care must be exercised not to till too close to the plants so as not to damage the shallow root system.
- Each season, alternate plantings of cabbage and its relatives (cauliflower, brussel sprouts, broccoli) with different crops to avoid disease buildup.

Problems

- **Head Splitting:** Head splitting is caused by irregularity in moisture when heads are close to harvest. That is, there has been too much or too little water in late development.
- **Cutworms:** Cutworms are a serious threat to young transplants. Paper cups with the bottoms removed provide ideal collars that prevent early insect damage to the transplant. As the plant matures, cutworms can damage cabbage heads.

The practice of removing the large outside wrapper leaves at storage and dipping the head in water or a salt solution will result in worms being removed.

Harvest and Storage

- **Pick early,** when heads are solid. Avoid trying to grow heads to the maximum size. This usually results in splitting and less favorable cabbage. The late varieties may be stored up to 3-4 months at 0°C. Ensure good air circulation. Avoid bruising the outer leaves when storing, and remove yellow or damaged wrapper leaves.

Easy Sauerkraut Recipe

2 large heads of cabbage, shredded
3 tbsp salt

Grate 1 cabbage and place in a crock or plastic bucket. Sprinkle half the salt over the cabbage. Grate the second cabbage, then add it to the crock along with the rest of the salt. Crush the mixture with your hands until liquid comes out of the cabbage freely. Place a plate on top of the cabbage, then a weight on top of the plate. Cover the container and check after 2 days. Scoop the scum off the top, repack and check every 3 days. After 2 weeks, sample the kraut to see if it tastes ready to eat. The flavor will continue to mature for the next several weeks. Canning or refrigerating the sauerkraut will extend its shelf life. Makes about 2 quarts.

*** Try substituting cabbage for noodles in a casserole!**



Veggie Fact:

Carrots are rich in carotene, they are also a good source of fiber and have high sugar content.

C carrots



General Characteristics and Care

- Carrots can be planted as soon as the soil softens in the spring, they can be planted even sooner in gardens with sandy soil.
- Garden soil should be plowed and prepared, with a depth up to 9 inches to allow for carrots to grow to full potential. Clumps and clods should be broken up.
- Plant seeds 1/2 an inch deep, in the later months when it warms up, they can be planted up to 3/4 of an inch deep.
- Rows should be spaced 8 to 12 inches apart.
- Carrots grow best in warm, moist soil, covering rows with a polyethylene film helps to warm the soil and keep moisture in.

Problems

- **Carrot Fly:** Carrot flies are black flies that are about 1/2 an inch long. Carrot flies lay eggs around the base of the carrot foliage. The eggs mature into yellow maggots that attack the carrot and can cause serious damage.
- **Flea Beetles:** Flea beetles can destroy a whole crop, they chew small holes in leaves, especially when plants are young.
- **Forked Roots:** Forked roots are caused by rocky or heavy soil, it can also be caused by transplanting carrots with long roots.
- **Aster Yellows:** Aster Yellow is a disease that cause carrots to grow hairy roots, and yellow tops. It is caused by an insect called an aster leafhopper.

Harvest and Storage

- Carrots are ready to harvest when roots are at least 1/2 an inch in diameter. Under unusual conditions carrot roots may not be strong enough to be pulled to the surface, digging around the carrot helps with this.
- Carrots can be stored by cutting off tops one inch above root and placed in storage at 0°C and with high humidity. They can also be stored in the refrigerator, buried in moist sand in a cellar, or in a pit in the garden insulated with straw. Under the right conditions, carrots can be stored up to 6 months.

Braised Carrots with Herbs

2 cups small carrots or carrot legs
1 cup beef broth
2 tbsp dried parsley
1 tsp honey
1 tbsp butter or margarine



In a medium sauce pan, bring beef broth to a boil, add carrots, honey, butter and parsley, cover and simmer for 4 to 5 minutes. Remove carrots to a warm plate, simmer sauce for 15 to 20 minutes, until a light glaze forms. Pour glaze over carrots, toss, and serve. Serves 4.

Veggie Fact:

Those with thyroid problems should avoid eating large amounts of cabbage or cauliflower. They both interfere with the body's absorption of iodine, needed by the thyroid gland.

Cauliflower



General Characteristics and Care

- Recommended planting: Start seeds indoors, then transplant to garden.
- Each plant should be placed approximately 1.5 feet apart in the row.
- Blanching: This is a process whereby a cover (cauliflower leaves or brown bag) is placed over the same developing head of the cauliflower, usually when the head is the size of a tea cup. A rubber band or clothespin can be used to tie the leaves together. Heads tied at different times should be marked with different colors, therefore indicating possible maturity dates. 12-14 days are usually required from the time of tying to the time of harvest.
- Each season, alternate plantings of cabbage and its relatives (cauliflower, brussel sprouts, broccoli) with different crops to avoid disease buildup.

Problems

- **Buttoning:** Cauliflower “buttoning” results from premature formation of the “curd” (young cauliflower head) to the point where the leaves are not large enough to properly develop the “curd”.
- **Bolting:** Loose head formation or bolting results when any stress or check in growth is placed on the plant during the growing season; for example, cold soil temperatures, over hardening of young transplants.
- **Insect Problems:** Insect problems are similar to cabbage therefore preventative “Rotenone” applications are advised.

Harvest and Storage

- Cauliflower has a short storage life of 2-3 weeks. The important points to remember are, to dip the heads in ice cold water and store in crushed ice, crisper, or refrigerator.

Easy Cream Cauliflower

1 medium head cauliflower, separated into florets
1 can cream of chicken soup
1/2 cup mayonnaise
2 tsp lemon juice
dash paprika



Cook cauliflower in salted water for 8 to 12 minutes, or until tender, drain. In a sauce pan combine remaining ingredients, heat through, pour over cauliflower and sprinkle with paprika. Serves 4 to 6.

Veggie Fact:

Farmers grow corn on every continent except Antarctica.

Corn



General Characteristics and Care

- Corn requires warm soil to grow properly. Temperature should be somewhere between 12°C to 18°C. Early plantings of corn should be made after the first frost, unless you use special soil warming protection. You can plant corn as late as the first week in July.
- Plant seed 1/2 inch deep in cool, moist soil and 1 to 1 1/2 inch deep in warm, dry soil. Make sure the seeds are 9 to 12 inches apart in rows, plant two or more rows to ensure good pollination and ear growth. Allow 36 to 40 inches between rows.
- You should cultivate soil around corn stalk to control weeds, chemical herbicides are not recommended.
- Although corn is a warm-weather crop, water is very vital to insure proper growth. You must water crop regularly, especially when tassels, silking and ears are developing.

Problems

- **Corn Earthworms:** Corn earthworms lay eggs on the silks and on the leaves near the ear. They are tiny caterpillars that feed on the tip of the ear. Once the corn earworm is inside the husking there is no effective control, but anything that restricts the worm from getting inside the husking will prevent the problem, like securing the husking with a rubber band or using a clothespin once the silk has developed.
- **Corn rootworm beetles:** Corn rootworm beetles will cause a lot of silk damage, they usually occur in the later plantings. Silk and leaves are the feeding of choice for these beetles, if the beetle population is sufficient, the corn will develop without a full set of kernels.

Harvest and Storage

- Corn should be harvested during the “milk” stage, when kernels are formed but not fully mature. This stage happens about 20 days after the first silk stands appear, it is called the “milk” stage because when kernel is punctured a white milk like substance comes out. Other signs that corn is ready to harvest is drying and browning of silks, and firmness of un-husked ears. To harvest, the ears should be snapped off in a quick downward push, with a pull and twist.
- If you must store harvested corn, place in bags and put in refrigerator as soon as possible, harvested corn should be used within 1 to 2 days, do not husk until ready to cook.
- Freezing is the best method for preserving corn, although you can make a pickled relish and canned corn.

Grilled Corn with Dill Garlic Sauce

1/2 cup butter softened
3 tbsp dill
3 cloves of garlic, minced
6 fresh cobs of corn

Combine butter, dill and garlic, cover and chill for 8 hours. Grill corn on a greased grill rack over medium heat for about 10 minutes or until corn is tender. Serve with herbed butter.



Veggie Fact:

The inside of a cucumber can actually be 20°C cooler than the outside temperature. Hence the saying "cool as a cucumber".

Cucumber



General Characteristics and Care

- Cucumbers should be planted in the spring, after the danger of a frost has passed. Cucumbers need ample soil moisture, and they thrive in warm summer days. You can plant them in the early summer, and have another harvest them in the fall.
- Seeds should be planted 1/2 to 1 inch deep, and they should be 12 inches apart in a row. Cucumbers have shallow roots, so for the first couple of months ample soil moisture is crucial.
- In small gardens the vines can be trained to grow on a trellis or fence. When the vines are supported the cucumbers will hang free and develop even and straight.
- Do not harvest, handle, or work with cucumbers when they are wet.

Problems

- **Cucumber beetles:** Cucumber beetles are 1/4 inch long, they are black with yellow spots or stripes. They can fly from plant to plant and destroy it.
- **Bacterial Wilt:** Bacterial wilt is caused by the cucumber beetles; plants can be infected without showing any symptoms. Vines will wilt and die usually when the cucumber is 1/2 grown. At this point it is too late to prevent the disease.
- **Aphids:** Look for small colonies of aphids on the underside of leaves. Washing plant with a steady stream of warm water will wash aphids away.

Harvest and Storage

- You can pick cucumbers at any stage of development, before seeds get hard. Cucumbers are usually eaten when they are immature. They can be picked when they are 2 inches long for pickling, 4 to 6 inches long for dills, and 6 to 8 inches for slicing varieties.
- Best quality cucumbers are green, firm and crisp.
- Harvest cucumbers in the early morning, and refrigerate right away. Cucumbers will keep in the refrigerator for 5 days.
- Aside from pickling there is no practical way to preserve cucumbers.

Cucumber Sauce for Fish

3/4 cup sour cream
1/2 cup grated cucumber
1 tsp salt
1 tbsp lemon juice
dash of ground cayenne
1 tbsp chopped green onions (tops only)

Combine all ingredients, serve chilled.



Head Lettuce

Veggie Fact:

The ancient Greeks served lettuce at the end of a meal because they believed it made people sleepy.



General Characteristics and Care

- It is recommended to start seeds indoors 4-6 weeks before planting. When the weather starts to warm up, and before transplanting, be sure to 'harden' off seedlings by taking them outdoors for increasingly longer lengths of time until the weather is warm. At that point, seedlings can be transplanted into the garden.
- At the initial stages of growth, thin plants to a distance of 1/4 - 1 inch between seedlings to allow for growth. Removed seedlings can be eaten or transplanted if desired.
- Space lettuce plants 1 foot apart in the row.

Problems

- **Bolting:** Take care to harvest heads before bolting occurs. At this point the plant's energy is no longer going into producing tasty leaves and a tightly packed lettuce head, but flowers and seeds.
- Slugs love lettuce leaves! Do not mulch your lettuce patch or keep the area too damp—this will encourage slugs. Place a close collar of coarse sand or crushed eggshells on the soil adjacent to lettuce to form a barrier that slugs cannot cross.
- Earwigs can sometimes be found in the centre of heads, but are more of a nuisance than a threat. These critters are washed away at the sink before use.

Harvest and Storage

- Store unwashed in the fridge and wash before use. Head lettuce will keep longer than leaf lettuce but should be eaten within two weeks.
- Harvest heads when the head feels firm. Watch that a stem does not appear as this is a sign that the lettuce is about to go to seed.
- When serving lettuce, tear leaves instead of cutting with a knife. Salad dressing will cling to dry lettuce leaves better than wet ones, so dry leaves first. Dress leaves with dressing just before serving—lettuce that is dressed too far in advance will go limp.
- Avoid storing lettuce with fruits like apples, pears or bananas. These fruits will cause harvested lettuce to decay quickly.

Citrus Vinaigrette

½ cup orange or lemon juice
4 tablespoons olive or canola oil
¼ teaspoon salt
¼ teaspoon black pepper

Combine the juices and salt and pepper. Slowly whisk in oil until incorporated. A blender or food processor may also be used. Pour into a glass jar and seal. Serve over your favourite salad greens. The vinaigrette will keep, tightly covered, for a week in the refrigerator.



Leaf Lettuce

Veggie Fact:

The ancient Romans believed lettuce had healthful properties. Legend has it that Emperor Caesar Augustus put up a statue praising lettuce because he believed it cured him from a serious illness.



General Characteristics and Care

- Leaf lettuce, unlike grocery store lettuce, consists of small crisp leaves loosely arranged on a stalk.
- Lettuce can be grown and harvested all summer long for fresh and inexpensive salad greens. For a continuous harvest, try re-seeding every two weeks, or simply harvest the greens with scissors one inch above the soil—new leaves will grow out of the stems that are left.
- Plant lettuce in nutrient rich soil—well rotted manure or compost are good. Leaf lettuce can be grown in containers, and even as a decorative border for flower beds. Excellent for a school project.
- Lettuce has a shallow root system and will require frequent watering. Water in the morning or midday as evening watering increases the risk of disease and encourages slug infestations.
- Lettuce seeds require sunlight to germinate—sow seeds in a shallow furrow in the soil and sprinkle with a thin layer of loose soil.

Problems

- Lettuce will go to seed quickly especially in the NWT's long days. Plant later on in the summer for best results or pick very early.
- **Slugs:** These slimy guys love lettuce leaves! Do not mulch your lettuce patch or keep the area too damp—this will encourage slugs. Place a close collar of coarse sand or crushed eggshells on the soil adjacent to lettuce, the slugs will be unable to cross this barrier.
- **Aphids:** Watch for aphid colonies on the undersides of leaves. These little pests can be washed away with soapy water sprayed directly on leaves, be sure to wash lettuce leaves well before eating.

Harvest and Storage

- Store unwashed lettuce leaves in a plastic bag in the fridge for 3 – 5 days, wash and rinse well in cold water before use.
- Avoid storing lettuce with fruits like apples, pears or bananas. These fruits will cause harvested lettuce to decay quickly.
- Harvest leaves at any stage, clipping plants with scissors from the outside in.
- When serving lettuce, tear leaves instead of cutting with a knife. Salad dressing will cling to dry lettuce leaves better than wet ones, so dry leaves first. Dress leaves with dressing just before serving—lettuce that is dressed too far in advance will go limp.
- For optimal nutritional value, lettuce should be eaten when fresh and crisp.

Herb and Leaf Lettuce Salad

4 cups mixed fresh greens

¼ cup fresh chopped fresh herbs (sage, dill, basil, etc.)

4 tablespoons vinaigrette salad dressing

2 tablespoons crumbled or grated cheese (optional)

Wash and dry lettuce leaves, tear into bite sized pieces. Place in an oversized bowl with room for tossing. Place in fridge until ready to toss and serve. When ready to serve, pour vinaigrette dressing over greens and toss to coat. Add cheese if desired and toss lightly. Serve immediately. Serves 4.



Veggie Fact:

Green garden peas are a good source of insoluble fiber. Dietary fiber reduces the risk of heart disease and stroke!

Peas



General Characteristics and Care

- Peas grow best in cool, damp weather. Peas should be planted in the early summer, or when the soil is dry enough to till without it sticking to garden tools.
- Plant peas 1 to 1-1/2 inches deep, and 1 inch apart in single or double rows. Allow 18 to 20 inches between single and double rows, allow 8 to 12 inches between double rows in pairs.
- Small seedlings are easily damaged by direct contact with fertilizer and improper cultivation of the soil.

Problems

- ***Fusarium Wilt and Root Rot Disease:*** These problems are easily identifiable, the lower leaves will be yellow and wilted, also the plants will be stunted. Fusarium Wilt can be prevented by purchasing the wilt resistant varieties of seeds. Root Rot can be avoided by insuring that your garden has proper drainage and soil is not too wet.

Harvest and Storage

- When the garden pea pods appear swollen (round) they are ready to be picked. Around harvest time, pick a few pods at a time to make sure the crop is ready to be eaten. Sugar snap peas should be picked a few days prior to this, and are great in stir-fry because they do not need to be shelled.
- Peas are the best when they are fully expanded, but immature, if they are fully mature, they are hard and have a starchy taste. Smaller pods are sweeter, and should be eaten raw, the larger ones should be cooked.
- Peas will stay fresh in the refrigerator for 3-4 days, the sugar quickly turns to starch, so the faster they are eaten, the better.
- Peas can also be frozen, freezing works best when the peas are fresh. It is important that you blanch them first. By blanching them, the peas can last up to a year in your freezer.

Pea Soup

3/4 cup chopped sautéed onions
(sautéed in a tbsp of butter for 5 minutes)
1 large bag of peas
1 cup chicken broth
1/4 cup buttermilk

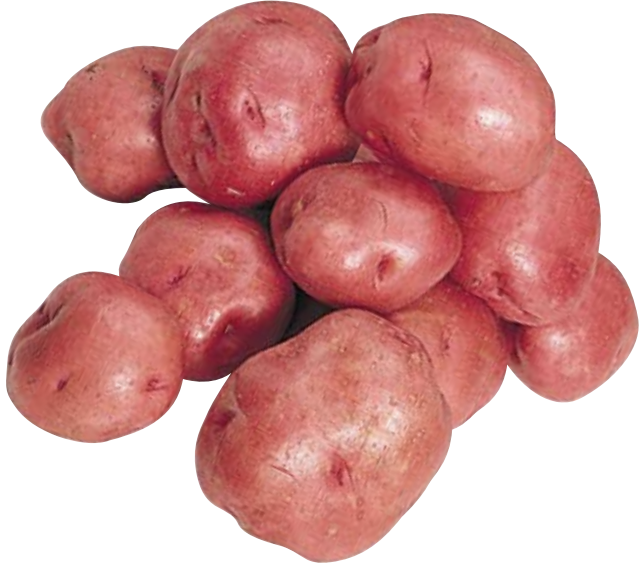


Simmer for 5 minutes, or until peas are tender. Puree in a blender, then add buttermilk, add salt and pepper to taste. Heat and serve, adding more buttermilk if desired.

Veggie Fact:

Potatoes contain some of just about every nutrient, including fiber, and they are low in calories, the skin holds most of the nutrients.

Potatoes



General Characteristics and Care

- Potatoes are started from “seed pieces”. These pieces may be small potatoes or 2 ounce pieces cut from a potato.
- Plant pieces soon after cutting, make sure that each piece has one good “eye” in it.
- Plant seeds 10 to 12 inches apart and space rows 24 to 36 inches apart. Cover in a furrow 1 to 3 inches thick.
- The soil should be fertile and well drained. Clay soils should be plowed deeply in the fall and be improved with organic material.
- Begin to hill potato plants when you see the plants are still small. When the plants are about 4” tall, cover them over with dirt in order to encourage the growth of potatoes beneath the soil. Hilling a couple of times will give more potatoes.

Problems

- **Potato Scab:** For the most part potatoes grown in the NWT will develop scab. This is most often caused by our soil conditions which are very alkaline. Although scab does not look very good on the potato it does not affect the eating quality.

Harvest and Storage

- Harvest potatoes after the vines have died, you will need a spade or a pitchfork to dig the potatoes up. Be very gentle when digging up potatoes.
- Potatoes should be firm, have no spots, and be disease free when harvested.
- When storing potatoes it is best to place them in a cool, dark place, with good air circulation. Do not refrigerate potatoes, in doing so they will become sweet. Potatoes can be stored for up to 2 weeks at room temperature. Potatoes will keep longer if they are stored in the dark at 3°C with high humidity.
- Potatoes that have sprouts or “eyes” are still edible, just remove the sprout. Shriveled, wrinkled, soft potatoes should not be eaten. Green potatoes can be eaten if skin is peeled off, but they will not be at their best.

Steamed Potatoes with Dill

16 small potatoes
2 heaping tbsp dill
1 tbsp butter
1 tsp salt

Steam potatoes for about 30 minutes, place potatoes in a bowl, add rest of ingredients, mix until all the butter is melted. Serve right away.



Veggie Fact:

Radishes were first cultivated thousands of years ago in China, then in Egypt and Greece. Radishes were so highly regarded in Greece that gold replicas were made.

Radish



General Characteristics and Care

- Radishes grow well in almost any soil that is prepared correctly with lots of moisture.
- Seeds should be planted 1/4 to 1/2 an inch deep, in a garden bed seeds should be planted 2 to 3 inches apart in all directions to insure radishes grow to full potential.
- Radishes don't need a lot of attention after the seedling stage, they do however require an adequate amount of water.
- Sequential planting is great with radishes; planting rows one week apart up to mid August will allow for better use of this quick growing plant.

Problems

- **Root Maggots:** Root Maggots may tunnel into the root of a radish. Apply the suggested soil insecticide before planting if Root Maggots have been a problem before.
- **Flea Beetles:** Flea beetles can destroy a whole crop, they chew small holes in leaves, especially when plants are young.
- **Aphids:** Aphids will make colonies on the undersides of leaves. You can rid the plant of aphids by washing with a steady stream of water.

Harvest and Storage

- Pull radishes when the root is less than 1 inch in diameter, and quite young. Radishes only stay edible for a short while before they become soggy.
- To store radishes, wash, and remove tops. Radishes will last longer in the refrigerator when tops are removed. You can store the tops for 3-5 days, they are wonderful in a salad. Place radishes in plastic bags in refrigerator, they will keep for 5-7 days. Keeping radishes too long will result in the radishes having a woody taste.

Open Faced Radish Sandwich

4 bagels cut in 1/2 or 8 pieces of bread
8 ounces cream cheese
6 small radishes
salt and pepper to taste



Spread 1/4 inch of cream cheese on bagels or bread. Using a sharp knife slice radishes thinly. Overlap radish slices on cream cheese, sprinkle with salt and pepper.

***Radishes are also excellent fresh out of the garden!**

Veggie Fact:

Remains of squash have been found in Central America and Mexico dating back as far as 7000 BC.

Summer Squash



General Characteristics and Care

- You can plant squash almost anywhere after the last frost. You can plant summer squash from early summer to about mid July.
- Plant seeds 24 to 36 inches apart for single plants, or plant 4 or 5 seeds in a hill 48 inches apart, cover with 1 inch of soil. When the plants grow to 1 or 2 inches tall, cut the smaller of the bunch down. Only have 2 or 3 plants per hill.
- Soil must be able to drain well, certain mulches encourage early growth because squash roots are shallow.

Problems

- **Cucumber Beetles:** Cucumber beetles attack the vines, seedlings, mature and immature fruits. They can ruin a whole crop, they can be controlled by putting a thin cloth, like cheese cloth over plant. Cheese cloth is thin enough to let in light, and keep out bugs.
- **Squash Bugs:** Squash bugs attack the vines and the maturing fruit. They can be quite devastating, they increase in large numbers in late summer. Planting sensitive varieties early, and harvesting before August will help stop the infestation of squash bugs.

Harvest and Storage

- Summer squash should be harvested when it is still immature, when it is about 6 to 8 inches in length. Summer squash tastes best when it is immature and tender.
- Cut the squash from the vine using a sharp knife or pruning shears. Be really careful not to damage the plant.
- To store squashes place in plastics bags, unwashed, and place in refrigerator for no more than 3 days. Do not wash until ready to use.
- Squash can be prepared almost anyway you can think of. It can be grilled, steamed, boiled, fried, or sautéed.

Fried Summer Squash Pancakes

3 cups grated summer squash or zucchini
1/2 tsp salt
1 tbsp fresh chopped parsley
1 medium clove of garlic, minced
3/4 cup grated parmesan cheese
1 large egg
1 cup biscuit mix
dash of pepper
milk as needed



Combine all ingredients in a large bowl, add milk until a pancake like batter is formed. Drop by spoonful on a greased skillet, when golden turn over. Serve hot.

Veggie Fact:

Tomatoes are very high in Vitamin C and Vitamin A. They also contain very high levels of antioxidants which are cancer preventers.

Tomatoes



General Characteristics and Care

- Tomatoes are usually easy to grow, and a couple of plants will produce enough tomatoes to satisfy a family.
- It is recommended that you buy transplants or start seeds inside in growing containers. Once it warms up outside, you can transplant into a bigger pot. Insert stakes to keep plant upright, and in the fall you can bring the plant inside again. The tomato plant will continue to produce well into the winter.
- When planting tomatoes, the space is solely dependant on the type of plant, and the method of culture. Spacing can vary between 12 and 36 inches.
- You can plant tomatoes outside using a starter fertilizer and ulch. Black plastic or organic material will work for a mulch. The mulch will help control weeds and warm the soil. Do not apply mulch until the soil has warmed up, about mid summer.

Problems

- **Tomato Hornworm:** Tomato hornworms are 2 to 3 inch green caterpillars with white stripes down the body, a horn can be found on the top rear of caterpillar. Hornworms will quickly ruin your crop, they are often hard to see, it is suggested that you pick the tomatoes in the cooler part of the day. If you see a Hornworm with a small white cocoon, do not kill it, this white cocoon helps control the population and they will shortly die off.
- **Septoria Leaf Spot:** Septoria leaf spot is easily identifiable. The infected plant will have black spots on leaves, with white centers. This condition worsens in heavy rainfall. Dispose of crop by plowing over, or composting.

Harvest and Storage

- Tomatoes should be firm and fully colored, they ripen the best in summer temperatures of 32°C.
- The day before the first expected frost harvest all green, mature tomatoes and wrap in paper individually. Store in a room with a temperature of 15°C.
- Fresh ripe tomatoes should NOT be stored in the refrigerator. Instead they should be stored at room temperature, away from direct sunlight for 2-3 days.



Herbed Tomato Slices

15 tomato slices (1 1/2 inches thick)
2 tbsp grated parmesan cheese
1/4 tsp dried basil

No stick cooking spray
1/3 cup bread crumbs
1 tbsp margarine

Place tomato slices in a baking dish coated with cooking spray, set aside. Combine bread crumbs, cheese, and basil, mix well. Sprinkle evenly over tomato slices, bake at 350° for 20 -25 minutes. Serves 5.

Veggie Fact:

1/2 cup of turnips has more fiber than an apple!

Turnips



General Characteristics and Care

- Turnips can be planted in spring, late summer, and fall.
- Turnips require minimal soil preparation but they do require a lot of water for optimum growth. So water freely.
- Plant seeds 1/2 an inch deep, you can place 3 to 20 seeds per foot of row. Rows should be 12 to 24 inches apart.
- Rutabagas are a cross between turnips and cabbage.

Problems

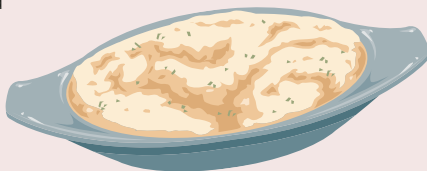
- **Root Maggots:** Root Maggots can be a problem where turnips were grown the previous year, you can rid the area of root maggots by destroying the whole plant after harvest.

Harvest and Storage

- Turnips and rutabagas store well in the refrigerator, they are of their best quality when they are medium size. Turnips should be 2-3 inches in diameter, and rutabagas should be 3-5 inches in diameter.
- Harvesting after fall frost may result in a sweeter turnip or rutabaga. Also a heavy straw mulch will extend harvesting till early winter.
- Turnips and rutabagas may be dipped in warm paraffin wax to lock in moisture while storing.

Turnip Puff Recipe

2 cups cooked, mashed turnips, cooled
1/2 cup melted butter or margarine
1 cup bread crumbs
1 tsp sugar
1/2 tsp salt
1/4 tsp pepper
2 eggs, separated



Combine turnips, breadcrumbs, melted butter or margarine, sugar, salt, pepper, and beaten egg yolks. Whip egg whites until stiff peaks form, fold into turnip mixture. Spoon mixture into a buttered 1-quart casserole dish.

Bake at 350° for 40 minutes. Turnip puff serves 4 to 6 people.

Winter Squash

Veggie Fact:

*Winter squash is low in calories,
fat free and cholesterol free!*



General Characteristics and Care

- Squash seeds do not germinate well in cold soil, they will damage easily in frost. Do not plant squash until the danger of a frost is past, and the soil is warm.
- The type of squash with vines require 50 to 100 square feet per hill. Plant seeds one inch deep, no more than 5 to a hill. You must allow 5 to 6 feet between hills. When plants are 1 to 2 feet tall, pick the best 2 and cut down the rest.
- Squash plants should be kept free of weeds, this can be achieved by hoeing and cultivating. Squash require little care once vines cover ground.

Problems

- **Cucumber Beetles:** Cucumber beetles attack the vines, seedlings, mature and immature fruits. They can ruin a whole crop, they can be controlled by putting a thin cloth, like cheese cloth over plant. Cheese cloth is thin enough to let in light, and keep out bugs.
- **Squash Bugs:** Squash bugs attack the vines and the maturing fruit. They can be quite devastating, they increase in large numbers in late summer. Planting sensitive varieties early, and harvesting before August will help stop the infestation of squash bugs.

Harvest and Storage

- Winter squash can be harvested once the fruits have turned a deep, solid color, and the rind is hard. Harvest before the first frost, if harvested after frost, the fruit will not keep as long.
- Cut the squash from the vine using a sharp knife or pruning shears. Be really careful not to damage the plant.
- Store harvested squash in a dry building where the temperature sits somewhere between 10°C to 15°C. If planning to store for a while, do not stack fruit, keep them from touching each other. This will help stop spreading decay. Store whole winter squashes in an area where the temperature is between 7°C and 10°C. You can store them for up to 6 months. Storing at room temperature will reduce the storage time to 3 months.
- Cooked squash freezes well, place cooked squash in plastic bags, with 1/2 inch extra space for head room. They can last up to 1 year.

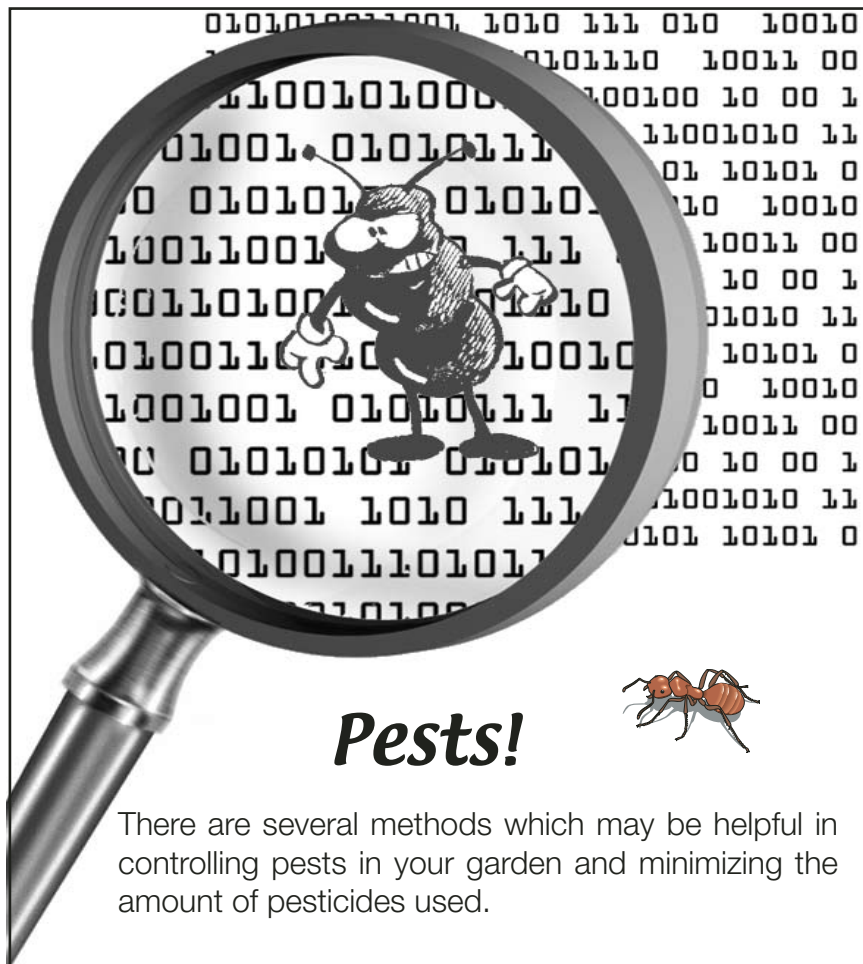
Easy Sautéed Winter Squash

1 winter squash, about 2 lbs.
1 tbsp brown sugar

2 tbsp butter
salt and pepper to taste



Cut squash in 1/2 length wise and remove seeds and stringy insides. Cut crosswise into large chunks, then peel and cut squash meat into 1/2 inch cubes. In medium skillet heat butter, when hot add squash cubes in a single layer, without stirring cook for 5 minutes or until bottoms are brown. Stir and cook for 5 more minutes, then sprinkle on brown sugar and cook for 5 more minutes (or until squash is tender). Add salt and pepper to taste, serve warm.



Pests!



There are several methods which may be helpful in controlling pests in your garden and minimizing the amount of pesticides used.

These methods include:





- *Destroy plant material in the fall which may harbor insect eggs larvae or adults.*
- *Rotate crops.*
- *Avoid killing natural predators and encourage their development.*
- *Use natural repellants.*



Natural Repellants and the Pests they Repel

<i>Vegetable</i>	<i>Natural Repellant Herb</i>	<i>Pest Repelled</i>
Cabbage	Mint Santolina White Savory Tansy Sage Coriander Marjoram Wormwood	Ants Moths Most Insects
Asparagus	Tomato	Asparagus Beetle
Beans	Eggplant	Colorado Potato Beetle
Beets	Onion Family	Most Pests
Carrots	Onion Family	Carrot Fly
Tomato	Garlic	Blight
Potato	Garlic	Blight
Strawberry	Chrysanthemums	Most Insects
Most Crops	Marigolds Asters Calendula Geranium Chrysanthemums	Most Insects

Guide to Common Pest Identification

Pest or Disease	Picture	Solution
Ants: Ranging in size from 1/6 to 1/4 inch long, these wingless insects can range in colour from black, brown, to reddish.		Control the aphids in your garden (ants are attracted to aphids' 'honeydew' secretions), and be sure to remove decaying vegetable matter (another food source) to your compost heap.
Aphids: Small soft bodied insect, winged or wingless, found in large numbers on underside of leaves.		Remove affected leaves, or spray plant with a mildly soapy solution if infestation is extensive.
Leafhoppers: Up to 1/4 inch long, green or brown insect with a wedge shaped body. Affected leaves will curl, overall plant growth stunted.		Encourage the development of ladybugs, the leafhopper's natural predator. A mildly soapy solution mixed with a teaspoon of isopropyl alcohol can also be sprayed onto both the top and underside of leaves.
Squash Bugs: Tiny oval brown eggs will hatch into small black insects with long antennae.		Remove affected leaves on a continual basis to prevent infestation.













Guide to Common Pest Identification con't

Pest or Disease	Picture	Solution
Slugs: With two animated antennae, and slimy pale yellow to dark grey bodies, slugs look like snails without shells.		Lay boards in the rows between plants and leave overnight. In the morning turn board over and collect and dispose of slugs. Use a tight border of sand and crushed egg shells around plants which slugs cannot crawl over.
Root Maggots: This tiny maggot is white and less than 1/3 inch long. They hatch from eggs laid by flies at the base of plants. By tunneling into and feeding off of the plant, they will eventually kill their host.		Keep your garden clean to deter flies. Healthy and robust plants are less likely to be attacked by maggots.
Flea Beetles: These tiny blue-black beetles jump like fleas when disturbed. They prefer hot dry conditions and chew tiny holes in the leaves of vegetables.		Remove plant debris in the fall to prevent overwintering of beetles. Keep plants well watered to make them less attractive to beetles. Spray infested plants with mildly soapy water.
Cucumber Beetles: Resemble the more helpful ladybug. Bodies are oblong-oval in shape with long beaded antennae. A yellow-greenish body is marked with 12 black spots. Cucumber beetles will eat holes in the leaves of many different vegetable plants.		Interplant with repellent plants such as radishes, marigolds, catnip, geraniums, and nasturtiums. You can also make a puree of dead beetles and water. Sprinkle the mixture around the plants in your garden—beetles dislike the smell of their own dead.

Plant Disease

The prevention of plant diseases is the most important measure to take for a healthy garden.

Some useful measures are as follows:

-  Use fertile well-drained soil
-  Plant crops suited to the soil and local climate
-  Control weeds and grass which may provide protection for insects
-  Use disease-free seed
-  Use treated seed
-  Purchase healthy plants - free of root swellings, leaf spots, etc.
-  Remove plant refuse from fields annually and compost
-  Plant disease-resistant varieties if possible
-  Stay out of the garden when it is wet as it leads to soil compaction and spread of disease
-  Avoid overuse of insecticides which may kill beneficial insects
-  Rotate crops and follow the general production recommendations
-  Remove individual diseased plants

Organic Pesticide and Fungicide Recipes

Basil Insect Repellant

4 cups boiling water

1 cup fresh basil leaves, or 2 tablespoons dried basil leaves

1 teaspoon dishwashing liquid soap

Pour boiling water over basil leaves and let steep for 10 minutes. When cool, strain the mixture, add the dishwashing soap, and spray on affected plants as necessary.

Garlic Insect Spray

2 1/2 cups boiling water

2 cloves garlic, crushed

1 teaspoon dishwashing liquid soap

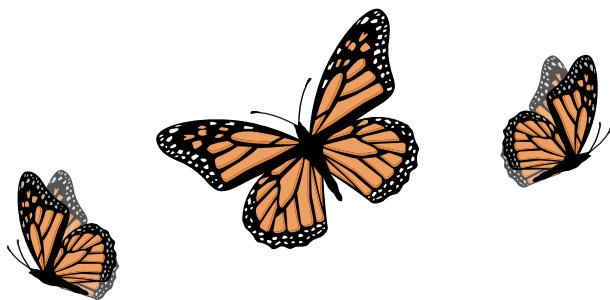
Pour boiling water over garlic and let steep for 10 minutes. When cool, strain the mixture, add the dishwashing soap, and spray on affected plants as necessary.

Chamomile Fungal Spray

1 cup fresh chamomile flowers, or 2 tablespoons dried chamomile flowers

4 cups boiling water

Pour boiling water over chamomile leaves and let steep for 10 minutes. When cool, strain the mixture, and spray liberally on affected plants as necessary.





How To Grow Organic!

- Organic gardening is using inputs consisting only of naturally occurring animal or plant material, with no use of man-made chemicals.

Here are a few reasons why you should grow organic!

- There is no need to buy dangerous pesticides and fertilizers.
- Most people say that organic veggies taste better.
- Stop waste and environmental pollution from excess fertilizers.
- No pesticides will go on fruit, veggies or flowers, eliminating the risk of ingesting a poison.

How to turn your garden into an organic garden:

- Rotate crops every year, plants of the same family should not be grown in the same ground year after year. In doing so, this will cut back on diseases and pests.
- Grow vegetable companions where ever possible, especially the ones that repel insects.
- Never leave the ground bare, put down compost.
- Control weeds with certain types of mulch, by growing ground cover, cultivating and hoeing.

Composting

What is composting?

- Composting is the a slow breakdown of organic material into a rich dark soil called humus. Most of the decomposing work is done by fungi and bacteria.

Why compost?

- There are numerous reasons why composting is good. It reduces waste in land fills, compost is an excellent soil conditioner, and using compost will cut back on the need for expensive chemical fertilizers. So the question should be: why not compost?

What can I put into my compost?

- Almost anything can be composted, vegetable peeling, fruit rinds, twigs, grass clippings, leaves, coffee grounds and filters, tea bags, pasta, egg shells, dryer lint, paper, wood chips, and straw.
- There are some things that are not recommended for compost, things such as: meats, bones, fish, dairy products, peanut butter or oil based products, oil, grease, and pet or human feces.

Where can my compost go?

- Well, your compost can really be piled up almost anywhere. If you choose to put your compost into a bin, it looks neater, and you have better control over moisture and bugs. You also can make a compost pile in the corner of your yard, the results are the same in the end, but the decomposing time is slower.



Yearly Planting Schedule

Date	Crop / Variety	Yield	Comments

Yearly Planting Schedule

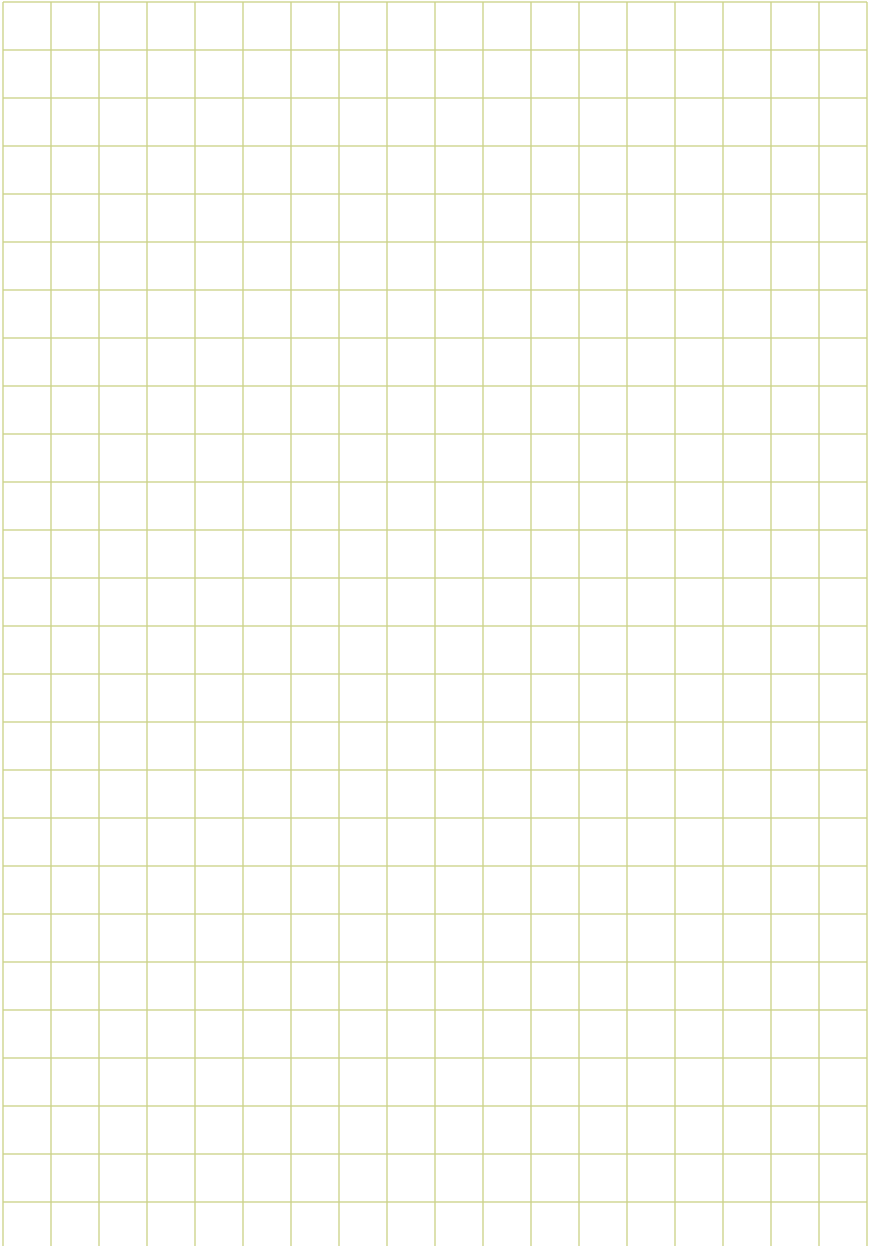
Date	Crop / Variety	Yield	Comments

Yearly Planting Schedule

Date	Crop / Variety	Yield	Comments

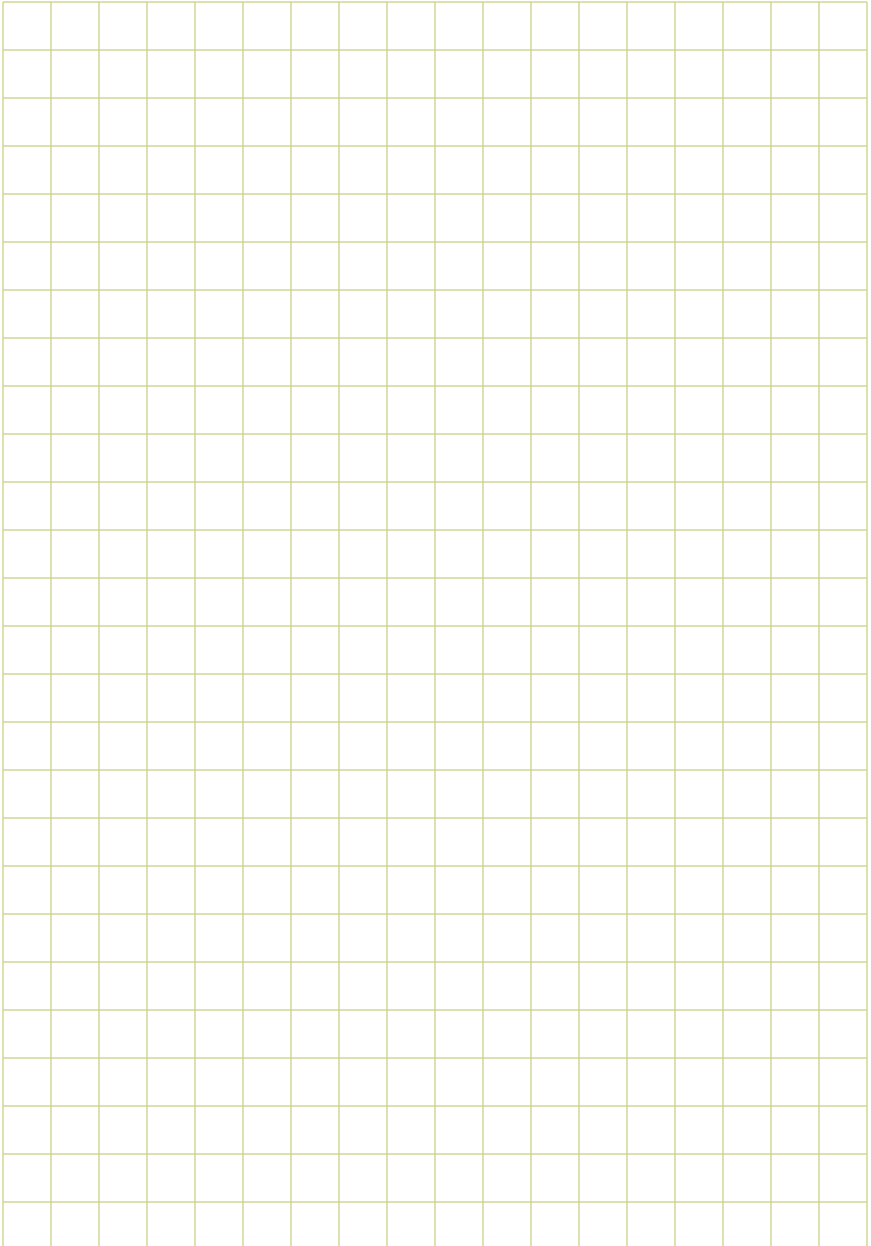
Garden Layout

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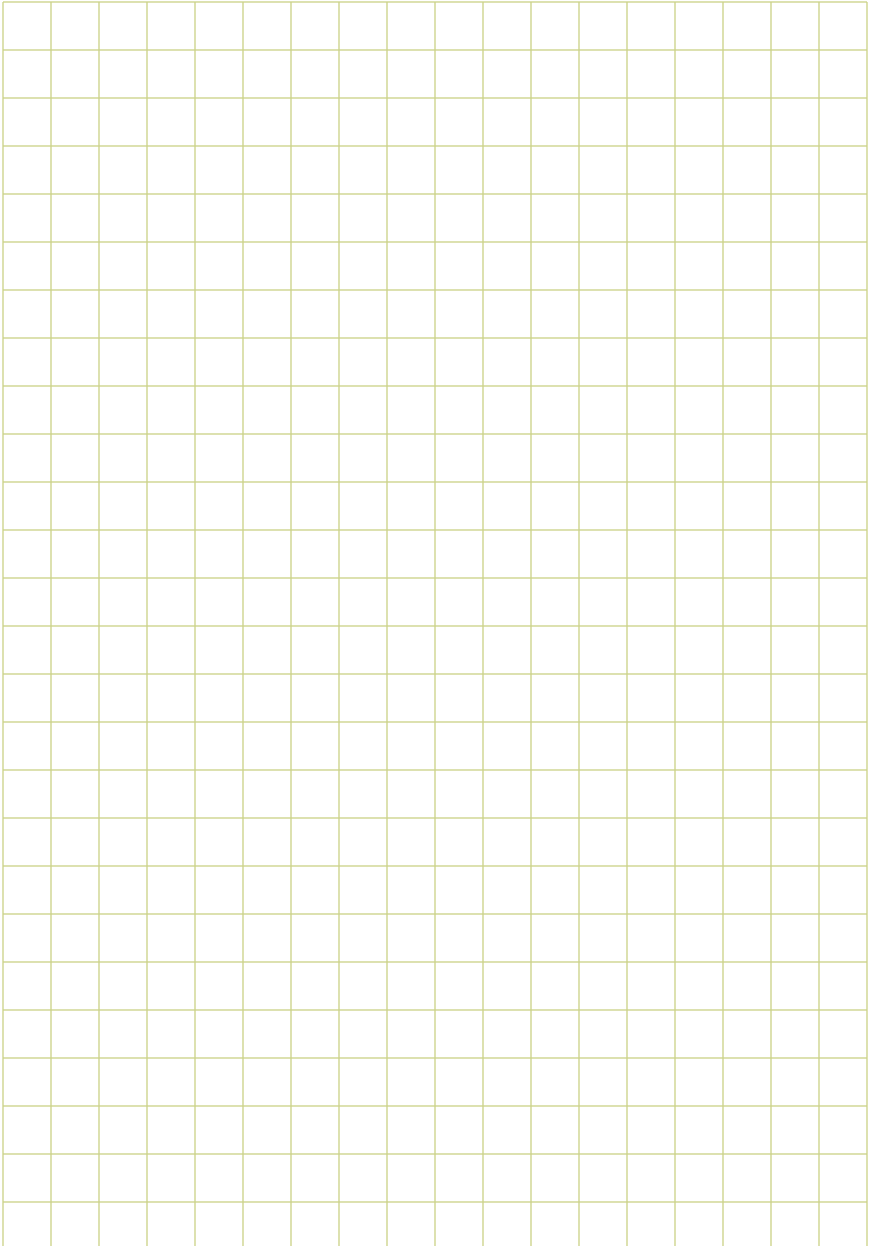
Garden Layout

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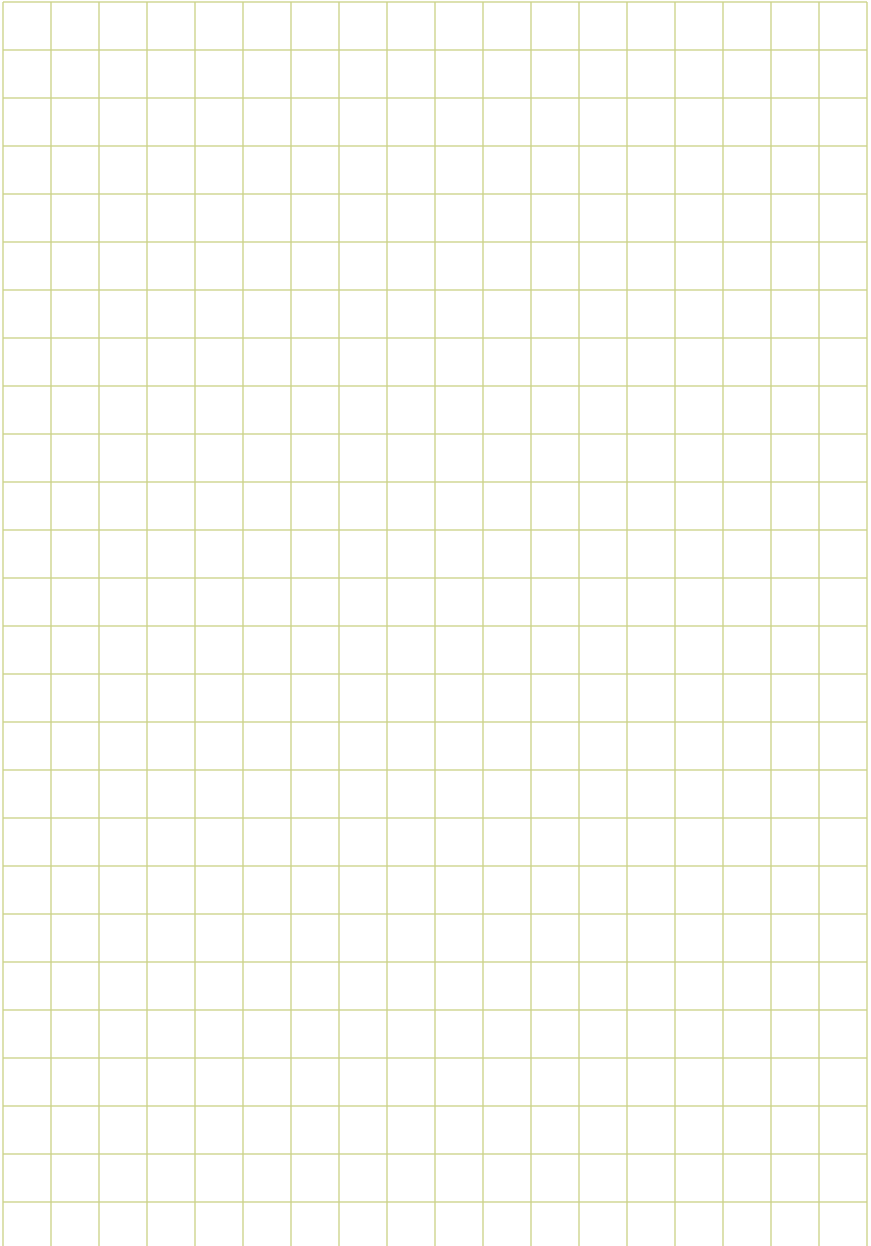
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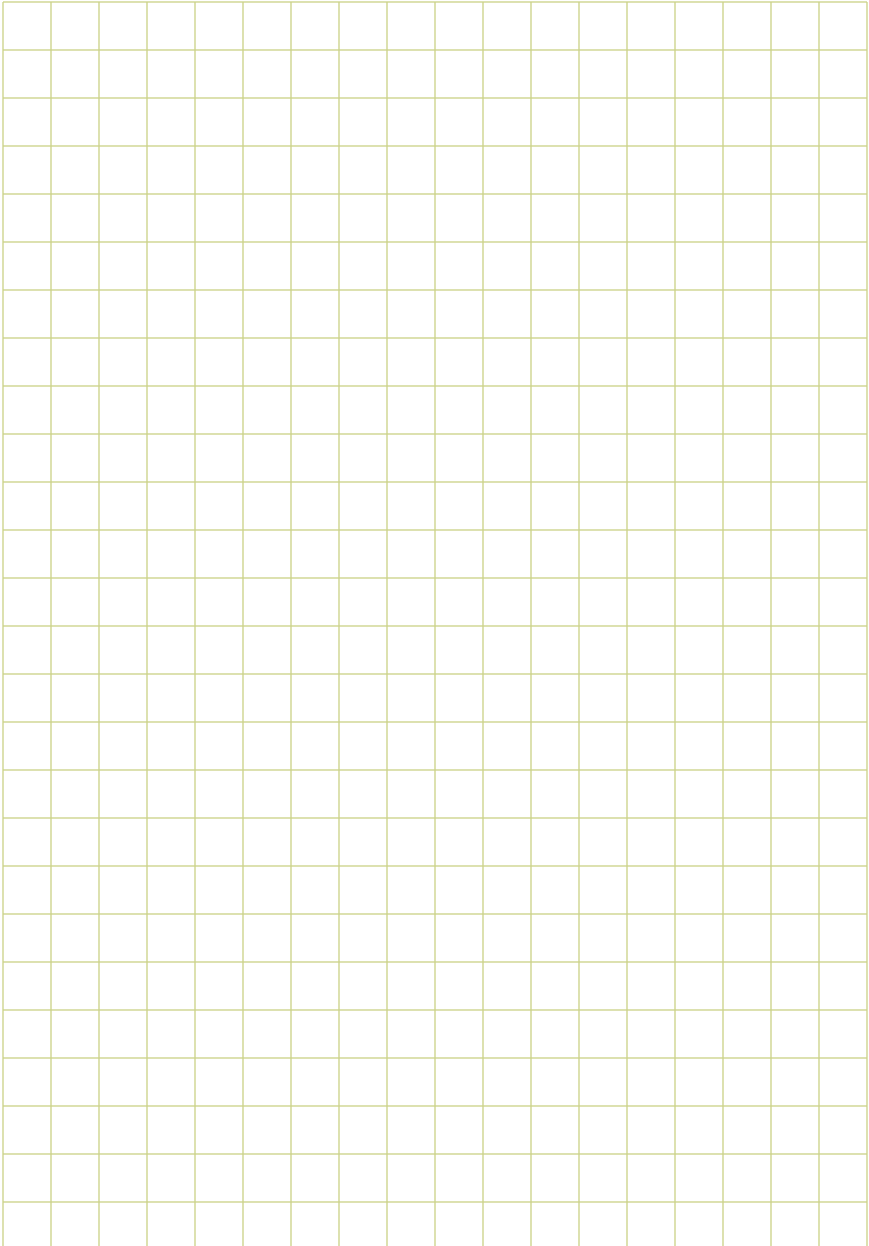
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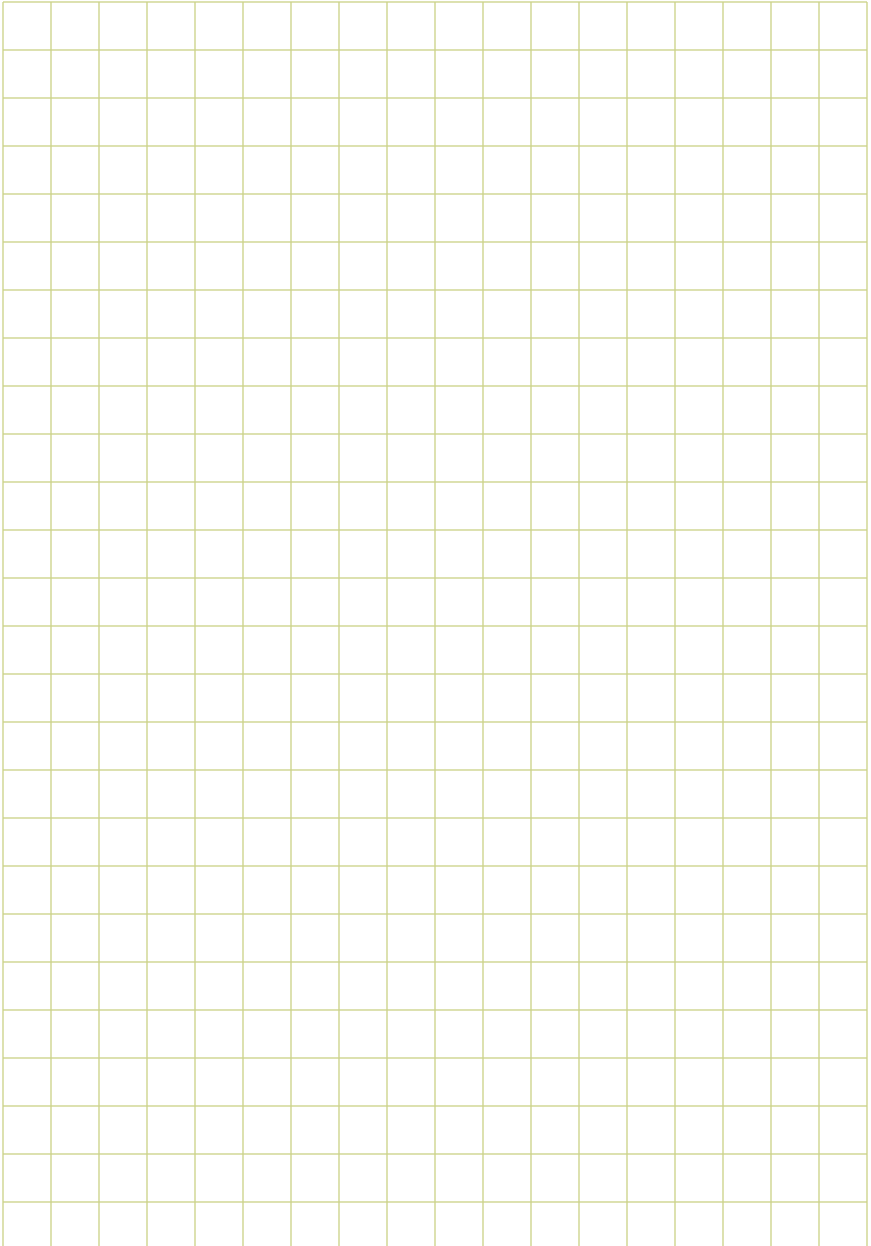
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Canada

