



Growing Instructions

Adzuki Bean (*Vigna angularis*)* – Plant after the last frost, 1- 1½” deep, 6” apart. Beans can be eaten green, when seeds can just be seen in the pods, or they can be used dry.

Amaranth (*Amaranthus spp.*) – Plant once soil is warm (70° F/21° C), after corn. Cover seeds lightly, thin to 6” between plants, 12-18” between rows. For greens, pinch out growing tip to encourage branching; pick individual leaves like spinach. For grain, allow plants to go to seed, then collect dry heads and rub through a screen into a bucket, or bend over plants and rub seed heads with hands into a bucket; do not hang to dry first. Winnow, and dry further if necessary.

Amaranth may cross with red-rooted pigweed; keep isolated. Pigweed (*Amaranthus retroflexus*) is a pleasant cooked green; eat it before it pollinates your crop! It is easier to maintain purity if you grow a purple-leaved amaranth.

Arugula (*Eruca sativa*)* – Start in late April; sow every two weeks for a steady supply. Plant 1/8” deep and 1” apart in rows 8-12” apart.

Asparagus (*Asparagus officinalis*) – Perennial; takes 2-3 years to establish. Asparagus does not like wet feet, and likes rich, weed-free soil. Dig trench 12-18” wide, 6-8” deep, 3’ apart. Soak crowns briefly in lukewarm water. Make a 2” tall ridge down the centre of the trench and place crowns on top, spreading out roots. Space 12-18” apart from root tip to root tip. Cover crowns with 2” of soil and compost; when spears are 2-3” tall, cover again with 2” of soil, leaving tip exposed, repeating until up to original soil level. Mound slightly to prevent water pooling, and keep well mulched. Do not harvest first year, and only lightly the second year; can begin normal harvest the third year. Each year topdress with compost and mulch; cut down foliage when it dies in the fall.

Harvest spears before they start to open, or they will be tough; cut at ground level with a knife. Stop harvesting when diameter of spears decreases to the size of a pencil and let ferns grow to recharge plant.

Asparagus Pea (*tetragonolobus pupurea*) – Plant around same time as beans, 1/2” deep and 2” apart with rows 30” apart; can also do a double row, with seeds 8-10” apart. Support sprawling plants off the ground if possible. Harvest daily while they are still small (3/4” long), or they will be tough. Seed can be saved by letting them dry on the plant and then shelling them.

Barley (*Hordeum vulgare*) – Plant 1/2-2” deep, a few inches apart; preferably in rows 7-9” apart, but can also be broadcast and raked to cover. Plant in the spring as soon as soil can be worked. Harvest when seed is at ‘hard dough’ stage, dentable but not easily crushed; make into sheaves and stook to cure until fully dry and hard. Thresh and winnow; some barley varieties must be dehulled before eating, but are best planted still in their hulls; others thresh clean.

Basil (*Ocimum basilicum*)* – Plant outdoors after risk of frost is past, or start indoors and transplant. Plant 1/8” deep, 1/4” apart; thin to 12”.

Bean (*Phaseolus vulgaris*)* – Plant after last frost; soil must be warm or seed will rot. If growing on corn, wait to plant until corn is about 3” tall, or two weeks after corn is planted. Darker coloured seeds usually germinate better in cooler soil. Sow 1” deep. Space bush beans 2-4” apart and pole beans in pairs 8” apart, with 8” between pairs if climbing twine, or in groups of 3-4 around single poles 1’ apart. Pick green beans before seeds start swelling, shelly beans when seeds are full size but before pods dry, and dry beans when pods are fully dry; seed must be dry enough to not dent with a fingernail for storage. Dry beans can be further dried on a tarp, then threshed by dancing on them and winnowing away the chaff.

Bean, Lima (*Phaseolus lunatus*)* – Plant when soil temp. is over 24° C/ 77° F, later than common beans. Sow 1” deep, 2” apart; harvest as shelly or dry beans. Some varieties need trellising on twine or poles.

Bean, (Scarlet) Runner (*Phaseolus coccineus*)* – Plant around the frost-free date; more cold-tolerant than other beans. Sow 1½” deep, 2 to a pole 12” apart. Eat as shelly beans or dry beans; pods are edible, but furry. Make sure the trellis is stout, either poles or twine.

Bean, Tepary (*Phaseolus acutifolius*)* – Like dry, hot conditions; probably won’t need watering (traditionally dry-farmed in the Sonora Desert) and should be planted about the same time as Lima beans. Plant 1” deep, 4-6” apart in rows 12” apart. Shatter easily, so harvest as soon as pods are dry. Usually a sprawling bush with runners; can be trellised, or not.

Beet (*Beta vulgaris*)* – Biennial. Plant when daffodils bloom (late April-early May); sow 1/2” deep, spaced 1” apart, and thin to 3” with rows 24” apart. Dig beets before hard frost; cut off leaves 1” above root so stem can heal. Brush off soil and let dry briefly, but do not break taproot; pack in layers of damp sawdust, dry leaves, or sand and store cold and moist.

Bottle Gourd (*Lagenaria siceraria*) – Start indoors 2 weeks before frost-free date; plant 1” deep in peat pots (resents transplanting). Transplant out in hills 8” apart when 3 weeks old. Water heavily, then decrease in late summer to encourage maturing. Let trail along the ground a bit, to form more roots; then direct up a trellis. Prune vine tips when 8-10’ long to encourage branching and earlier fruiting. When vine withers, fruit is ready for harvest.

Buckwheat (*Fagopyrum esculentum*) – Any time after the frost-free date, prepare a moderately fine seedbed, like you would use for grain. Broadcast seed, preferably just before a rainstorm, and rake lightly to cover. Plants are indeterminate; harvest when seeds turn black, preferably before they start to shatter too much, thresh and winnow. Hulled seeds can be ground in a Corona mill and the resulting meal sifted to remove hulls and produce a workable flour.

Cabbage (*Brassica oleracea*)* – Biennial. Plant indoors 4-5 weeks before transplanting; sow 1/4” deep, 1” apart; transplant to 18” apart. Water regularly to prevent wilting. To repel pests, use row covers. To store, choose solid, healthy heads and pull them. Store cold and moist, either placing them on shelves spaced apart or hung by the root. Will give off fumes, so best stored separately from other foods unless root cellar is well ventilated.

Calendula (*Calendula officinalis*) – Self-seeding annual. Harvest flowers daily once they appear; the more you pick, the more they bloom. Dry indoors and pick off petals for salve and cooking. Stop harvesting in early September to let them go to seed.

Carrot (*Daucus carota* var. *sativus*)* – Biennial. I was taught to plant them in mid-late May; they usually fail to come up and we replant them in June. Sow 1/4” deep, 1/4” apart in rows 20” apart; thin to 2”. Keep rows moist until seedlings emerge. Dig before ground freezes, but some frost is fine. Break off tops; store in boxes with 1” layers of damp sawdust, leaves, peat moss or sand between layers of carrots. Store cold and moist.

Chard (Perpetual Spinach, *Beta vulgaris*)* – Biennial. Plant in early spring. Sow 1/2” deep, 1” apart in rows 18” apart; thin to 6”.

Chickpea (*Cicer arietinum*)* – Plant just after you would plant peas, 1-1 ½” deep and 3” apart, thinning to 6” (or 6” thinned to 12” for some varieties). Fairly drought tolerant. Can be harvested and eaten green like shelling peas, or let mature and threshed out by trampling them once dry. Hang to dry indoors if weather is too wet during drydown.

Chufa (*Cyperus esculentus*) – Not frost hardy. Start indoors and transplant out after risk of frost is passed. Soak tubers for 24 hours before planting ¾-1” deep. Transplant out 6” apart. Will grow until frost stops it; dig tubers, clean them, and dry them for storage. Rehydrate before eating.

Cilantro (*Coriandrum sativum*)* – Start in early spring, and plant until autumn. In summer, grow under bean trellises.

Claytonia/Miners Lettuce (*Claytonia perfoliata* syn. *Montia perfoliata*) – Plant early spring and late summer; sow 1/8” deep, thin to 4-8”. Self-seeds if you let it.

Coriander (*Coriandrum sativum*)* – See **Cilantro**.

Corn (*Zea mays*) – Wait until soil has warmed to 60° F/15° C to plant. Darker coloured seeds usually germinate better in cool soil. Plant 1-2” deep, four seeds to a hill (10” between them), spaced 40” on centre; or plant in rows 24” apart for early varieties, 30-40” apart for main season ones, with row spacing of 8-10” for early varieties and 10-12” for main season. Plants will pollinate for 2-3 weeks after tasseling; separate varieties by at least 500’ or plant successively so they will pollinate at different times. If doing succession plantings, let first variety reach eight-leaf stage before planting the next one. Save seed from at least 100 plants (preferably 200), selecting based on field characteristics of plant, not just on cob size.

Corn Salad (*Valerianella locusta*) – Very frost tolerant, and needs cool weather to germinate. Plant in early spring and late summer/ early fall. Sow 1/4” deep, 1” apart in rows 12” apart; thin to 2-4”. Keep moist and shaded until seedlings emerge. Self-seeds if you let it.

Cowpea (*Vigna unguiculata*)* – Plant once soil is warm, over 65° F/18° C, 1-1 ½” deep, 4-6” apart, with 9” between rows for bush varieties. Trellis pole and bush-with-runner types like beans. Leaves, immature pods, and seeds are all edible. Unlike common bean, cowpea has a taproot.

Cucumber (*Cucumis sativus*)* – Start indoors 4-6 weeks before last frost. Sow 3/4” deep. Transplant in early June. Dig holes 12” deep, 16” wide and bury compost or manure, cover them and plant transplants, spacing them about 2’ apart. Keep well watered, and topdress with manure. Give them a strong trellis of net. Pick daily.

Daylily (*Hemerocallis fulva*) – Start from divisions. Divide and transplant in early spring or late summer after blooming. Dig clump and separate fans; can cut through roots if necessary – they are tough. Replant at same depth they were originally and water well.

Einkorn (*Triticum monococcum*) – Plant 1/2-2” deep, a few inches apart; preferably in rows 7-9” apart, but can also be broadcast and raked to cover. Plant as soon as soil can be worked in the spring. Harvest when seed is at ‘hard dough’ stage, dentable but not easily crushed; make into sheaves and stook to cure until fully dry and hard. Thresh and winnow; most einkorns must be dehulled before eating, but are best planted still in their hulls.

To use straw for weaving, harvest when topmost joint in stem is still a little green.

Emmer (*Triticum dicoccum* or *T. turgidum* var. *dicoccum*) – Plant 1/2-2” deep, a few inches apart; preferably in rows 7-9” apart, but can also be broadcast and raked to cover. Plant as soon as soil can be worked in the spring. Harvest when seed is at ‘hard dough’ stage, dentable but not easily crushed; make into sheaves and stook to cure until fully dry and hard. Thresh and winnow; emmer must be dehulled before eating, but are best planted still in their hulls.

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Fava (*Vicia faba*)* – Plant same time as peas; do not like heat. Soak at least overnight to germinate before planting. Sow with the hilum (on the end) down, 2” deep, 4” apart for leaves; or for beans, in rows 6-12” apart with seed 8-12” apart or on a grid 8” apart. If lodging is a problem, put stakes at the corners of the patch and string around it. Water at flowering time and while pods are small to increase yield; stop when they start to dry down. Can eat young greens like spinach, either whole plant, or by pinching out tips after plant has produced five flower whorls, which will also improve bearing and reduce aphid problems. Immature pods can be eaten before they get stringy (about 3” long); shelly beans when pods are clearly full. Dry beans can be harvested when pods turn black and shrivel and

seeds cannot be dented with a thumbnail. Soak before cooking; tannins in seed coat can be reduced by pre-soaking before cooking in a baking soda solution (1 tsp./ lb. beans).

Flax (*Linum usitatissimum*)– Plant about a month before the frost-free date. Plant a fairly dense stand for fibre flax (to suppress weeds and make less-branched stems), or a more open stand for seed flax (to increase yield per plant). Fibre can be in rows with 3-4” between them, or broadcast. Harvest by pulling, about 30 days after the main flush of flowering; you may also be able to get fibre when the seed is mature, but it may be lower quality. To process for spinning, flax needs to be retted, either by soaking in water or letting it lie on dewy grass for several weeks.

Garbanzo bean (*Cicer arietinum*)* – See **Chickpea**.

Garlic (*Allium sativum*) – Plant late September. Divide bulbs into individual cloves; only plant those with paper intact. Plant 2-3” deep in rows across the bed, 6” apart (5 per row in a 3’ bed), with 6” between rows. In late spring, when garlic is growing well, weed and mulch. Cut off scapes (‘seed’ stalks) when they emerge and eat them. Dig bulbs in late July, once half the leaves have yellowed and withered. Cure by laying whole plants in a dry, shady, airy place on a screen or slatted bench for two weeks, shuffling them occasionally. When they are nicely dry, rub off dried soil and any loose outer papers; cut off roots flush with bulb and tops 1” above the bulb. Sort out any damaged or moldy bulbs for immediate use; save largest, healthiest bulbs for next year’s seed (1/5-1/6 of the harvest). Store the rest at room temperature in baskets or mesh bags.

If something forces you to plant in the spring, store garlic below 40° F for at least 40 days to “vernalize” it, or it will not subdivide into cloves.

Grains, Small – Includes wheat, rye, barley, oats, triticale, spelt, einkorn, emmer. Plant 1/2-2” deep, a few inches apart; preferably in rows 7-9” apart, but can also be broadcast and raked to cover. Plant spring wheats and facultative wheats, barley, oats, and most einkorns and emmers in the spring as soon as soil can be worked; plant fall wheats, facultative wheats, spelt, and rye in fall, sometime around the first frost. Harvest when seed is at ‘hard dough’ stage, dentable by not easily crushed; make into sheaves and stook to cure until fully dry and hard. Thresh and winnow; some barleys, some oats, spelt, emmer, and einkorn must all be dehulled as well before eating, but are best planted still in their hulls. To use straw for weaving, harvest when topmost joint in stem is still a little green.

Grass Pea (*Lathyrus sativus*) – Can soak seed for 24 hours before sowing. Plant two weeks before last frost date, ½ -1” deep, 4” apart. Can be trellised, or not. Harvest seed when dry. *Do not eat too often; poisonous if a dietary mainstay, but fine for occasional use.*

Hopniss/ Groundnut (*Apios americana*) – Perennial. Plant tubers 4” deep on 12” centres; happiest in wet, rich soil with a trellis or something to climb. Takes 2-3 years to produce good-sized tubers. Ideally, dig in the fall after frost has killed vines, or in the spring before they emerge. Store and cook like potatoes, or dry and grind into gluten-free flour. Replant small tubers for a future crop. ‘Hopniss’ is the Lenape name for this plant.

Jerusalem Artichoke (*Helianthus tuberosus*) – Perennial. Plant sections of tuber with at least two eyes 3-4” deep, 12-18” apart in rows 2-3’ apart. Can be planted in fall or spring. You can ignore this crop until harvest, or in late summer, can cut tops back to 4 ½’ (removing flowers) to encourage larger tubers. Topdress with compost or manure every other year. Stores well in ground but poorly out of it; harvest as needed after frost has killed tops, in fall or spring, whenever ground is thawed until they sprout. Spreads aggressively. Keep controlled.

Kale (*Brassica oleracea*)* – Biennial. Start indoors or sow in early spring, 3/8” deep, 3/8” apart in rows 24” apart; thin to 12-18”, depending on size of adult plants. Transplant out, burying to the bottom of the first leaves’ stems. Mulch close up around stem and toss hay lightly over crown to protect for winter use.

Kohlrabi (*Brassica oleracea*)* – Biennial. Plant summer crop as soon as soil can be worked, in succession plantings; for fall storage, plant in mid-late summer. Sow ½ to 1" apart ½" deep; rows 1' apart. Thin to 4" for normal varieties, 1-2' for giant varieties. Harvest normal kohlrabi around tennisball size, and giant kohlrabi at 6-10" in diameter. Leaves are also fine to eat.

Leek (*Allium ampeloprasum*) – Biennial. Start indoors eight weeks before frost-free date, the same as onions. 3 – 4 seeds per cell, 1/5" deep. Transplant when tulips start flowering. Dig a 5" deep trench, and add 1" of compost to the bottom. Make a small hole in the bottom of the trench, and bury the bottom half of the leek seedling. Space 4" apart. Water carefully. As leeks grow, move soil back into trench in layers, and mulch. Harvest any time after leeks are larger than your thumb. Mulch for the winter and harvest as needed, or dig and replant in sand to store in the root cellar.

Lentil (*Lens culinaris*)* – Plant 2 weeks before last frost date, 1- 1 ½" deep and 1" apart, thinned to 4" later; like dry, cool conditions. Tie to trellising to keep pods off the ground. Harvest when bottom third of pods have turned brown and rattle when shaken.

Lentil, Ethiopian (*Lathyrus sativus*) – See **Grass pea**.

Lettuce (*Lactuca sativa*)* – Plant in early spring and every two weeks while weather is cool; again in August. Sow 1/8" deep, 1/4" apart in rows 18" apart; thin to final spacing of 8-12".

Luffa (*Luffa aegyptiaca/ Luffa cylindrica*) – Start indoors 6-8 weeks before the frost-free date. Give them all the heat you can. Sow ¾" deep in peat or newspaper pots to decrease transplant shock, and harden off for a week before transplanting out 36" apart. Can warm soil with a coldframe before planting and keep a coldframe over plants for the first bit to warm them more. Trellis and keep well watered. Two months before frost, remove all flowers which are not yet fruit; they won't mature in time, and this encourages the luffa to concentrate on the fruits it has. Before first frost, harvest fruits; strip the outside skin and wash out skeleton and leave it to dry. Save dark seeds for planting. A very dubious proposition this far north.

Lupini Bean (*Lupinus albus*) – Plant at same time as peas. Harvest when pods are dry.

Mangelwurzel (*Beta vulgaris*)* – See **Beet**.

Melon (*Cucumis melo*)* – Grow like **Watermelons**. Ready to harvest when fruit starts 'slipping' – a crack forms where the stem attaches to the melon. Sometimes needs another 1-2 days ripening indoors.

Mustard Greens (*Brassica juncea*)* – Plant every two weeks while weather is cool; 1/8" deep, 2" apart thinned to 6-8"; rows 12" apart.

Oats (*Avena sativa*) – Plant 1/2-2" deep, a few inches apart; preferably in rows 7-9" apart, but can also be broadcast and raked to cover. Plant in the spring as soon as soil can be worked. Harvest when seed is at 'hard dough' stage, dentable by not easily crushed; make into sheaves and stook to cure until fully dry and hard. Thresh and winnow; some oats must be dehulled as before eating, but are best planted still in their hulls; other varieties are hullless.

To use straw for weaving, harvest when topmost joint in stem is still a little green.

Onion (*Allium cepa*)* – Biennial. If growing from seed, start indoors 8-10 weeks before frost-free date, and transplant out one week before it. Sprinkle seed on soil surface and sprinkle a bit more soil on top of it; can grow in flats. If growing from sets, plant sets to the depth of your first knuckle. Choose small sets; larger ones will bolt, decreasing bulb size. Space onions 4" apart in rows 8" apart. If it is really dry, water occasionally until tops start yellowing. Once tops yellow and wither, pull plants; let cure in a dry, shady, airy place for a couple weeks, then cut off tops at 1" and store at normal room temperature in baskets or mesh bags.

Alternately, let tops partially dry after pulling and braid them, including a twine in the braid for strength (onions are too heavy for their tops!) and hang them for storage.

Onions are daylight sensitive; choose bulbing onions based on geographical location:

a) Long Day: Begin bulb formation when day length reaches 14 – 16 hours. Largest, bushiest tops yield the biggest onions.

b) Short Day: Start to bulb up with 10 – 12 hours of day length. Best for southern regions.

c) Intermediate/ Day Neutral: Need 12 – 14 hours of daylight to start bulbing; most versatile geographically.

Onion, Egyptian/ Walking (*Allium cepa* var. *proliferum*) – Perennial. Produces bulbils at top. When stalks dry in early fall, they will fall over and bulbils will root and sprout. Can remove bulbils and plant 1” deep, 9” apart, when stalks begin falling. Use for green onions.

Onion, Multiplier (*Allium cepa* var. *aggregatum*) – Perennial. Plant in early- to mid-October and again in spring (may not survive hard winters). Plant 1-2” deep; hill with 2-5” of soil and cover with fairly deep mulch. Remove mulch and some of the soil in spring. Space small bulbs 4-6” apart. For spring planting, leave 1/3 of bulb exposed. Multipliers go dormant in summer; dig them and replant in fall. Stop watering; harvest when half of the tops have fallen over, and eat bulbs whose tops take longest to fall (these won’t keep as well). Cure for a month. Eat larger bulbs first, since they will resprout sooner. Store in mesh bags at room temperature.

Pak Choi (*Brassica rapa*)* – Plant in late May; sow 1/4” deep, 1” apart, in rows 30” apart. Thin to 18”.

Parsley (*Petroselinum crispum*)* – Biennial. Plant May-July. Sow 1/4” deep, 1/4” apart in rows 16” apart; thin to 4”. Cover seedbed with mulch until seedlings emerge; topdress with a little compost. Leave in ground to go to seed in second year.

Cover with thick evergreen branches or old hay to protect for the winter.

Parsnip (*Pastinaca sativa*)* – Biennial. Plant as soon as soil can be worked, at the same time as peas. Sow 1/2” deep, 2” apart; thin to 3-6”. Keep seedbed moist for 2-3 week germination. Make three plantings 7 days apart if you’re worried about moisture. Dig after frost, being careful to not break the roots off; flavour improves with freezing. Mulch 1’ deep if keeping in garden in winter.

Pea (*Pisum sativum*)* – Plant as soon as ground can be worked. Sow 1” deep and 2” apart, in a double row 8” wide. Trellis if necessary with twine or netting; can’t hang on to poles. Pick green shelling peas regularly to increase yields; pick dry peas when vines are drying down and seeds can no longer be dented with a fingernail. For fall planting, plant 6-8 weeks before first frost.

Peanut (*Arachis hypogaea*)* – Peanuts flower above ground, then grow “pegs” down into the ground, so the pods form underground. Plant in early June, 3-4” apart in rows 12-18” apart (2 rows in a 3’ bed). Peanuts need loamy to sandy soil so they can get their pegs underground, and all the heat they can get. Cover in fall to extend their season. Dig plants carefully with a fork as soon as tops are killed by frost; shake off soil and hang plants in bunches to dry and cure for 2-3 weeks in some place where animals and birds cannot get at them. Cure pods for another two months spread on trays in the house. Can then be eaten raw, sprouted, or roasted; can also be eaten fresh in the fall like edamame.

Pepper (*Capsicum annuum* & others)* – Start indoors 6-10 weeks before last frost; sow 1/4” deep. Harden off for 10 days before transplanting. Prepare planting holes by adding manure and eggshell and covering it with a bit of soil. You can work in aged manure or compost 2 weeks before transplanting out and cover the site with a coldframe to warm the soil. Plant in the hottest spot you have available. Transplant 6-10” apart and topdress.

Cover with coldframe for cool nights until nights are consistently above 55 degrees F/13 degrees C.

Poppy (*Papaver somniferum*) – Plant late fall or early spring; sprinkle seed and cover 1/4”, firm soil; need darkness to germinate. Thin to 6” apart when first true leaves grow. Allow seed pods to dry on the plant, then cut and place upside down in a paper bag to collect seeds. When seed is thoroughly dry, store in an airtight container.

Potato (*Solanum tuberosum*) – Plant late April-early May, when dandelions bloom. Put seed potatoes where they will be exposed to light and turn green before planting. Cut potatoes in pieces with at least one eye per piece and with two cubic inches of tuber per piece. Let pieces sit for 1-2 days to let surfaces dry and heal to avoid rot. Dig trench 6” deep, with 12” between trenches; place potatoes in bottom of trench 12” apart, with eyes up. Bury 3” deep. When sprouts emerge several weeks later, bury to original soil level. “Hill” plants by piling more soil against base later, or mulch very heavily, since any tuber which is too near the surface will turn green. Harvest new potatoes 2-3 weeks after flowering ends and eat promptly; harvest storage potatoes 2-3 weeks after all above-ground growth dies. Dig potatoes, brush off dirt, and leave to cure in a dark, dry place at 45-60° F/7-15°C for two weeks. Store around 45° F/7°C in a dark place with ventilation.

Pumpkin (*Cucurbita pepo*)* – See **Squash**.

Quinoa (*Chenopodium quinoa*) – Plant in late April- mid May when soil is below 60° F; if it is above that, seed may not germinate, so chill seed first. Plant 1/4” deep, thin to 12” between plants (eat thinnings as baby greens), 12-18” between rows. If soil moisture is decent, do not water until the three-leaf stage; drought tolerant. For greens, pick individual leaves like spinach. When first seeds begin to shed, lay plants on a tarp in a dry place, inside or outside; thresh after several days by shaking plants onto tarp. Seed also ready to harvest when leaves have fallen; can be stripped from stem by and upwards pull with gloved hands. If dry, and seed is mature, quinoa can resist light frosts without harm; however, if the seed is rained on, it may sprout. Seed is dry enough when it cannot be dented by a thumbnail. Blow away chaff or sieve it out, then spread on trays in the sun or a warm place to dry completely and stir occasionally; store in a cool place in an air-tight container. Before quinoa can be eaten, it must be soaked to remove saponins on it. Quinoa may cross with lambs’-quarters (which is also a tasty green), so it must be kept isolated; lambs’-quarters is more branching and has smaller seedheads.

Rice (*Oryza sativa*) – Soak 24 hours before planting. Plant in plug flats mid-April and transplant out after frost, within three weeks of planting. Space 8” apart. Can also direct-seed very early varieties. Cut before frost, when husks are golden-brown and seed is hard. Hang to dry for a few weeks indoors. Hull with a dehuller or by beating with a mortar and pestle.

Rye (*Secale cereale*) – Plant 1/2-2” deep, a few inches apart; preferably in rows 7-9” apart, but can also be broadcast and raked to cover. Plant rye in late September-early October, sometime around the first frost. Harvest when seed is at ‘hard dough’ stage, dentable by not easily crushed; make into sheaves and stook to cure until fully dry and hard. Thresh and winnow.

To use straw for weaving, harvest when topmost joint in stem is still a little green.

Savory, Summer (*Satureja hortensis*) – self-seeding annual. Harvest once plants are well established; stop harvesting in early September to let them go to seed.

Sesame (*Sesamum indicum*) – Start indoors 4-6 weeks before last frost. Plant by barely covering seed; keep a little moist until they emerge, then reduce watering to once per week. Sesame likes hot, dry conditions. Transplant out after frost, spacing plants 6” apart in rows 24” apart, or on a 12” grid. Pods will begin ripening from the bottom of the stalk; either pick them and dry them indoors before they shatter, or cut whole plants and bring them in to dry down. Make sure to keep seeds contained so they don’t get lost when pods shatter.

Sorghum (*Sorghum bicolor*) – Plant in late May-early June. Direct-sow 1/4” deep 8-12” apart. Protect seed heads from birds with bags or scraps of row cover. Harvest stalks for syrup two weeks after milk stage, seeds when they cannot be dented with a fingernail. Likes similar conditions to corn.

Soybean (*Glycine max*)* – Plant just after the frost-free date. Sow 1-2” deep, 3” apart in rows 7-9” apart. Harvest for edamame when seeds are full-sized but still green, or let them dry down on the plants just like beans.

Spinach (*Spinacia oleracea*)* – Plant every two weeks starting in early spring and again in late summer, when weather is cool. Sow 1/2” deep, 1” apart in rows 16” apart; thin to 3”.

Spinach, New Zealand (*Tetragonia tetragonioides*) – Plant late May- early June, and again in late summer for an autumn harvest. Soak seeds at least overnight before planting, up to 24 hours. Sow 1/2” deep, 1” apart in rows 16” apart; thin to 3”. Harvest leaves steadily to encourage new growth.

Squash (*Cucurbita pepo*, *C. moschata*, *C. maxima*, *C. argyrosperma/mixta*)* – Start indoors 3-4 weeks before last frost, with 1-2 seeds per pot 1/2” deep and thinned to strongest plant. Can also direct seed after frost in late May- early June. Plant three plants per hill, 8’ apart for vines and 4’ apart for bushes. Topdress with manure. If planting with corn and beans, plant in separate hills between rows of corn hills at same time as corn. Before frost, harvest squash, leaving a stub of stem several inches long; cure indoors for several weeks to a month. Store at room temperature.

Sunflower (*Helianthus annuus*) (Arikara)* – Plant soon after peas. Sow 1” deep, 6” apart; thin to 12-18” apart. Supply with lots of compost or manure. Protect seeds from birds by covering flowers with old onion bags. Harvest when back of heads turn yellow, leaving a 2” length of stem. Hang to dry; rub heads together to remove seeds and spread on screens to fully dry; store in mesh bags.

Tat Soi (*Brassica rapa*)* – Plant early May and again in August. Sow 1/4” deep, 2” apart and thin as necessary to 6” when several inches tall. Flea beetles an issue; use row covers. Enjoy raw or cooked.

Terrasol – See **Jerusalem Artichoke**.

Tomato (*Lycopersicon esculentum* var. *esculentum*)* – Start indoors 7 weeks before last frost. Sow 1/2” deep; harden off for 10 days before transplanting. Prepare hole with manure and ground eggshell in the bottom, covered by a layer of soil. Set bush types 24” apart, vines 18” apart. Train vines up trellises.

Watermelon (*Citrullus lanatus*)* – Start indoors in early May; to increase heat for germination, place near stove or cover with a pane of glass and set on a windowsill. Transplant out a week after last frost, ideally into a coldframe, setting them 2’ apart. Need a lot of fertility and water. Harvest when melons sound hollow, or when ground spot turns yellow, or when tendril nearest melon turns brown and dies. Probably will be less ripe than you think.

Wheat (*Triticum aestivum*)* – Plant 1/2-2” deep, a few inches apart; preferably in rows 7-9” apart, but can also be broadcast and raked to cover. Wheat are categorized as spring-planted, fall-planted, or facultative (either spring or fall); pay attention when planning your garden. Plant spring wheats and facultative wheats in the spring as soon as soil can be worked; plant fall wheats and facultative wheats in fall, sometime around the first frost. Harvest when seed is at ‘hard dough’ stage, dentable by not easily crushed; make into sheaves and stook to cure until fully dry and hard. Thresh and winnow. To use straw for weaving, harvest when topmost joint in stem is still a little green.

Zucchini (*Cucurbita pepo*) – See **Squash**. Zucchini are normally harvested when very immature. To save seed, wait until skin hardens enough to not be dented with a thumbnail (but still before frost). Then cut or smash zucchini open and scoop seeds and attached pulp into a container. Add a bit or water to make a wet mush and leave for 1-2 days, until it smells sour and seeds look clean. Add more water; good seeds sink, and you can pour off bad ones and pulp. Transfer to a screen, rinse away the rest of the pulp, and spread out the seeds to dry. You can also skip the fermentation, if you prefer; you can also let them cure 2 weeks after picking to let the seeds get plumper. Any zucchinis on the plant which *aren't* being saved for seed can still be eaten as usual.

*Seed saving instructions found in *How to Save Your Own Seeds: A Handbook for Small-Scale Seed Production* from Seeds of Diversity Canada.