

Seed Crop Information

Crop Name	Type	Seeds/Ounce	Seeds/Gram	Germination Lighting	Cover Seed ¹	Germination Temperature (Soil)	Sow To Transplant ²	Finishing Night Temperature	Transplant To Flower (Crop Time from 512 Plugs to 606 Finish Trays, 36 Cells per Flat)
Abutilon	Annual	8,500	300		No	72-75°F (22-24°C)	25-35 days	62-65°F (17-18°C)	8-9 weeks
Achillea (288 plug)	Perennial	140,000	4,900	Best with light	No	65-70°F (18-21°C)	35-40 days	60-65°F (15-18°C)	5-6 weeks***
Agastache	Perennial	68,000	2,400		Yes	60-70°F (15-21°C)	25-35 days	65-70°F (18-21°C)	10-12 weeks*
Ageratum	Annual	200,000	7,000		No	75-78°F (24-25°C)	28-38 days	60-65°F (15-18°C)	Spring, 8 weeks
Alcea (Hollyhock) (128 plug)	Perennial	3,000-6,000	105-210		Yes	70-75°F (21-24°C)	28 days	55-60°F (13-15°C)	8-10 weeks **/ ***
Alchemilla (128 plug)	Perennial	95,000	3,325		Yes	70-75°F (21-24°C)	70 days	55-58°F (13-14°C)	12-14 weeks***
Alstroemeria F1 (pots)	Annual	1,400	50		Yes	72°F (22°C) 1 week 44°F (7°C) 2-4 weeks 65°F (18°C) 1 week	55-65 days	50-60°F (10-15°C)	16-18 weeks
Alternanthera (A. dentata)	Annual	17,400	614	Best with light	Yes	72-76°F (22-24°C)	28-35 days	62-65°F (16-18°C)	4-5 weeks**
Alyssum (can direct sow)	Annual	90,000	3,150		No	68-72°F (20-22°C)	28-38 days	50-55°F (10-13°C)	Spring, 3-4 weeks
Anemone coronaria (128 plug)	Perennial/Cut	56,000	1,960		Yes	65-70°F (18-21°C)	40-58 days	46-55°F (8-13°C)	18-20 weeks
Anemanthele	Grass	84,000-98,000	3,000-3,500	Best with light	No	68-77°F (20-25°C)	35-42 days	59-64°F (15-18°C)	6-8 weeks
Angelonia	Annual	28,500 (Pelleted)	1,000 (Pelleted)	Best with light	No	72-76°F (22-24°C)	35-42 days	64-66°F (18-19°C)	8-10 weeks
Aquilegia	Perennial	15,000-22,000	525-770		Yes	70-75°F (21-24°C)	54-70 days	55-60°F (13-15°C)	15-20 weeks
Arabis (128 plug)	Perennial	70,000	2,450		No	65-70°F (18-21°C)	56 days	50-55°F (10-13°C)	12-15 weeks***
Armeria (128 plug)	Perennial	15,000-20,000	480-714		Optional	68-70°F (20-21°C)	70 days	50-55°F (10-13°C)	14-17 weeks***
Asclepias, Annual	Annual	11,000	385		Yes	70-75°F (21-24°C)	35-55 days	60-65°F (15-18°C)	7-11 weeks***
Asclepias, Perennial (128 plug)	Perennial	3,500	123		Optional	65-75°F (18-24°C)	63 days	60-65°F (15-18°C)	11-13 weeks***
Asparagus, Ornamental	Annual	500-875	17-30	Best in darkness	Yes	78-80°F (25-26°C)	42-49 days	60-65°F (15-18°C)	Spring, 24 weeks
Aster, Annual (Callistephus)	Annual	12,000	420		Yes	65-70°F (18-21°C)	15-20 days	55-65°F (13-18°C)	4-5 weeks***
Aster, Perennial	Perennial	62,300	2,200	Best with light	Yes	65-70°F (18-21°C)	21-30 days	55-60°F (13-15°C)	14-16 weeks***
Astilbe arendsii (128 plug)	Perennial	384,000	13,400		No	70-75°F (21-24°C)	70-77 days	55-58°F (13-14°C)	14-16 weeks***
Bacopa	Annual	34,020 (Pelleted)	1,200 (Pelleted)	Best with light	No	68-74°F (20-23°C)	21-28 days	55-60°F (13-15°C)	4-6 weeks

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Basil (can direct sow)	Annual Vegetable	16,000	560		Yes	65-70°F (18-21°C)	23-28 days	62-65°F (17-18°C)	Spring, 4-5 weeks
Begonia, Dragon Wing®	Annual	28,550 (Pelleted)	1,000 (Pelleted)	Best with light	No	74-78°F (24-25°C)	49-56 days	60-65°F (15-18°C)	Spring, 7-11 weeks (6 to 10-in./15 to 25-cm pots*)
Begonia, BabyWing®	Annual	28,550 (Pelleted)	1,000 (Pelleted)	Best with light	No	74-80°F (24-27°C)	49-56 days	60-65°F (15-18°C)	5-7 weeks
Begonia, Fibrous	Annual	2,000,000 28,510 (Pelleted)	70,000 1,000 (Pelleted)	Best with light	No	74-78°F (24-25°C)	41-56 days	60-65°F (15-18°C)	Spring, 6-8 weeks
Begonia, Tuberous	Annual	1,000,000	35,000	Best with light	No	75-78°F (24-25°C)	49-73 days	65-68°F (18-20°C)	Spring, 10-12 weeks; Summer, 8-10 weeks (baskets); light 10pm-2am if sown before April
Bellis (128 plug)	Perennial	140,000	4,900		Yes	65-75°F (18-24°C)	49 days	45-55°F (7-13°C)	6-14 weeks
Broccoli	Vegetable	6,000-9,000	210-315		Yes	70°F (21°C)	10-14 days	50-60°F (10-16°C)	4-6 weeks***
Browallia	Annual	125,000	4,375		No	75-78°F (24-25°C)	49-52 days	60-65°F (15-18°C)	Spring, 8-9 weeks
Brussels Sprouts	Vegetable	7,000	245		Yes	70°F (21°C)	14-21 days	50-60°F (10-15°C)	4-6 weeks***
Cabbage	Vegetable	7,000	245		Yes	70°F (21°C)	10-14 days	50-60°F (10-15°C)	4-6 weeks***
Calendula	Annual	3,000-4,000	105-140		No	68-70°F (20-21°C)	32-36 days	55-58°F (13-14°C)	Spring, 9-10 weeks
Campanula	Perennial	1,500,000-1,700,000	52,500-59,500	Best with light	No	60-65°F (15-18°C)	49-70 days	58-60°F (14-15°C)	Spring, 10-15 weeks***
Carex	Grass	51,000-68,000	1,800-2,400		No	68-72° (20-22°C)	28 days	50-60°F (10-15°C)	10-12 weeks**
Carnation	Annual Perennial	25,000	875		Yes	65-70°F (18-21°C)	35-42 days	50-55°F (10-13°C)	10-14 weeks (flowering 6-in./15-cm pots)
Cauliflower	Vegetable	7,000	245		Yes	70°F (21°C)	10-14 days	50-60°F (10-15°C)	4-6 weeks***
Celery	Vegetable	71,000	2,485		Yes	70-75°F (21-24°C)	15-28 days	58-60°F (14-15°C)	8-10 weeks***
Celosia	Annual	34,000-50,000	1,190-1,750		No	75-78°F (24-25°C)	32-35 days	55-65°F (13-18°C)	Spring, 7-10 weeks
Centaurea (128 plug)	Perennial	2,200	79		Yes	70-75°F (21-24°C)	56 days	50-55°F (10-13°C)	10-12 weeks***
Cerastium (128 plug)	Perennial	80,000	2,800	Best with light	No	65-72°F (18-22°C)	56 days	55-58°F (13-14°C)	11-12 weeks***
Chives (direct sow)	Perennial Vegetable	33,000	1,155		Yes	70°F (21°C)	Direct sow	55-60°F (13-15°C)	9-12 weeks***
Cilantro/Coriander (can direct sow)	Vegetable	3,000	105		Yes	65-70°F (18-21°C)	14-18 days	55-58°F (13-14°C)	7-10 weeks***
Cineraria (288 plug)	Annual	150,000	5,250	Best with light	No	70-75°F (21-24°C)	40-52 days	60-62°F (15-17°C)	Winter, 12-14 weeks
Cleome	Annual	14,000	490	Best with light	No	70-72°F (21-22°C)	20-25 days	70-75°F (21-24°C)	7-8 weeks; germination can be erratic year to year***
Coleus	Annual	100,000-125,000	3,500-4,375		Yes	72-75°F (22-24°C)	35-43 days	62-65°F (17-18°C)	Spring, 4-6 weeks
Collards	Vegetable	7,000	245		Yes	70°F (21°C)	14-21 days	50-60°F (10-15°C)	4-6 weeks***
Coreopsis (C. grandiflora)	Perennial	10,000	350	Best with light	No	65-75°F (18-21°C)	26-37 days	50-55°F (10-13°C)	6-10 weeks***

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Corynephorus	Grass	226,800-255,300	8,000-9,000		No	68-72° (20-22°C)	30 days	50-60°F (10-15°C)	10-12 weeks**
Cosmos	Annual	3,500-5,000	125-175		Yes	65-70°F (18-21°C)	25-33 days	60-65°F (15-18°C)	Spring, 4-6 weeks
Crossandra	Annual	4,000	140		Yes	77-80°F (25-27°C)	34-49 days	68-75°F (20-24°C)	Summer, 16-24 weeks (4-in./10-cm pots); alternate temperature for germination
Cyclamen (288 plug)	Annual	2,500-4,000	87-140	Best in darkness	Yes	65-68°F (18-20°C)	56-77 days	58-65°F (14-18°C)	Fall, 20-22 weeks; Winter, 24-26 weeks; Spring, 23-25 weeks*
Dahlia	Annual	2,800	98		Yes	68-70°F (20-21°C)	27-32 days	55-65°F (11-18°C)	Spring, 5-7 weeks
Delphinium	Perennial	8,000-18,000	280-630		Yes	Day 75-80°F (24-26°C) Night 65-70°F (18-21°C)	20-28 days	55-63°F (13-17°C)	9-12 weeks***; alternate day/night temps for germination
Dianthus	Annual Perennial	22,000-45,000	770-1,575		Optional	64-68°F (18-20°C)	31-40 days	50-55°F (10-14°C)	Spring, 8-10 weeks
Diascia	Annual	4,900	175		Yes	65-70°F (18-21°C)	28 days	50-60°F (10-15°C)	6-8 weeks
Dichondra	Annual	6,070	214		Yes	72-76°F (22-24°C)	35 days	62-65°F (16-18°C)	7-8 weeks**
Digitalis (128 plug)	Perennial	126,000	4,410	Best with light	No	70-75°F (21-24°C)	56 days	48-55°F (9-13°C)	16-18 weeks**
Dill (can direct sow)	Annual Vegetable	27,000	945		No	65-70°F (18-21°C)	30-43 days	55-60°F (13-15°C)	Spring, 4-5 weeks***
Dracaena indivisa	Annual	10,000	350	Best in darkness	Yes	Day 86°F (30°C) Night 68°F (20°C)	30-40 days	65-68°F (18-20°C)	10-12 months**
Dusty Miller (Silver Dust)	Annual	50,000-100,000	1,750-3,500		No	72-75°F (22-24°C)	31-48 days	60-65°F (15-18°C)	Spring, 7-9 weeks
Echinacea	Perennial	8,000	280		Yes	70°F (21°C)	14-21 days	50-55°F (10-13°C)	8-10 weeks***
Eggplant	Vegetable	6,000	210		Yes	70-75°F (21-24°C)	12-20 days	60-65°F (15-18°C)	4-6 weeks***
Eragrostis	Grass	107,800 (Pelleted)	3,800 (Pelleted)		No	64-68°F (18-20°C)	20-28 days	62-74°F (16-23°C)	6-8 weeks; cover seed lightly
Erysimum	Annual	14,000	500		Yes	68-72° (20-22°C)	28 days	55-60°F (13-15°C)	7-9 weeks
Festuca	Grass	22,600-28,500	800-1,000		No	68-72° (20-22°C)	21-28 days	58-60°F (14-15°C)	10-12 weeks**
Flowering Kale/Cabbage	Annual	7,000	245		Yes	65-70°F (18-21°C)	14-24 days	50-55°F (10-13°C)	Spring, 7-8 weeks**
Fuchsia	Annual	70,000	2,450		Yes	70-75°F (21-24°C)	29-49 days	65-68°F (18-20°C)	Spring, 8-10 weeks
Gaillardia (G. grandiflora) (128 plug)	Perennial	7,000	245	Best with light	No	70-75°F (21-24°C)	56 days	52-55°F (11-15°C)	10-12 weeks
Gazania	Annual	12,000	420		Yes	68-70°F (20-21°C)	25-28 days	55-60°F (13-15°C)	Spring, 7 weeks
Geranium	Annual	6,000	210		Yes	70-75°F (21-24°C)	17-25 days	65-70°F (18-21°C)	Spring, 8-11 weeks; Summer, 7-8 weeks
Geranium, Ivy	Annual	6,000	210		Yes	70-75°F (21-24°C)	12-20 days	60-65°F (15-18°C)	14-15 weeks (4-in./10-cm pots), 16-17 weeks (baskets); growth retardant may be needed
Gerbera	Annual	7,000	245		Yes	68-72°F (20-22°C)	25-30 days	60-65°F (15-18°C)	14-20 weeks (4-5-in./10-13-cm pots)*
Geum (128 plug)	Perennial	10,000	350	Best with light	No	65-70°F (18-21°C)	70 days	50-55°F (10-13°C)	10-11 weeks***
Gloxinia	Annual	800,000	28,000	Best with light	No	65-70°F (18-21°C)	35-42 days	65-68°F (18-20°C)	11-14 weeks (4.5-6-in./11-15-cm pots)*

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Gomphrena	Annual	11,000	385		Yes	68-75°F (20-24°C)	30-43 days	62-65°F (17-18°C)	Spring, 4-5 weeks
Helenium (288 plug)	Annual	5,000 (Multi-seed pellet)	206 (Multi-seed pellet)		Yes	65-75°F (18-24°C)	21-28 days	64-66°F (18-19°C)	5-7 weeks
Helichrysum bracteatum (Strawflower)	Annual	45,000	1,575		Yes	70-75°F (21-24°C)	27-34 days	62-65°F (17-18°C)	Spring, 6-6.5 weeks
Helichrysum microphyllum (Licorice Plant)	Annual	645,000	22,750		No	72-76°F (22-24°C)	42-49 days	62-65°F (16-18°C)	8-9 weeks**
Heliopsis (128 plug)	Perennial	8,000	280		Optional	68-77°F (20-25°C)	63 days	60-62°F (15-18°C)	8-10 weeks
Heuchera	Perennial	500,000	17,500	Best with light	No	65-75°F (18-22°C)	35-55 days	55-60°F (13-15°C)	6-9 weeks***
Hibiscus (200 plug)	Annual Perennial	2,835	100		Yes	68-72°F (20-24°C)	21-28 days	68-70°F (20-21°C)	9-13 weeks (quarts to gallons)
Hypoestes	Annual	18,000	630		No	70-75°F (21-24°C)	31-39 days	60-68°F (15-20°C)	Spring, 8-10 weeks
Iberis (128 plug)	Perennial	10,000	350	Best with light	No	60-65°F (15-18°C)	56 days	50-54°F (10-12°C)	10-14 weeks***
Impatiens auricoma	Annual	20,000-23,000	700-800	Best with light	No	72-76°F (22-24°C)	28-35 days	62-68°F (17-20°C)	Spring, 8-9 weeks**
Impatiens walleriana	Annual	40,000-60,000	1,400-2,100	Best with light	No	72-76°F (22-24°C)	34-43 days	62-68°F (17-20°C)	Spring, 5-6 weeks
Impatiens, New Guinea (I. hawkerii)	Annual	11,000-17,000	385-595	Best with light	No	72-78°F (22-25°C)	39-48 days	60-68°F (15-20°C)	Spring, 8-9 weeks**
Iresine	Annual	44,800	1,580	Best with light	Yes	72-76°F (22-24°C)	28 days	62-65°F (16-18°C)	5-7 weeks**
Isolepis	Grass	13,500	475	Best with light	No	64-68°F (18-20°C)	28-35 days	62-74°F (16-23°C)	4-6 weeks
Juncus	Grass	29,000 (Multi-seed pellet)	1,000 (Multi-seed pellet)	Best with light	No	64-68°F (18-20°C)	35-42 days	62-74°F (16-23°C)	5-7 weeks
Kale	Vegetable	6,000	210		Yes	65-70°F (18-21°C)	14-21 days	50-55°F (10-13°C)	4-6 weeks***
Kniphofia (Tritoma)	Perennial	9,000	315	Best with light	No	65-75°F (18-24°C)	30-45 days	60°F (15°C)	10-12 weeks***; transplant into larger packs (18s) or larger containers
Koeleria	Grass	79,000	2,800		No	64-68° (18-20°C)	21-28 days	64-68°F (18-20°C)	7-9 weeks**
Larkspur	Annual	10,000	350		Yes	70°F (21°C)	56 days	50-55°F (10-13°C)	4-6 weeks to transplant for cuts
Lavender angustifolia	Perennial	27,000-30,800	950-1,085		Yes	65-75°F (18-24°C)	21-35 days	65-70°F (18-21°C)	Spring, 15-18 weeks
Leek (direct sow)	Vegetable	8,000	282		Yes	70-75°F (21-24°C)	Direct sow	60-65°F (15-18°C)	14-16 weeks***
Lettuce	Vegetable	15,000	525	Best with light	No	65-70°F (18-21°C)	22-28 days	55-60°F (13-15°C)	6-9 weeks
Leucanthemum (128 plug)	Perennial	15,000-35,000	525-1,225		Yes	68-77°F (20-25°C)	56 days	50-55°F (10-13°C)	10-12 weeks***
Linaria	Annual	18,900 (Multi-seed pellet)	660 (Multi-seed pellet)		Yes	65-68°F (18-20°C)	28-35 days	50-60°F (10-15°C)	5-7 weeks
Lisianthus (Eustoma)	Annual	28,550 (Pelleted)	1,000 (Pelleted)	Best with light	No	68-72°F (20-22°C)	63-70 days	60-65°F (15-18°C)	Spring and Summer, 10-12 weeks

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Lobelia erinus	Annual	700,000-1,000,000	24,500-35,000	Best with light	No	70-76°F (21-24°C)	32-41 days	50-55°F (10-13°C)	Spring, 8-9 weeks
Lupinus (128 plug)	Perennial	1,000	35		Yes	65-70°F (18-21°C)	35 days	50-55°F (10-13°C)	10-12 weeks***
Luzula	Grass	57,000-68,000	2,000-2,400		No	68-70°F (20-21°C)	21-28 days	55-58°F (13-14°C)	9-10 weeks**
Lychnis (128 plug)	Perennial	57,000	2,010		Optional	65-68°F (18-20°C)	56 days	50-55°F (10-13°C)	10-12 weeks***
Marigold†	Annual	9,000	315		Yes	70-72°F (21-22°C)	30-33 days	60-62°F (15-17°C)	Spring, 6-8 weeks
Matricaria	Perennial	200,000	7,000	Best with light	No	70-72°F (21-22°C)	21-28 days	60-62°F (15-17°C)	Spring, 9-10 weeks
Melampodium	Annual	5,500	190		Yes	65-68°F (18-20°C)	20-24 days	60-62°F (15-17°C)	7-9 weeks
Millet, Ornamental (128 plug) (can direct sow)	Annual	3,290	116		Yes	72-78°F (22-25°C)	14-21 days	64-66°F (18-19°C)	Spring, 4-5 weeks
Mimulus	Annual	624,000	21,840	Best with light	No	60-70°F (15-21°C)	20-25 days	55-60°F (13-15°C)	8-9 weeks; long-day plants – light if sown prior to February 15
Mint	Perennial Vegetable	472,000	16,520		Yes	70-75°F (21-24°C)	17-22 days	55-60°F (13-15°C)	Spring, 3-4 weeks***
Monarda (128 plug)	Perennial	56,000	1,975		Yes	70-75°F (21-24°C)	56 days	55-58°F (13-14°C)	8-10 weeks***
Myosotis (128 plug)	Perennial	45,000	1,590	Best with light	No	68-74°F (20-23°C)	49 days	50-55°F (10-13°C)	10-12 weeks***
Nasturtium	Annual	220	8		Yes	65-70°F (18-21°C)	24-31 days	62-65°F (17-18°C)	Spring, 8-9 weeks
Nemesia	Annual	90,000	3,150		Yes	68-74°F (20-23°C)	14-21 days	55-60°F (13-15°C)	13-15 weeks**
Nicotiana	Annual	250,000	8,750	Best with light	No	70-75°F (21-24°C)	31-43 days	60-65°F (15-18°C)	Spring, 9 weeks
Oenothera (128 plug)	Perennial	6,500	227		Yes	65-72°F (18-22°C)	63 days	55-58°F (13-14°C)	10-12 weeks***
Onion (direct sow)	Vegetable	9,000	315		Yes	70°F (21°C)	Direct sow	55-60°F (13-15°C)	8-10 weeks***
Oregano	Perennial Vegetable	245,000	8,575		Yes	70°F (21°C)	18-28 days	50-55°F (10-13°C)	10-11 weeks***
Osteospermum	Annual	3,680	130		Yes	70-75°F (21-24°C)	28-35 days	60-62°F (15-17°C)	7-10 weeks**; hold plugs 2 weeks at 50°F (10°C) before transplant
Pansy	Annual	20,000-30,000	700-1,050		Yes	68-70°F (20-21°C)	31-42 days	50-55°F (10-13°C)	Spring, 8-9 weeks; Summer, 7-8 weeks
Parsley (can direct sow)	Vegetable	18,000	630		Yes	70° (21°C)	21-28 days	60-65°F (15-18°C)	7-10 weeks***
Pentas	Annual	31,900 (Pelleted)	1,125 (Pelleted)		No	74-78°F (23-25°C)	45-57 days	62-65°F (17-18°C)	Spring, 9 weeks
Pepper	Vegetable	4,000	140		Yes	75-78°F (24-25°C)	29-38 days	62-65°F (17-18°C)	Spring, 4-7 weeks
Pepper, Ornamental	Annual	6,000-8,000	210-280		Yes	75-78°F (24-25°C)	15-21 days	62-65°F (17-18°C)	12-16 weeks**
Petunia	Annual	245,000-285,000 33,000 (Pelleted)	8,575-9,975 1,200 (Pelleted)	Best with light	No	75-78°F (24-25°C)	31-43 days	60-62°F (15-17°C)	Spring, 6-8 weeks
Petunia, Easy Wave® Wave®, Tidal Wave® & Shock Wave®	Annual	33,000 (Pelleted)	1,200 (Pelleted)	Best with light	No	75-78°F (24-25°C)	31-43 days	60-65°F (15-18°C)	Spring, 7-10 weeks**
Phlox	Annual	14,000	490	Best in darkness	Yes	65-68°F (18-20°C)	33-42 days	50-55°F (10-13°C)	Spring, 8-9 weeks

Crop Name	Type	Seeds/Ounce	Seeds/Gram	Germination Lighting	Cover Seed ¹	Germination Temperature (Soil)	Sow To Transplant ²	Finishing Night Temperature	Transplant To Flower (Crop Time from 512 Plugs to 606 Finish Trays, 36 Cells per Flat)
Platycodon	Perennial	32,000	1,120	Best with light	No	68-70°F (20-21°C)	18-28 days	55-60°F (13-16°C)	6-9 weeks***
Plectranthus	Annual	21,200 (Pelleted)	1,100 (Pelleted)	Best with light	No	64-72°F (18-22°C)	35-42 days	64-68°F (18-20°C)	9-10 weeks**
Poppy (Orientale)	Perennial	95,000	3,325	Best with light	No	65-75°F (18-24°C)	23-35 days	50-55°F (10-13°C)	Spring, 15-16 weeks***
Poppy, Iceland (P. nudicaule) (128 plug)	Perennial	100,000	3,500	Best with light	No	60-65°F (15-18°C)	70 days	50-55°F (10-13°C)	13-14 weeks
Portulaca	Annual	280,000	9,800		No	78-80°F (25-26°C)	30-38 days	65-68°F (18-20°C)	Spring, 8 weeks
Primula acaulis (288 plug)	Annual	28,000-37,000	980-1,295	Best with light	No	65-68°F (18-20°C)	63-66 days	56-58°F (13-14°C)	Spring, 8-12 weeks
Primula obconica (288 plug)	Annual	190,000	6,650	Best with light	No	65-68°F (18-20°C)	40-45 days	60-65°F (15-18°C); finish at 50-55°F (10-13°C)	18 weeks**
Ptilotus	Annual	24,400	860		Yes	78-80°F (25-26°C)	35-42 days	60-65°F (15-18°C)	8-10 weeks; do not overwater
Purslane	Annual	280,000	9,800		No	78-80°F (25-26°C)	30-38 days	65-68°F (18-20°C)	8-9 weeks
Ranunculus (288 plug)	Annual	42,000	1,470		Yes	60-68°F (15-20°C)	49-70 days	40-50°F (4-10°C)	Fall, 14-16 weeks
Rudbeckia	Annual Perennial	25,000-80,000	875-2,800		Yes	70-72°F (21-22°C)	20-35 days	50-55°F (10-13°C)	8-10 weeks***; <i>R. fulgida</i> is much more difficult to germinate than <i>R. hirta</i>
Ruellia	Annual	13,850	488		Yes	72-76°F (22-24°C)	35-40 days	65-68°F (18-20°C)	15-16 weeks
Sage	Perennial Vegetable	3,000	105		Yes	70°F (21°C)	20-27 days	55-60°F (13-15°C)	Spring, 9-12 weeks**
Salpiglossis	Annual	125,000	4,375	Best in darkness	No	70-72°F (21-22°C)	26-36 days	50-55°F (10-13°C)	Spring, 13-14 weeks
Salvia (splendens & farinacea)	Annual	7,500	262		Yes	76-78°F (21-25°C)	33-42 days	65-68°F (18-20°C)	Spring, 8 weeks
Scabiosa (128 plug)	Perennial	2,400	84	Best with light	No	70-75°F (21-24°C)	42 days	50-55°F (10-13°C)	10-12 weeks***
Schizanthus (288 plug)	Annual	45,000	1,575	Best in darkness	No	60-72°F (15-22°C)	21-35 days	45-55°F (7-13°C)	Spring, 6-8 weeks***
Scutellaria	Annual	39,000	1,370	Best with light	No	70-75°F (21-24°C)	42-49 days	66-68°F (19-20°C)	8-11 weeks**
Sedum acre/spurium (128 plug)	Perennial	400,000	1,400	Best with light	No	60-70°F (15-21°C)	63 days	60-65°F (15-18°C)	11-14 weeks***
Snapdragon, Bedding	Annual	180,000-230,000	6,300-8,050		No	65-68°F (18-20°C)	32-43 days	45-55°F (7-13°C)	Spring, 10-12 weeks
Spilanthes	Annual	116,200	4,100	Best with light	Yes	72-76°F (22-24°C)	28-35 days	62-65°F (16-18°C)	6-7 weeks**
Stachys	Perennial	15,875 (Pelleted)	560 (Pelleted)		No	65-74°F (18-24°C)	28-35 days	64-68°F (18-19°C)	7-9 weeks***
Stipa	Grass	4,000-4,800 (Multi-seed pellet)	140-170 (Multi-seed pellet)	Best with light	No	64-75°F (18-24°C)	35-42 days	59-64°F (15-18°C)	6-7 weeks
Stock (Matthiola)	Annual	19,000	630		Yes	62-68°F (17-20°C)	22-26 days	50-55°F (10-13°C)	Fall, 12-13 weeks; Spring, 10-11 weeks

Crop Name	Type	Seeds/Ounce	Seeds/Gram	Germination Lighting	Cover Seed ¹	Germination Temperature (Soil)	Sow To Transplant ²	Finishing Night Temperature	Transplant To Flower (Crop Time from 512 Plugs to 606 Finish Trays, 36 Cells per Flat)
Strawberry F1	Annual	60,000	2,100		Yes	65-70°F (18-21°C)	21-28 days	60-62°F (15-17°C)	10-12 weeks (baskets in bud and bloom)
Sunflower (Helianthus) (200 plug) (can direct sow)	Annual	2,700	95		Yes	68-72°F (18-25°C)	21 days	61-68°F (17-20°C)	9-11 weeks (5.5-6-in./14-15-cm pots)
Sweet Pea (can direct sow)	Vining	350	12		Yes	55-68°F (13-20°C)	Direct sow to germ, 7-15 days	41-50°F (5-10°C); flower 45-60°F (7-15°C)	16-20 weeks
Talinum	Annual	26,500 (Pelleted)	935 (Pelleted)		Yes	68-74°F (20-24°C)	35 days	62-66°F (17-19°C)	4-5 weeks***
Tecoma	Annual	1,050	37		Yes	68-74°F (20-23°C)	35-40 days	65-68°F (18-20°C)	10-11 weeks
Thunbergia	Vining	1,100	38		Yes	70-75°F (21-24°C)	17-24 days	60-62°F (15-17°C)	Spring, 8-9 weeks
Thyme	Perennial Vegetable	124,000	4,340		Yes	70°F (21°C)	18-28 days	55-60°F (13-15°C)	11-12 weeks***
Tithonia (288 plug)	Annual	3,600	127		Yes	68-70°F (20-21°C)	28-35 days	60-62°F (15-17°C)	Spring, 6-10 weeks (6-in./15-cm pots to 1-gal. containers)
Tomato	Vegetable	9,000-11,000	315-385		Yes	70-75°F (21-24°C)	23-24 days	62-65°F (17-18°C)	Spring, 3-5 weeks***
Torenia	Annual	28,500-35,700 (Pelleted)	1,000-1,250 (Pelleted)	Best with light	No	72-75°F (22-24°C)	29-41 days	62-64°F (17-18°C)	Spring, 6-7 weeks
Trachelium	Annual	18,500-28,500 (Pelleted)	650-1,000 (Pelleted)	Best with light	No	70-72°F (21-22°C)	25-30 days	52-68°F (11-20°C)	10-14 weeks
Verbascum	Perennial	28,350	1,000	Best with light	No	70-72°F (21-22°C)	14-21 days	50°F (10°C)	9-11 weeks***; blooms first year from a February sowing
Verbena	Annual	10,000	350		Yes	75-80°F (24-26°C)	35-42 days	62-65°F (17-18°C)	Spring, 7-8 weeks; Summer, 6-7 weeks
Veronica (128 plug)	Perennial	221,000	7,735	Best with light	No	70-75°F (21-24°C)	49 days	55-58°F (13-14°C)	11-14 weeks***
Vinca (Catharanthus)	Annual	21,000	735	Best in darkness	Yes	78-80°F (25-26°C)	32-44 days	65-68°F (18-20°C)	Spring, 9 weeks
Viola	Annual	30,000-40,000	1,050-1,400		Yes	65-75°F (18-24°C)	40-45 days	50-55°F (10-13°C)	Fall, 8-9 weeks; Spring, 5-6 weeks
Zinnia angustifolia	Annual	60,000	2,116		Yes	68-72°F (20-22°C)	25-28 days	60-65°F (15-18°C)	Spring, 4-6 weeks
Zinnia elegans	Annual	2,000-6,000	70-210		Yes	68-72°F (20-22°C)	25-28 days	60-65°F (15-18°C)	Spring, 4-6 weeks
Zinnia hybrida	Annual	7,000-11,500	245-400		Yes	68-72°F (20-22°C)	25-28 days	60-65°F (15-18°C)	Spring, 4-6 weeks

1 Although light may be beneficial for germination, some species may benefit from a light covering to maintain moisture.

2 **288 Tray** - Add 7 to 10 days to the Sow-To-Transplant time.

384 Tray - Add 5 days to the Sow-To-Transplant time.

† French marigolds will finish 1.5 to 2 weeks earlier than African marigolds. African marigolds require short days to flower. If sown after February 15, give short days for 14 days in the plug tray.

*Finish as flowering plant

**4 to 4.5-in. (10 to 11-cm) pots

***Finish as green packs

Note: All seed counts are approximate due to variation based on a lot-by-lot comparison.

Seed counts may also vary widely between color and series.

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