



CROP	APPROX. # SEEDS PER 100' ROW	APPROX. # SEEDS PER ACRE	POTENTIAL HARVEST PER 100' ROW	OPTIMUM SOIL TEMPERATURE	DAYS TO GERMINATION	SEED DEPTH	PLANT SPACING	ROW SPACING	IDEAL PH RANGE
Amaranth, grain	1.5M	392M	10 lbs	18-24°C/64-75°F	4-10	5mm (¼")	25-35cm (10-14")	50cm (20")	6.0-7.5
Artichoke*	N/A	N/A	35+ heads	21-27°C (70-80°F)	10-21	5mm (¼")	90-120cm (36-48")	180cm (72")	5.6-6.6
Arugula	1.2M	348M	27 lbs	4-12°C (40-50°F)	4-8	5mm (¼")	10-15cm (4-6")	45-60cm (18-24")	6.5-7.0
Asparagus*	N/A	N/A	40 lbs	21-30°C (70-85°F)	14-56	1cm (½")	45-60cm (18-24")	90-120cm (36-48")	6.5-7.0
Beans, Broad	450	98M	12 lbs shelled beans	10-21°C (50-70°F)	10-14	5cm (2")	10-15cm (4-6")	60-90cm (24-36")	6.0-6.5
Beans, Bush	800-1M	232M-290M	80-100 lbs	21-32°C (70-90°F)	6-10	2-5cm (1-2")	5-10cm (2-4")	45-60cm (18-24")	6.0-6.5
Beans, Pole	400	43.5M	150 lbs	21-32°C (70-90°F)	6-10	2-5cm (1-2")	15-20cm (6-8")	45-60cm (18-24")	6.0-6.5
Beans, Soya	800	174M	20 lbs	21-32°C (70-90°F)	8-16	2-5cm (1-2")	5-10cm (2-4")	60cm (24")	5.8-6.2
Beets	600-1M	436M	40 lbs greens or 100 lbs roots	10-26°C (50-80°F)	5-12	1cm (½")	5-10cm (2-4")	30-45cm (12-18")	6.0-6.8
Broccoli	170	30M	75 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-6.8
Brussels sprouts	170	30M	60 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-7.5
Cabbage	200	44M	150 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	60-90cm (24-36")	6.5-7.0
Carrots	2.4M	1,044M	100 lbs	7-30°C (45-85°F)	14-21	5mm (¼")	4-10cm (1½-4")	30-45cm (12-18")	6.0-6.8
Cauliflower	200	44M	90 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-6.8
Celery/Celeriac*	N/A	N/A	200 lbs	15-24°C (60-75°F)	20-30	5mm (¼")	30cm (12")	45cm (18")	6.0-6.5
Collards	170	30M	50 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	45-60cm (18-24")	75-90cm (30-36")	6.0-6.8
Corn	400	87M	up to 100 ears	15-30°C (60-85°F)	7-10	2-5cm (1-2")	20-25cm (8-10")	60-90cm (24-36")	5.8-6.8
Cucumbers	240	35M	120 lbs	15-30°C (60-85°F)	7-10	2cm (1")	23cm (9")	90cm (36")	6.0-6.8
Eggplant*	N/A	N/A	100 lbs	24-32°C (75-90°F)	7-12	5mm-1cm (¼-½")	45-60cm (18-24")	60-90cm (24-36")	5.5-6.0
Endive/Radicchio	140	40.6M	100 heads	10-22°C (50-72°F)	2-15	5mm (¼")	30-45cm (12-18")	45cm (18")	6.0-6.5
Fennel, bulbing	240	53M	300 lbs	10-25°C (50-75°F)	10-14	1cm (½")	15-30cm (6-12")	60cm (24")	5.5-7.0
Kale	170	30M	75 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	30-45cm (12-18")	75-90cm (30-36")	6.0-6.8
Kohlrabi	360	104M	50 lbs	10-30°C (50-85°F)	7-10	5mm (¼")	10-15cm (4-6")	30-45cm (12-18")	6.0-6.8
Leeks	240	70M	150 leeks	10-25°C (50-75°F)	10-12	5mm (¼")	15-20cm (6-8")	45cm (18")	5.5-6.5
Lettuce, Head	200	58M	100 heads (50 lbs)	10-22°C (50-72°F)	7-10	5mm-1cm (¼-½")	30cm (12")	45-90cm (18-36")	6.0-6.5
Lettuce, Leaf	1.2M	348M	50 lbs	10-22°C (50-72°F)	7-10	5mm-1cm (¼-½")	2-12cm (1-5")	45-90cm (18-36")	6.0-6.5
Melons	60	5.2M	100 melons	20-25°C (68-77°F)	5-10	1cm (½")	60-90cm (24-36")	1.5-2m (5-6')	6.0-6.8
Mustard	400	174M	100 lbs	21°C (70°F)	5-10	5mm-1cm (¼-½")	10-15cm (4-6")	30-45cm (12-18")	6.0-6.5
Onions, bulbing	260	76M	100 lbs	21-25°C (70-75°F)	10-14	5mm-1cm (¼-½")	12-15cm (5-6")	45-75cm (18-30")	5.5-6.5
Onions scallions	1.2M	1,045M	100 lbs	21-25°C (70-75°F)	10-14	5mm-1cm (¼-½")	2-5cm (1-2")	15cm (6")	6.0-6.8
Pac choi & choi sum	260	114M	100 lbs	20-25°C (68-77°F)	5-10	5mm-1cm (¼-½")	15-20cm (6-8")	30-45cm (12-18")	6.0-6.8
Parsnips	440	128M	75 lbs	21°C (70°F)	14-21	5mm-1cm (¼-½")	7-10cm (3-4")	45-90cm (18-36")	6.0-6.8
Peas	1.2M	260M	20 lbs (shelled)	18-21°C (65-70°F)	7-14	2cm (1")	2-7cm (1-3")	60-90cm (24-36")	5.8-7.0
Peppers*	N/A	N/A	50 lbs	25-29°C (78-85°F)	10-21	5mm-1cm (¼-½")	30-60cm (12-24")	45-60cm (18-24")	5.5-6.0

*Not direct sown M=1,000 1 acre = 43-560 sq. feet



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

*Not direct sown M=1,000 1 acre = 43-560 sq. feet

cover crops

Organic growers know soil must be kept healthy to grow healthy plants. When an area is not being used to grow food crops, it should be used to grow plants that enrich the soil before the next crop is planted. Be sure to use the right cover crop for the right job, and remember that they can be used in combination to perform several tasks at once. A fall planting of White Dutch Clover and Winter Wheat will fix nitrogen, and hold it for tilling under in the spring. Cover crops replenish soils in the following ways:

- replenish nitrogen and fix it in the soil
- provide winter habitat for beneficial insects
- prevent soil erosion from wind and rain
- loosen and aerate packed soil
- add organic matter when tilled under
- increase the water-holding capacity of soil
- compete with and prevent weed seeds
- hold nitrogen in leaves before being tilled under and returning it to the soil

Nitrogen Fixer	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	SEEDS PER 1000 SQ. FEET	SEEDS PER ACRE	MAX. SEED DEPTH	GROWTH RATE
Crimson Clover			—	—	—	—	—	—	—	—		260 g 9 oz	11.3 kg 25 lbs	55 mm ¼"	Medium
Fava Beans	—	—	—	—	—				—	—		1.3 kg 3 lbs	57 kg 125 lbs	50 mm ¼"	Slow
Hairy Vetch			—	—				—	—			320 g 12 oz	13.6 kg 30 lbs	5-10 mm ½-¾"	Slow
White Clover			—	—	—			—	—			115 g 4 oz	5 kg 11 lbs	5 mm ¼"	Slow
Winter Field Peas		—	—	—	—			—	—			1.14 kg 2½ lbs	50 kg 110 lbs	20-60 mm 1-2½"	Fast

Soil Builders	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	SEEDS PER 1000 SQ. FEET	SEEDS PER ACRE	MAX. SEED DEPTH	GROWTH RATE
Barley			—	—	—	—	—	—	—			1.14 kg 2½ lbs	50 kg 110 lbs	20-40 mm 1-1½"	Fast
Buckwheat			—	—	—	—	—	—	—			620 g 22 oz	27 kg 60 lbs	20-40 mm 1-1½"	Fast
Fall Rye			—	—				—	—			1.14 kg 2½ lbs	50 kg 110 lbs	20-40 mm 1-1½"	Medium
Oats			—	—	—	—	—	—	—			1.14 kg 2½ lbs	50 kg 110 lbs	20-40 mm 1-1½"	Medium
Winter Wheat			—	—	—	—	—	—	—			1.14 kg 2½ lbs	50 kg 110 lbs	20 mm 1"	Fast

Pest/Weed Control	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	SEEDS PER 1000 SQ. FEET	SEEDS PER ACRE	MAX. SEED DEPTH	GROWTH RATE
Alyssum			—	—	—	—	—	—	—			10 g 0.35 oz	454 g 1 lb	Surface	Fast
White Mustard			—	—	—	—	—	—	—			104 g 4 oz	4.54 kg 10 lbs	5-10 mm ½-¾"	Fast