

Seed Planting Details

Common Name, Species	Germination time, days	Germination %	Seed longevity (years)	Root depth and type	Spacing between mature plant centers
VEGETABLE					
Asparagus: <i>Asparagus officinalis</i>	x	x	x	MS	2' - 4'
Beans, bush: Phaseolus vulgaris	6 - 14	90	1	DF	2" - 3"
Beans, pole: Phaseolus vulgaris	6 - 14	90	1	DF	4" - 6"
Beets: Beta vulgaris	7 - 10	70	4	DT	4" - 6"
Broccoli: Brassica oleracea, var. italica	3 - 10	80	4	ST	10" - 12"
Brussels sprouts: Brassica oleracea, var. gemmifera	3 - 10	70	4	ST	12" - 16"
Cabbage: Brassica oleracea, var. capitata	4 - 10	80	4	SF	12" - 16"
Cantaloupe: Cucumis melo	4 - 8	70	5	ST	Mounds, 8'
Carrots: <i>Daucus carota</i> , var.	10 - 17	55	4	ST	1" - 4" (per size)

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sativa					
Cauliflower: Brassica oleracea, var. botrytus	4 - 10	80	4	ST	10" - 12"
Celery: Apium graveolens	9 - 21	50	6	MT	10" - 12"
Chicory: Cichorium intybus	5 - 12	80	8	MT	Thin to 6" - 8"
Chives: Allium schoenoprasum	X	X	X	SF	2"
Collards: Brassica oleracea, var. acephala	4 - 10	80	4	MT	Thin to 5"
Corn: Zea mays, var. saccharata	6 - 10	80	2	MF	12" - 18"
Cress: Nasturtium officinale	4 - 10	80	3	ST	1/2"
Cucumber: Cucumis sativus	6 - 10	80	7	SF	Mounds, 4'
Eggplant: Solanum melongena	7 - 14	60	6	MF	8" - 10"
Garlic: Allium sativum	6 - 10		2	SF	4"

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Kale: <i>Brassica oleracea</i> , var. <i>acephala</i>	3 - 10	80	4	MT	Thin to 12"
Kohlrabi: <i>Brassica caulorapa</i>	3 - 10	80	4	ST	6" - 8"
Leeks: <i>Allium porrum</i>	7 - 12	60	4	SF	5"
Lettuce, Bibb: <i>Lactuca sativa</i> , var. <i>capitata</i>	4 - 10	85	4	SF	6"
Lettuce, Rodin: <i>L. sativa</i>	4 - 10	85	4	SF	7"
Lettuce, French all-season: <i>L. sativa</i>	4 - 10	85	4	SF	8"
Lettuce, cos: <i>L. sativa</i>	4 - 10	85	4	SF	6"
Mustard (greens): <i>Brassica alba</i>	4 - 10	80	3	ST	Thin to 6"
Onions: <i>Allium cepa</i>	X	X	X	SF	4" - 6"
Parsley: <i>Petroselinum</i>	14 - 28	50	1	MT	Thin to 5"
Parsnips: <i>Pastinaca sativa</i>	14 - 28	50	1/2	MT	Thin to 4"
Peas: <i>Pisum sativum</i> , var.	6 - 15	80	1	DF	3" - 4"

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arvense					
Peppers, green: Cap-sicum frutescens	10 - 20	55	4	SF	8" - 10"
Potatoes: Solanum tuberosum	8 - 16	90	1	DF	Early 10", mid-late 14" -18"
Pumpkins: Cucurbita pepo, moschata	8 - 16	75	5	MF	Mounds, 4'
Radishes: Raphanus sativus	3 - 10	80	4	ST	2"
Rhubarb: Rheum rhaponticum	X	X	X	DT	2" - 3"
Rutabagas: Brassica napobrassica	3 - 10	75	4	ST	Thin to 6"
Salsify: Tragopogon porrifolius	18 - 30	90	1	MT	4"
Spinach: Spinacia oleracea	6 -12	65	1	SF	Thin to 4"
Squash: Cucurbita maxima	3 - 12	80	5	SF	Mounds, 4'
Tomatoes: Lycopersicon	6 -14	80	4	MF	1' - 2'

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esculentum					
Turnips: Brassica rapa	3 - 10	75	1	ST	2" - 4"
Watermelon: Citrullus vulgaris	3 - 12	70	6	DF	Mounds, 4'
PERENNIAL HERBS					
Angelica: Angelica archangelica	21 - 30		1/6	DT	18" - 24"
Catnip: Nepeta cataria	21 - 30		5	MF	10" - 12"
Comfrey: Symphytum pere-grinum	X		X	DT	2' - 4'
Lavender: Lavandula vera	10 - 21		5	MS	10" - 12"
Lemon Balm: Melissa officinalis	7 - 21		5	MF	10" - 12"
Oregano: Origanum vulgare	21 - 30		5	MF	18" - 24"
Peppermint: Mentha piperita	X		X	MF	12"
Rosemary: Rosmarinus officinalis	14 - 28		4	MT	12" - 24"
Rue: Ruta	10 - 21		2	MT	10" - 12"

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graveolens					
Sage: <i>Salvia officinalis</i>	14 - 28		3	MT	10" - 12"
Savory, winter: <i>Satureja montana</i>	21 - 30		3	MT	8" - 10"
Thyme: <i>Thymus vulgaris</i>	14 - 21		3	SS	6" - 12"
HERBS, ANNUAL					
Anise: <i>Pimpinella anisum</i>	14 - 18		3	MT	12" - 18"
Basil: <i>Ocimum basilicum</i>	7 - 14		8	SF	8" - 10"
Borage: <i>Borago officinalis</i>	7 - 14		8	MT	12" - 24"
Caraway: <i>Carum carvi</i>	14 - 18		3		8" - 10"
Chamomile, Roman: <i>Anthemis nobilis</i>	14 - 18			MF	10" - 12"
Coriander: <i>Coriandrum sativum</i>	14 - 18		6		12" - 18"
Dill: <i>Anethum graveolens</i>	14 - 18		3	MT	10" - 18"
Fennel, sweet: <i>Foeniculum</i>	14 - 18		4	DT	12" - 24"

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vulgare					
Marjoram: Majorana hortensis	14 - 20		3	MF	12" - 18"
Savory, summer: Satureja hort.	18- 21		3	MF	8" -10"
Tarragon: Artemisia dranunculus	21 - 30		3	MF	10" - 12"

FLOWERS

Achillea: Millfoil, Yarrow	10		2		12"
Althea rosea: Hollyhock	10		4	DT	12" - 24"
Alyssum	5		2	SF	3" - 4"
Anemone: Windflower	15		2	SB	4" - 6"
Antirrhinum: Snapdragon	20		3	MT	8" - 12"
Aquilegia: Columbine	15		2	MF	10" - 12"
Aster	8		2		10" -24"
Aubrieta	20			SF	4"
Bellis: English Daisy	5		2		18"
Calendula: Pot	10		3	MF	8" - 10"

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Marigold					
Calliopsis (Coreopsis tinctoria)	20		2		8" - 10"
Campanula: Bellflower	10		3		10" - 12"
Centaurea: Bachelor's button	20		2		8" - 10"
Chrysanthemum	5		3	DF	4" - 18" (per size)
Coleus	20		2	MF	Pot
Coreopsis	20		2	MF	18" - 20"
Cosmos: Cosmea	5		2	MF	10" - 12"
Dahlia	5		2	DT	18" - 24"
Delphinium	15		2	MF	12" - 24"
Dianthus alpinus	5		3	SF	4" - 6"
Dianthus barbatus: Sweet William	5		3	SS	8" - 10"
Dianthus: Carnation hybrids	20		3	SS	6" - 8"
Dianthus: Pinks	8		3	SS	6" - 8"
Digitalis	20		2	MS	12" - 18"

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Foxglove					
Gaillardia: Blanket flower	20		2		12" - 18"
Gypsophila: Baby's breath	20		2	SF	6" - 8"
Helianthus: Sunflower	15		3	MF	12"
Helichrysum: Everlasting, Strawflower	5		2		8" - 10"
Iris	30		1	MB	6" - 8"
Hyacinthus	X		X	SF	8" - 12"
Lathyrus: Sweet pea	15		3	DF	4" - 6"
Limonium: Statice	15		1		10" - 12"
Lunaria: Honesty, Money plant	10		3		12"
Lupinus: Lupine	20		3	DT	6" - 24"
Matthiola: Stocks	5		3	MT	10" - 12"
Myosotis: Forget-me-not	15		3	SF	4" - 6"
Nigella: Love-in-a-mist	8		2	SF	6"
Pelargonium	20		3	MF	18" - 24"

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(Geranium)					
Penstemon	20		2		12" -18"
Phlox, perennial	20-40		1	MF	6" - 8"
Phlox, annual (Drummondii)	10		1	MF	6" - 8"
Primula	15		1	SF	10"
Ranunculus	15		2	SF	4" - 6"
Ricinus: Castor bean	15		3	MF	3" - 4"
Salpiglossis	5				10" - 12"
Tagetes: Marigold	5		3	MF	12" -14"
Tropaeolum majus: Nasturtium	8		3	SF	12" - 24"
Viola tricolor: Pansy	10		1	SF	6" - 8"
Zinnia	5		3	MF	10" - 12"

x Means species is not propagated by seed

Longevity means the number of years the seed may be stored and still germinate with good vitality.

Root Depth

S means Shallow

M means Medium

D means Deep

Root Type

F means Fibrous

T means Taproot

S means Spreading as roots go down

Source: Tom Cuthbertson, Alan Chadwick's Enchanted Garden, Ten Speed Press, 1979, ISBN 0-525-47509-5.

Harvest Time Tips

How do you know when your crops are ripe? It's not always obvious. Here are some tips:

Crop	Harvest Tips
Asparagus	Usually takes 3 years before you harvest, although strong varieties (such as all-male) may be harvested at 2 years. Harvest only for one month the first time. Cut or snap off spears at 5-8 inches tall. Don't dig or you may damage spears that haven't emerged yet. Remember tops have to grow strong to store energy for next spring's harvest.
Beans	Best when pods snap readily, while tips are still pliable.
Beets	Harvest early beets at 1.5-2 inches diameter, tops are good greens. Long season beets can be left in the ground over winter but harvest before spring or they will bolt.
Broccoli	Cut while the buds are compact, have not turned yellow or opened into flowers. Leave the plant so side shoots will develop new, smaller buds.
Brussels Sprouts	Cut when about 1 inch diameter; pick lower ones and let upper ones mature. Lower leaves can be removed to allow more room for sprouts.
Cabbage	Cut heads when solid before they crack or split. Small heads may develop later from cut stem. If you have a lot maturing at the same time, you can retard growth on some by giving the head a quarter-turn twist to break some of the roots.
Carrots	Ready when crisp and ½ to 1 inch diameter. Sugar content is higher in older carrots but younger ones are more tender. Fall crop can be left in soil to harvest over the winter.
Cauliflower	Harvest before heads over mature and become "ricey". Heads should be firm and compact, 6-8 inches diameter. If you tie together the outer leaves over the head 7-12 days before harvest, it will help to blanch the head. This crop is difficult in hot weather, best to grow as a fall or winter crop.
Chard	Use leaves 8-10 inches long. New leaves continue to grow from the center.
Chinese Cabbage	Cut entire plant when compact and firm, before it bolts. Best as fall crop.
Corn	Pick when silk turns dark, about 3 weeks after silk first appears. Kernels should be plump and milky.
Cucumbers	Pick at 2 inches or less for pickles, can be longer for slicing. Cukes are old if they are large, puffy, dull and yellow. Keep vine picked so young fruit develop.
Eggplant	Harvest when 6-8 inches long and uniformly deep color. Too old when dull, soft and seedy.
Endive, Escarole	Cut at ground level when fully developed, 10-12 inches

Crop	Harvest Tips
	across. If you tie together the outer leaves over the head 7-12 days before harvest, it will help to blanch the head. For forcing varieties (such as Sugarhat), dig root over winter and bring into cool, dark location to force.
Garlic	Pull when top turns yellow, air dry and trim roots later. Store in dry location.
Jerusalem Artichoke	Dig tubers anytime from September to spring.
Kale	Break off outer leaves when 8-10 inches long. New leaves continue from center.
Kohlrabi	Harvest at silver solar size; larger ones get woody. Young leaves can be cooked like kale or cabbage.
Lettuce	Ready in 50-60 days, turns bitter as the stalk goes to flower, remove it and plant something else.
Melons	Stem "slips" or separates easily from the fruit. Bottom spot turns to yellowish color. Rind resists penetration with a fingernail.
Mustard Greens	Break off outer leaves when 6-8 inches long. Best in cool weather.
Onions	Harvest green onions when the thickness of a pencil. Harvest dry onions after tops fall down. Allow to air dry for 2-3 weeks. Then trim tops and store with good air circulation.
Parsnips	Leave in ground until a freeze for sweetest flavor. Large ones may be woody; best as a fall crop. Can be left in ground over winter but harvest before spring.
Peas	Pick when pod is full and green, about 1 week after flowering for edible pod varieties. Harvest shelling peas when still a bright green color.
Peppers	Can harvest at any size but usually picked when full grown and mature. Hot peppers need to be full ripe and colored.
Potatoes	New or "baby" potatoes form anytime after flowers die back. For large potatoes, wait until the vine dies. Then dig and allow to finish drying in cool, dark place.
Pumpkins/Squash	Allow to ripen on the vine to deep color and a hard rind. Winter squash are ready when the ground spot" on the underside changes from white to gold color. Cut from vine leaving 3-4 inches of stem attached. Store in a cool, dry place.
Radish	Harvest at size of marbles up to 1 inch, in about 1 month. After that, they get pithy.
Rhubarb	Do not harvest during first year. Harvest only 1-2 weeks second year. After that, you may harvest for 8-10 weeks. Only the stem is used because the leaves contain large amounts of oxalic acid.
Spinach	Cut entire plant when plants have 6-8 leaves. They mature

Crop	Harvest Tips
	quickly and will bolt in hot weather.
Summer Squash	Harvest while skin is still tender.
Sweet Potatoes	Harvest before frost kills the vine. Handle carefully to avoid bruises. Let roots dry 2-3 hours then cure in warm, dry room for 10 days. Store in cool, humid location.
Tomatoes	Fully colored but still firm. Overripe ones turn mushy. Below 50 degrees tomatoes lose flavor so don't try too hard to save unripe ones at season's end. Green tomatoes with a white star on the blossom end are good for frying.
Turnips	Harvest roots when 2-3 inches in diameter. Tops are good greens at 4-6 inches long. Can be left in ground over winter but harvest before spring.