

# 2009 AHS SEED EXCHANGE CATALOG

Since 1959, the AHS has sponsored and coordinated a seed exchange among its members. To celebrate the golden anniversary of the Seed Exchange, the first 300 members to submit their orders will receive 'Pot of Gold' Swiss chard seeds from the exchange's 2009 sponsor Renee's Garden. A copy of *Recipes from a Kitchen Garden: Volume Two* by Renee Shepherd and Fran Raboff will be given to participants who donate \$25 or more to support the program.

The following seeds were donated by AHS members, organizations, and seed companies from all over the country. The description supplied for each plant combines published information about the species with details supplied by the donors. Remember, named cultivars do not always come true from seed, so you may observe some variation among seedlings. Unless otherwise stated, plants grown from these seeds will grow best in full sun and well-aerated, moderately fertile soil.

Conditioning cycles (also known as stratification) should be two months unless otherwise stated. Warm conditioning, where recommended, should be done at about 70 degrees Fahrenheit; cold conditioning at 40 degrees. A "warm soil" is one that has reached a temperature of at least 70 degrees. U.S. Department of Agriculture (USDA) Plant-Hardiness and AHS Plant Heat Zone ratings tend to be conservative; plants may grow outside the ranges indicated. A USDA zone rating of 0-0 means that the plant is a true annual; it completes its life cycle and dies in a year or less. Germination times will vary depending on the temperature at which seeds are sown and the age of the seeds. Where exposing seeds to a conditioning cycle is recommended, the germination time given is after completion of the conditioning period.

## ANNUALS

**1 *Amaranthus caudatus*.** Love-lies-bleeding, tassel flower. Height: 3–5 feet. Bushy erect annual or short-lived perennial with tassel-like, pendent panicles of red flowers in summer. Tolerates poor soil. Sow seeds in mid-spring in warm soil, barely covered. Germinates in 7–14 days. Africa, India, Peru. Zones 10–11, 12–1.

**2 *Amaranthus hypochondriacus* 'Pygmy Torch'.** Dwarf amaranth cultivar. Height: 1–1½ feet. Bushy erect annual with oblong, lance-shaped dark purple-green leaves. Tiny maroon flowers on tassel-like cymes in summer to early fall. Sow seeds in mid-spring in warm soil, barely covered. Germinates in 7–14 days. Southern United States, Mexico. Zones 0–0, 12–1.

**3 *Antirrhinum majus*.** Liberty Series snapdragon. Height: 2½–3 feet. Snapdragons are short-lived perennials usually grown as cool-season annuals. The Liberty Series features long-blooming spikes in a wide range of colors. Sow seeds on surface of growing medium at 60–65 degrees in late winter and transplant outdoors in early spring. In warmer regions, seeds can be sown in late summer for fall planting. Germinates in 7–14 days. Southwestern Europe and Mediterranean. Zones 8–11, 12–1.

**4 *Begonia semperflorens*.** Wax begonia. Height: ½–1 foot. Compact tender perennial usually grown as an annual. Glossy, broad leaves and white flowers edged with pink from late spring to early fall. Sow seeds uncovered in warm soil. Seeds are very fine and can be difficult to work with. Germinates in 14–21 days. Plant outdoors after danger of frost has passed. Brazil. Zones 11, 12–1.

**5 *Calendula officinalis* 'Flashback'.** Pot marigold cultivar. Height: 1–2 feet. Fast growing,

## TO ORDER SEEDS

You may place your order online in the "Members-Only" area of the website, or by mail.

The deadline for ordering seeds is **March 3, 2009**. Members who donated to the 2009 seed exchange have first choice of seeds, but we must receive these orders post-marked by **January 30, 2009**.

erect, cool-season annual that has thick, oblong, slightly aromatic leaves with solitary, daisylike flowers. Double and semi-double flowers are shades of orange, apricot, rosy-peach, and cream, many with petals backed with deep red or maroon. Blooms prolifically from May to September where summers are not too hot. Tolerates part shade and poor soils. Sow seeds outdoors in early spring, or in autumn in regions with mild winters. Germinates in 5–14 days. Mediterranean. Zones 0–0, 7–1.

**6 *Calendula officinalis* 'Pacific Beauty Mix'.** Pot marigold cultivar. Height: 2 feet. Double flowers bloom in shades of orange, yellow, peach, and creamy white. Blooms prolifically from May to September. This cultivar withstands summer heat. See previous entry for additional information.

**7 *Catharanthus roseus* 'Victory Carmine' and 'Victory Lavender'.** Madagascar periwinkle cultivar mix. Height: 1 foot. Usually grown as a summer annual, this tender perennial has glossy, bright green leaves. This mix contains plants that produce carmine-rose flowers with white eyes and overlapping petals and plants with large round

lavender-colored blooms. Sow seeds indoors at 55–65 degrees Fahrenheit, 6–8 weeks before the last frost. Germinates in 15–20 days. Madagascar. Zones 11, 12–1.

**8 *Celosia* sp.** Cockscomb mix. Height: 3–4 feet. This upright, branching plant has large, feather-like pink to red flowers growing above lance-shaped foliage. Performs best in a sheltered position in full sun. Self sows. Germinates in 6–14 days. Pantropical. Zones 10–11, 9–2.

**9 *Ceratotheca triloba*.** African foxglove. Height: 4–5 feet. This annual has pale lavender flowers resembling foxglove flowers. Blooms summer to frost. Tolerates part shade and is very drought tolerant. Fuzzy, aromatic leaves are deer resistant. Sow indoors 6–8 weeks before the last frost date or outdoors after danger of frost has passed. Barely cover the seeds. **Caution: All parts of the plant are poisonous.** Germinates in 8–14 days. Southern Africa. Zones 11, 12–1.

**10 *Clarkia elegans* (syn. *Clarkia unguiculata*).** Mountain garland clarkia. Height: 2½–3 feet. Erect annual with multiple flowers on stems covered by ruffled ribbons of roselike small blossoms in shades of coral, salmon, rose-pink, lilac, and occasionally pure white. Blooms summer and fall. Sow outdoors in spring and fall in areas where ground does not freeze. Germinates in 7–14 days. California and Pacific Northwest. Zones 0–0, 9–1.

**11 *Cleome hassleriana*.** Cleome, spider flower. Height: 4–6 feet. A multibranched plant up to two feet wide with palmately compound leaves. White flowers bloom from summer to frost. Sow seeds outdoors after last frost date in light, preferably sandy soil in full to part sun. Self sows. Germinates in 7–14 days. South America. Zones 11, 12–1.

**12 *Cleome hassleriana*.** Cleome, spider flower. Height: 4–6 feet. Mix of purple, lavender, pink,

and white flowers. See previous entry for additional information.

**13 *Cleome hassleriana* ‘Cherry Queen’.**

Height: 4–5 feet. Cleome, spider flower cultivar. Numerous cherry-rose flowers with long stamens appear from summer to frost. See entry 11 for additional information.

***Coleus blumei* (see *Solenostemon*)**

**14 *Consolida ajacis* (syn. *C. ambigua*).** Larkspur, mixed colors. Height: 1–4 feet. This annual has dense clusters of flowers that bloom in early summer along upright stems above fernlike leaves. This mix blooms in deep blue, pink, and white. Grow in sunny, moist, cool conditions; site should receive afternoon shade in warm regions. Sow seeds indoors 6–8 weeks prior to last frost or outdoors: from USDA Zone 7 and south in fall, north of Zone 7 in spring. Germinates in 7–21 days. Mediterranean. Zones 0–0, 9–1.

**15 *Consolida ajacis* (syn. *C. ambigua*) ‘Giant Imperial Mix’.** Larkspur cultivar. Height: 3–4 feet. This annual has tall tapering spikes of pink, rose, purple, and white flowers that bloom in early summer above fernlike leaves. See previous entry for additional information.

**16 *Cosmos bipinnatus*.** Cosmos. Height: 4–6 feet. Upright, freely branching annual with feathery foliage and white flowers in summer. This plant tolerates dry, porous soils. Early pinching produces fuller, stronger plants. Deadhead to prolong flowering. Sow seeds outdoors in spring once soil has warmed. Self sows. Germinates in 5–10 days. Mexico. Zones 0–0, 12–1.

**17 *Cosmos bipinnatus* ‘Dazzler’.** Cosmos cultivar. Height: 4 feet. Upright, freely branching annual with feathery foliage and yellow-centered crimson flowers in summer. See previous entry for additional information.

**18 *Cosmos bipinnatus* ‘Sensation Mix’.** Cosmos cultivar. Height: 4 feet. Upright, freely branching annual with feathery foliage and pink, dark rose, or white flowers. See entry 16 for additional information.

**19 *Cosmos sulphureus*.** Orange cosmos. Height: 4–5 feet. Upright annual with showy, daisylike flowers above finely lobed foliage. Open bowl-shaped, orange or yellowish red flowerheads bloom throughout summer. Deadhead to prolong flowering. This plant tolerates dry, porous soils and is very heat tolerant. Sow outdoors in late spring. Germinates in 3–10 days. Central America. Zones 0–0, 12–1.

**20 *Cosmos sulphureus* ‘Lady Bird Mix.’** Dwarf cosmos cultivar. Height: 1 foot. Early-blooming cosmos variety with semi-double red, orange, and yellow flowers. See previous entry for additional information.

**21 *Datura innoxia* (syn. *D. meteloides*).** Thorn apple, angel’s trumpet. Height: 2–3 feet. A lush, exotic, sprawling plant with large, dark green leaves and hairy green stems. Intensely fragrant, 6- to 8-inch-long, trumpet-shaped white flowers suffused with lavender open in early evening, blooming midsummer to frost. Deadhead to promote continuous bloom; otherwise prickly, globular seedpods form. Self sows. Sow indoors in late winter at 60 degrees and transplant outdoors after weather stays above 55 degrees F, or sow outdoors in warm soil. Germinates in 7–14 days. **Caution: All parts of plant are poisonous.** Central America. Zones: 0–0, 12–1.

**22 *Dimorphotheca sinuata*.** African daisy. Height: 1 foot. Luminous, daisylike flowers in orange, yellow, peach, and white open in daylight. This annual is drought tolerant and thrives in cool, dry climates. Sow seeds indoor 4–6 weeks before last frost or outdoors once soil has warmed. Germinates in 4–10 days. South Africa. Zones 0–0, 8–1.

**23 *Emilia coccinea* (syn. *E. flammea*, *E. javanica*).** Tassel flower. Height: 1–2 feet. This annual develops a clump of oblong leaves from which erect stems develop throughout summer, topped with 1-inch clusters of flame red and deep orange flowers. Tolerates hot, dry locations. Sow seeds indoors 6–8 weeks prior to last frost or directly in the garden after soil is warm. Germinates in 1–2 weeks. Tropical Africa. Zones 0–0, 12–8.

**24 *Eschscholzia californica*.** California poppy mix. Height 1–1½ feet. Annual or short-lived perennial with finely divided blue-green foliage and poppylike flowers. This mix features cream-colored poppies that bloom first, soon joined by red-blooming plants. California poppies bloom in spring and again during the cool weather of fall and winter. Flowers fully open in the sun, and will close during cloudy days or if placed in the shade. Grows best in free draining sandy or loamy soil and is drought tolerant. Self sows. Germinates in 10–15 days. Oregon to coastal California. Zones 7–9, 12–1.

**25 *Eschscholzia californica*.** California poppy mix. Height 1–1½ feet. A mix of plants that bloom in shades of red, pink, orange, and yellow. The flowers can be single or semi-double, with pleated petals. See previous entry for additional information.

**26 *Eschscholzia californica* ‘Alba’.** California poppy cultivar. Height: 1–1½ feet. A selection with cream-colored flowers. See entry 24 for additional information.

**27 *Eschscholzia californica* ‘Mission Bells’.** California poppy cultivar. Height: 1 foot. This selection blooms with a mix of single and double white, yellow, orange, deep orange, scarlet-red and purple flowers. See entry 24 for additional information.

**28 *Gomphrena haageana*.** Globe amaranth mix. Height: 1–1½ feet. An upright annual that bears spiky flower balls on slender green stems from early summer to frost. This mix blooms in shades of red and orange. Flowers attract butterflies and are used for fresh and dried arrangements. Heat and drought tolerant. Sow seed, lightly covered, indoors 6 weeks before last frost date, or outdoors once soil has warmed. Germinates in 10–20 days. Central America. Zones 11, 12–1.

**29 *Helianthus annuus*.** Common sunflower mix. Fast-growing plant with dark green, heart-shaped, coarse leaves on thick hairy stems. A mix of several different sunflower selections in a variety of colors and heights. Excellent for cut flowers. Heat tolerant. Sow outdoors in early spring. Southwestern United States and Mexico. Germinates in 10–14 days. Zones 0–0, 12–1.

**30 *Helianthus annuus* ‘Sunbeam Golden Yellow’.** Common sunflower cultivar. Height: 5–6 feet. This “pollenless” selection is popular for its bright golden petals around a green center. See previous entry for additional information.

**31 *Helianthus annuus* ‘Sunbright Supreme’.** Common sunflower cultivar. Height: 5–6 feet. This selection flowers earlier and has shorter and stronger flower stems. Its golden yellow flowers have rounded petals. Makes excellent cut flowers. See entry 29 for additional information.

**32 *Impatiens balsamina*.** Rose balsam, touch-me-not. Height: 2–2½ feet. Erect plants with white, cream-yellow, pink to lilac, bright red, crimson, or bicolored flowers that bloom from summer to early autumn. Grows best in part shade and moist soil. Self sows. Sow indoors in spring or outdoors once soil warms up. Germinates in 5–10 days. Asia. Zones 0–0, 12–1.

**33 *Impatiens walleriana*.** Busy Lizzy, impatiens. Height: 1–2 feet. Mounding to upright tender perennial, grown as an annual, with a wide range of flower colors, including pastels, white, pink, orange, and violet. Blooms from midsummer to frost. Sow seeds indoors in spring or outdoors when soil warms up. Self sows. Germinates in 7–14 days. Eastern Africa. Zones 10–11, 12–1.

**34 *Lavatera trimestris* ‘Dwarf White Cherub’.** Annual mallow cultivar. Height: 2½ feet. Fast-growing, upright annual with shallowly lobed, mid to dark green leaves with heart-shaped bases. Four-inch-wide, hibiscuslike, white flowers bloom in summer. Good for cut flowers. Sow seed outdoors in late spring. Germinates in 15–20 days. Mediterranean. Zones 0–0, 12–1.

**35 *Lobularia maritima* (syn. *Alyssum maritimum*) ‘Carpet of Snow’.** Sweet alyssum cultivar. Height: 6–8 inches. Compact, low-growing tender perennial grown as an annual, with linear leaves and rounded clusters of tiny, sweetly scented

ed white flowers that bloom in summer. Ideal for containers and border edges. Sow seeds outdoors in late spring. Germinates in 5–14 days. Mediterranean, Canary Islands. Zones 10–11, 12–1.

**36 *Lobularia maritima*** (syn. *Alyssum maritimum*) ‘**Royal Carpet**’. Sweet alyssum cultivar. Height 3–5 inches. Spicy-scented royal-purple blossoms form a dense, low-growing carpet. See entry above for additional information.

**37 *Matthiola incana***. Ten-week stock mix. Height: 1–1½ feet. Compact, branching annual with pubescent, gray green, lance-shaped leaves. Sweetly scented, mostly double flowers—in a range of colors from white to pink, lilac, carmine, and purple—bloom on short spikes in early spring to midsummer. Stock grows best in cool to moderate temperatures. Sow seeds where they are to grow, in fall in warmer regions or after last frost date in cooler regions. Germinates in 10–14 days. Southern Europe, Mediterranean. Zones 5–8, 8–5.

**38 *Mirabilis jalapa***. Four o’clock, marvel of Peru mix. Height: 2–3 feet. Fast-growing, bushy, tender perennial that is usually grown as an annual north of USDA Zone 8. Its fragrant, tubular flowers open at dusk or on cloudy days. This mix blooms in yellow, red, and pink. Tolerates part shade, especially in warm regions. Sow seeds indoors in early spring, or outdoors once soil has warmed. Self sows. Germinates in 7–14 days. Tropical Americas. Zones 8–11, 12–1.

**39 *Mirabilis jalapa***. Four o’clock, marvel of Peru mix. Height: 2–3 feet. This mixture has bicolor flowers in red and yellow or pink and white. See entry above for additional information.

**40 *Mirabilis jalapa***. Four o’clock, marvel of Peru. Height: 2–3 feet. This selection has white flowers. See entry 38 for additional information.

**41 *Nicandra physalodes***. Apple of Peru, shoo-fly plant. Height: 3–8 feet. Upright annual with wavy-margined leaves that produces violet-blue, bell-shaped flowers with white throats from summer to autumn. Fruits have papery, Chinese lanternlike husks that are useful for arrangements. Sow seeds outdoors in mid-spring. Self sows. Germinates in 7–14 days. **Caution: All parts of plant are poisonous.** Peru. Zones 0–0, 9–1.

**42 *Nicotiana alata*** (syn. *N. ×sanderæ*). Flowering tobacco, jasmine tobacco. Height: 1–1½ feet. Erect, sparsely branched, short lived perennial grown as an annual. Pubescent leaves and stems are sticky to the touch. A mix of white to scarlet tubular flowers bloom on short racemes from early summer to fall. Flowers release light fragrance at dusk. Sow indoors 6–8 weeks before last frost date or outdoors after last frost. Self sows. Germinates in 7–14 days. Brazil and Argentina. Zones 10–11, 12–1.

**43 *Nicotiana sylvestris***. Woodland tobacco. Height: 5 feet. A basal rosette of bright green, sticky leaves up to two feet long, gives rise to a thick stalk, topped in midsummer by long, tubular, fragrant white flowers. Tolerates some shade. Sow indoors 6–8 weeks before last frost date or outdoors after last frost. Self sows. Germinates in 7–14 days. Argentina. Zones 10–11, 12–1.

**44 *Nicotiana* spp.** Mixed flowering tobacco selections. Height: 2–3 feet. Mixture of lime tobacco (*N. langsdorffii*) and *N.* ‘Tinkerbell’ seeds. Lime tobacco has oval-shaped leaves and chartreuse, tubular flowers in drooping panicles. ‘Tinkerbell’ has bicolor flowers with pale green tubes flaring open to reveal dusky rose interiors. Both bloom from midsummer to fall. For germination requirements, see entry above. Brazil and hybrid origin. Zones 10–11, 12–1.

**45 *Nigella damascena***. Love-in-a-mist. Height: 1–3 feet. Annual with white starlike flowers nestled in fine, needlelike leaves. Inch-long egg-shaped seed capsules add interest in fall and in dried arrangements. Flowers for 4–6 weeks, beginning in July. Self sows. Direct sow after last frost date. Germinates in 7–14 days. Southern Europe, northern Africa. Zones 0–0, 12–1.

**46 *Papaver rhoeas***. Shirley poppy, corn poppy. Height: 2–3 feet. This annual produces cup-shaped, silky, single and double flowers from spring to early summer. This mix blooms in a variety of colors including cream, apricot, peach, coral, lavender, pink, bicolors, and picotees. Sow seeds outdoors, barely covered, in early spring. Self sows. Germinates in 7–21 days. Northern Africa and Eurasia, widely naturalized. Zones 0–0, 12–1.

**47 *Papaver somniferum***. Breadseed poppy mix. Height: 3–4 feet. Short-lived perennial, commonly grown as an annual, with gray-green, serrated leaves. This mix contains antique feather or carnation poppies (*Laciniatum* group) with tall, double flowered, deeply cut, four-inch blossoms; and peony flowered poppies (*Paeoniflorum* group) with softly ruffled petals. Flowers are in pastel shades of red, pink, salmon, purple, and white. Flowers are followed by large, gray-brown seedpods that are good for dried arrangements. Tolerates part shade. Sow seeds, uncovered, in early spring, just before last frost date. Germinates in 7–14 days. **Caution: All parts of plant are poisonous.** Eurasia. Zones 3–8, 8–1.

**48 *Papaver somniferum***. Breadseed poppy. Height: 3–4 feet. This selection produces double pink flowers. See entry above for additional information.

**49 *Papaver somniferum***. Breadseed poppy. Height: 1–1½ feet. This selection has dark purple flowers and ornamental seedpods. See entry 47 for additional information.

**50 *Papaver somniferum* ‘Lauren’s Grape’**. Breadseed poppy. Height: 3–4 feet. This cultivar produces dark purple single flowers. See entry 47 for additional information.

**51 *Papaver* sp.** Hungarian breadseed poppy. Height 3–4 feet. This Eastern European heirloom has luminous white or pale lavender-pink petals with contrasting dark centers. The seeds have a sweet, nutty flavor and are prized for cooking and baking. See entry 47 for additional information.

**52 *Portulaca grandiflora***. Moss rose. Height: ½ foot. A low-growing, somewhat prostrate plant with fleshy, narrow leaves and stems, and roselike flowers in a range of colors from yellow to pink and red. Blooms early summer to frost and tolerates full sun and sandy or dry soils. Good for rock gardens, groundcovers, and borders. Sow seeds indoors at 70 degrees, or outside after danger of frost. Germinates in 7–21 days. Brazil, Argentina, Uruguay. Zones 9–11, 12–1.

**53 *Ricinus communis* ‘Carmencita’**. Castor bean cultivar. Height: 5–10 feet. A tree in its tropical habitat, this plant is usually grown as an annual in North America. It has an erect, branching habit, with large, multi-lobed, dark-green leaves on thick reddish-purple stems. Small clusters of red flowers bloom in leaf axils in mid- to late summer, followed by formation of globular, prickly seedpods. Soak seeds in water for 24 hours before sowing outdoors in late spring once soil warms. Has invasive tendencies in California, Texas, and Florida. **Caution: All parts of the plant are highly poisonous, particularly the beanlike seeds.** Germinates in 10–21 days. Northeastern Africa to western Asia. Zones 10–11, 12–1.

**54 *Rudbeckia hirta*** (syn. *R. gloriosa*). Black-eyed Susan, gloriosa daisy. Height: 1½–3 feet. Usually grown as an annual, this erect biennial or short-lived perennial has a rounded habit, with hairy stems and leaves. Its daisylike yellow to orange flowers with dark central cones bloom from summer to fall. Deadhead to promote rebloom. Heat and drought tolerant, but doesn’t do well in humid climates. Self sows. Sow seeds, barely covered, outdoors after soil warms in spring. Germinates in 7–21 days. Central United States. Zones 3–8, 8–1.

**55 *Salvia coccinea***. Tropical or Texas sage. Height: 2–4 feet. Erect, bushy tender perennial, usually grown as an annual, has oval to heart-shaped, toothed, dark green leaves. Tubular, scarlet red flowers are produced from midsummer to first frost on slender, open, terminal spikes. Attracts pollinators. Self sows. Sow seeds indoors 6–8 weeks prior to last frost or outdoors in warm soil. Germinates in 7–14 days. Mexico, Central America, widely naturalized. Zones 11, 12–1.

**56 *Salvia coccinea* ‘Coral Nymph’**. Tropical or Texas sage cultivar. Height: 1–2 feet. This lower growing selection has bicolored flowers that are

pale pink with a coral pink lip. See entry above for additional information.

**57 *Solenostemon scutellarioides*** (syn. *Coleus blumei*). Height: 1 foot. A bushy annual or tender perennial grown for colorful patterned foliage. Spikes of insignificant white or pale pink flowers bloom in late summer. Grow in part to full shade. Ideal for containers or annual border. Pinch stems to encourage bushiness and remove flowers. Sow seeds indoors 4–5 weeks before last frost date. Germinates in 7–14 days. Southeastern Asia. Zones II, 12–I.

**58 *Tagetes erecta* ‘Crackerjack’**. African marigold cultivar. Height: 2½–3 feet. Compact annual with pinnately compound leaves. This variety blooms in a mix of fully double yellow, gold, and orange pom-pomlike flowers to 5 inches across from early summer to early autumn. Heat tolerant and excellent for edging, borders, or window boxes. Deadhead regularly to promote continuous blooming. Sow seeds indoors 4–6 weeks prior to last frost date or outdoors in late spring. Germinates in 7–14 days. Hybrid origin. Zones O–O, 12–I.

**59 *Tagetes patula* ‘Dainty Marietta’**. French marigold cultivar. Height: 10 inches. A compact, densely branched marigold with lacy, bright green foliage. Bright, frilly-edged, golden-yellow flowers with burgundy centers bloom from midsummer to fall. Sow seeds indoors 4–6 weeks prior to last frost date or outdoors in late spring. Germinates in 7–14 days. Hybrid origin. Zones O–O, 12–I.

**60 *Tagetes patula* ‘Lemon Drop’**. French marigold cultivar. Height: 8 inches. This selection has clusters of bright, double, lemon yellow flowers. See entry above for additional information.

**61 *Tagetes patula* ‘Petite’ mix**. French marigold cultivar. Height: 8 inches. This selection has showy, double, multicolored, inch-wide blooms in shades of orange, yellow, and gold. For additional information, see entry 59. Germinates in 7–14 days. Hybrid origin. Zones O–O, 12–I.

**62 *Tagetes tenuifolia* ‘Starfire’**. Signet marigold cultivar. Height: 6–10 inches. Soft mounding plants with fernlike foliage bloom from late spring to fall in three colors: bright paprika, rich gold, and a clear lemon yellow. Foliage has aromatic, lemon verbenalike scent. For additional information, see entry 59.

**63 *Tithonia rotundifolia***. Mexican sunflower. Height: 4–6 feet. An erect, branching plant with large, hairy, dark green leaves. Three-inch-diameter daisylike flowers are deep orange with orange-yellow centers, blooming from midsummer to fall. Tolerant of extreme heat and drought, but prone to fungal diseases in areas with high humidity. Sow outdoors, uncovered, when soil warms. Germinates in 7–21 days. Mexico, Central America. Zones II, 12–I.

**64 *Tropaeolum majus* ‘Empress of India’**. Nasturtium. Height: 1 foot. Rambling, vinelike plant with rounded, bright green leaves and large, bright red flowers that bloom from summer to autumn. Flowers best in poor soil. Useful in containers or front of border. The young leaves, flowers, and unripe fruits are edible. Tolerates light or dappled shade. Sow seeds outdoors in mid-spring. Germinates in 7–14 days. Central and South America. Zones II, 12–I.

**65 *Tropaeolum majus* ‘Tall Single Mixed Colors’**. Nasturtium. Height: 5 feet. This selection features a mix of orange, gold, and red flowers and can be used as a vine or trailer. For additional information, see entry above.

**66 *Verbena bonariensis***. Purple top vervain, Brazilian verbena. Height: 3 feet. Upright, open clump-forming perennial, grown as an annual where not hardy. Square, wiry, branching stems bear sparse lance-shaped, clasping leaves with toothed margins. Small, rounded terminal clusters of pale purple flowers bloom from midsummer to frost. Heat and drought tolerant. Self sows and is considered weedy in some mild winter regions. Sow indoors at 70 degrees in late winter, or outdoors after last frost date. Germinates in 21–28 days. South America. Zones 7–II, II–I.

**67 *Viola tricolor* ‘Helen Mount’**. Johnny-jump-up cultivar. Height: 6–9 inches. Tidy, low-growing annual or short-lived perennial with oval leaves. This old fashioned selection has showy purple, yellow, and white flowers that bloom from early spring into summer. Sow seeds indoors at 70 degrees in late winter, barely covered; warm region gardeners can sow seeds in fall for winter or early spring bloom. Self sows. Germinates in 7–14 days. Worldwide. Zones 5–9, 10–I.

**68 *Zinnia elegans* ‘California Giants’**. Bedding zinnia cultivar mix. Height: 3–3½ feet. Upright, bushy annual with pubescent, lance-shaped leaves that features 4-inch-wide, daisylike flowers. This mix features four-inch, dahlielike, double blooms in orange, rose, scarlet, white, and yellow colors. Deadhead regularly for summer-long flowering. Sow seeds indoors 4–6 weeks before last frost, or outdoors in late spring; barely cover seeds. Germinates in 7–21 days. Mexico. Zones O–O, 12–I.

**69 *Zinnia elegans* Short Stuff series**. Bedding zinnia cultivar mix. Height 8–10 inches. This mix blooms in white, coral, deep red, cherry, scarlet, orange, and gold. For additional information, see entry above.

**70 *Zinnia elegans* ‘Swizzle’**. Bedding zinnia cultivar mix. Height: 12 inches. This dwarf mix features bicolor flowers with either scarlet petals with yellow tips or cherry petals with ivory tips. See entry 68 for additional information.

**71 *Zinnia linearis*** (syn. *Z. angustifolia*) ‘Classic’. Narrow-leaf zinnia cultivar mix. Height: 1½–1

foot. Compact, branching plants have hairy stems and thin, straplike leaves. In summer, inch-wide daisylike flowers in bright shades of orange, yellow, and white bloom profusely. Resistant to mildew and drought. Sow seeds indoors 4–6 weeks before last frost, or outdoors in late spring; barely cover seeds. Germinates in 7–10 days. Mexico, South-eastern United States. Zones O–O, 12–I.

**72 *Zinnia* spp.** Zinnia mix. Height: 1½ feet. This mix of zinnias features flowers in shades of red, pink, purple, orange, yellow, and white. For additional information, see entry above.

## HERBACEOUS PERENNIALS, BIENNIALS, AND GRASSES

**73 *Actaea racemosa*** (syn. *Cimicifuga racemosa*) mixed with the cultivar ‘**Atropurpurea**’. Black cohosh. Height: 4–7 feet. This clump-forming perennial has dark green compound basal leaves composed of 3 deeply serrated, 3-part leaflets. In mid-summer, creamy white flowers are borne on wandlike racemes that extend above the foliage. Part shade and moist, loamy, acid soil. Warm condition, then cold condition seeds. Germination can be erratic and take up to a year. Eastern and central North America. Zones 3–8, 9–I.

**74 *Alcea rosea***. Common hollyhock. Height: 5–6 feet. A vigorous, upright biennial or short-lived perennial. Leaves are shallowly lobed, alternate. This selection has pink flowers with yellow centers. Deadhead to encourage rebloom. May require staking. Self sows. Sow seeds indoors two weeks before last frost date or outdoors in mid-spring; barely cover seeds. Germinates in 1–2 weeks. Mediterranean. Zones 3–9, 10–3.

**75 *Alcea rosea***. Common hollyhock. Height: 4–6 feet. This selection has red flowers. For additional information, see entry above.

**76 *Alcea rosea***. Common hollyhock. Height: 4–6 feet. This selection has yellow flowers. For additional information, see entry 74.

**77 *Alcea rosea* ‘Chater’s Double White’**. Common hollyhock cultivar. Height: 5–6 feet. This selection bears white, fully double blooms, borne in terminal spikes from early to late summer. For additional information, see entry 74.

**78 *Alcea rosea* ‘Indian Spring’ mix**. Common hollyhock mix. Height: 5–6 feet. This mix of old-fashioned, single-flowered hollyhocks (an All-America Selections winner in 1949) blooms in shades of pink, rose, red, and white. For additional information, see entry 74.

**79 *Alcea rosea* ‘Summer Carnival’ mix**. Common hollyhock cultivar mix. Height: 2–4 feet. This compact mix produces double blooms in red, pink, rose, yellow, and white. For additional information, see entry 74.

**80 *Alcea rosea* 'The Watchman'**. Common hollyhock cultivar. Height: 5–7 feet. This heirloom variety, grown by Thomas Jefferson at his Monticello estate, has deep maroon to purple flowers that appear almost black. For additional information, see entry 74.

**81 *Anemone coronaria* 'Harmony White'**. Poppy anemone cultivar. Height: 1 foot. Short-lived tuberous perennial with ferny green foliage and masses of white flowers with dark centers that bloom from spring into early summer. Grows best in free-draining soil. Good for containers and as cut flowers. Cold condition for 2–3 weeks before sowing outdoors in spring. Germinates in 10–14 days. Mediterranean. Zones 6–9, 10–3.

**82 *Aquilegia hybrida***. McKana hybrids. Columbine cultivar. Height: 2½ feet. Clump-forming perennials produce delicate, fernlike, blue-green compound leaves. In late spring to early summer, large flowers with spreading sepals and short, hooked spurs bloom in mixed colors including yellow, pink, red, blue, purple, and bicolors. Grow best in part shade and rich, evenly moist soil. Cold condition seeds before germinating at 70 degrees or sow outdoors in fall; do not cover seeds. Hybrid origin. Germinates in 7–30 days. Zones 3–9, 9–4.

**83 *Aquilegia* sp.** Height: 1–3 feet. This selection has blue flowers. Origin unknown. See entry above for additional information.

**84 *Aquilegia* spp.** Mixed columbine species. Height: 1–3 feet. This mix has red, white, purple, blue, and yellow flowers in singles, ruffles, and doubles. Origin unknown. See entry 82 for additional information.

**85 *Asclepias curassavica***. Bloodflower. Height: 3 feet. This annual or short-lived tender perennial has a shrubby habit with straight stems clad in narrow, opposing leaves. It bears terminal clusters of orange-red flowers with yellow centers from summer to fall. A food source for butterfly larvae. Milky sap may cause skin irritation. Self sows in subtropical areas. Sow seeds outdoors after last frost date. Germinates in 14–21 days. South America. Zones 9–11, 12–3.

**86 *Asclepias incarnata***. Swamp milkweed. Height: 3 feet. An upright, densely branched perennial that bears clusters of vanilla-scented, two-toned pinkish to rosy flowers from early summer into fall. Attracts butterflies and other pollinators. Thrives in moist, sunny sites but tolerates well-drained soil. Cold condition then warm condition seeds; do not cover seeds. Germinates in 7–21 days. Eastern United States. Zones 3–9, 9–2.

**87 *Asclepias incarnata* 'Milkmaid'**. Swamp milkweed cultivar. Height: 3–4 feet. This cultivar bears creamy white flowers. See entry above for additional information.

**88 *Asclepias tuberosa***. Butterfly weed. Height: 2–3 feet. Clusters of bright orange flowers bloom from midsummer to fall on erect stems clad in downy, willowlike leaves. Decorative narrow seed capsules ripen in late summer or fall. Thrives in drier, infertile soils and is suited to meadow areas. Attracts butterflies and other pollinators. Sow seeds outdoors in fall or early spring. Does not transplant well due to its deep tap root. Self sows. Germinates in 7–30 days. Eastern and southern North America. Zones 4–9, 9–2.

**89 *Aster ericoides* (syn. *Symphotrichum ericoides*) 'Monte Cassino'**. Heath aster cultivar. Height: 2–3 feet. Wispy foliage with white daisy-like flowers from late summer through fall. Sow seeds outdoors in early spring or late autumn, barely covered. Germinates in 7–14 days. Eastern and central North America. Zones 5–8, 8–1.

**90 *Aster novae-angliae* (syn. *Symphotrichum novae-angliae*)**. New England aster. Height: 4–6 feet. Perennial with daisylike flowers in violet-purple rays around a yellow center. Flowers appear from late summer through fall on erect branched stems clasped by long, narrow leaves. May require staking. Sow seeds indoors in late winter. Germinates in 7–14 days. East and central North America. Zones 4–8, 8–1.

**91 *Baptisia australis***. Plains false indigo. Height: 5 feet. A shrubby perennial with attractive blue-green foliage and dark blue pealike flowers that bloom in long racemes in midsummer. Clump-forming, spreads by rhizomes. Sow outdoors in late fall or indoors in early spring. Germinates in 7–35 days. Southeastern United States. Zones 3–9, 9–1.

**92 *Belamcanda chinensis***. Blackberry lily. Height: 1–3 feet. A rhizomatous iris relative that bears a succession of yellow to orange-red, spotted flowers up to 2 inches across in summer. Semi-erect, sword-shaped leaves are clustered at the base. Decorative fruit capsules split in late summer or early fall to expose shiny black seeds. Cold-condition seeds then germinate at 70 degrees. Germinates in 15–21 days. Asia. Zones 5–9, 9–5.

**93 *Carex muskingumensis***. Palm sedge. Height: 2½ feet. Loosely tufted, deciduous, grasslike perennial has narrow stems topped by whorls of narrow, bright green leaves. Clusters of conelike golden flowers develop in early to midsummer. Requires moist or wet soil in sun or part shade. May spread quickly in fertile soils. Cold condition seeds and sow in spring. Germinates in 7–28 days. Eastern and Central North America. Zones 3–8, 8–1.

**94 *Coreopsis* 'Sunburst'**. Coreopsis cultivar. Height: 2 feet. Upright plant forms tidy clumps of narrow, lush dark green lance-shaped leaves. Large, golden-yellow, semi-double and double flowers with dark yellow centers bloom at the tips of slender stems from early to late summer. Dead-

head to extend flowering period. Sow seeds indoors 4–6 weeks prior to last frost date. Germinates in 14–21 days. Southern United States. Zones 4–9, 9–1.

**95 *Crocosmia* 'Emberglow'**. Crocosmia, montbretia cultivar. Height: 2–2½ feet. Corm-forming perennial with medium green, sword-shaped leaves in basal clumps. Deep red flowers held above leaves on spikes that arch near the tip. Buds open from the base to the tip and spent flowers drop cleanly. Blooms in mid- to late summer. Tolerates light shade. In cooler regions, corms can be dug in late summer for overwintering. Lift and divide congested clumps in spring to maintain vigor. Sow seeds indoors in warm soil in late winter, barely covered. Germinates in 30–90 days. Southern Africa. Zones 6–9, 9–6.

**96 *Crocosmia* 'Lucifer'**. Crocosmia, montbretia cultivar. Height: 3–4 feet. This selection is taller, with bright red flowers. For additional information, see entry above.

**97 *Dianthus barbatus***. Sweet William double-flowered cultivar mix. Height: 1½–2 feet. This short-lived perennial or biennial has erect stems clad in lance-shaped leaves. Compact terminal clusters of fringed flowers bloom from late spring into early summer in shades of red, pink, white, and bicolors. Ideal for cut flowers. Tolerates part shade, especially in warm climates. Self sows. Start seeds indoors 6–8 weeks before last frost. Germinates in 7–14 days. Southern Europe. Zones 4–9, 9–1.

**98 *Dianthus deltooides* 'Arctic Fire'**. Maiden pink cultivar. Height: 1½–1 foot. A tufted or mat-forming perennial bearing grasslike blue-green foliage. White flowers have serrated edges and red "eyes" in the center. Flowers bloom on solitary spikes just above the foliage in early to midsummer and may rebloom if deadheaded. In warmer regions, site in part shade. Sow seeds, covered lightly, indoors in late winter or outdoors in spring. Germinates in 7–21 days. Europe. Zones 3–9, 9–1.

**99 *Dierama pulcherrimum***. Fairy wands, angel's fishing rods. Height: 5 feet. Growing from a corm, or swollen underground stem, this iris relative produces strong, wiry stems and clumps of stiff, grasslike, foliage. In late spring to midsummer, the pink funnel-shaped flowers bloom in small clusters at the tips of arching stems. Must have excellent drainage. Sow seeds indoors in late winter and grow on in containers for a year to allow corms to develop. Germinates in 7–28 days. South Africa. Zones 8–10, 10–7.

**100 *Digitalis grandiflora***. Yellow foxglove. Height: 2 feet. This biennial or short-lived perennial has finely toothed, often glossy leaves 3–10 inches long. The pale yellow flowers, etched inside with decorative brown veins, are produced on loose spikes from early to midsummer. Dead-head for repeat bloom. Sow seeds indoors at 70

degrees in late winter, or outdoors once soil has warmed. Self sows. Germinates in 10–20 days.

**Caution:** *All parts are poisonous.* Southern Europe to Siberia. Zones 3–8, 8–1.

**101 *Digitalis purpurea*.** Common foxglove. Height: 2–6 feet. Biennial or tender perennial with erect stems that are densely covered with lance-shaped leaves. One-sided racemes bear lavender-purple flowers. Tolerates part shade. Deadhead flowers before seeds set to extend life-span and avoid self-sowing. Seeds sown outdoors in early fall should flower the following summer; seeds sown in late winter to early spring may take two years to bloom. Self sows. Sow seeds, uncovered, in warm soil. Germinates in 10–20 days. Central Europe. Zones 4–8, 9–3.

**102 *Digitalis purpurea* ‘Excelsior’ mix.** Common foxglove cultivar mix. Height: 4 feet. This mix includes flowers in shades of purple, pink, rose, yellow, and white. For additional information, see entry above.

**103 *Digitalis* spp.** Foxglove mix. Height: 3–4 feet. This mix includes a variety of flower colors, including white, purple, and pale yellow with small brown spots. Germinates in 10–15 days. Europe, northwestern Africa, and central Asia. Zones 5–9, 10–1.

**104 *Echinacea purpurea*.** Purple coneflower. Height: 3–4 feet. Erect perennial with hairy, red tinged green stems, hairy ovate basal leaves, and ovate to lance-shaped stem leaves. Flowerheads to five inches across appear from midsummer to early autumn, composed of conical, spikey brown discs surrounded by slightly reflexed purple rays. Sow seeds outdoors in fall or spring after cold-conditioning. Germinates in 10–20 days. Eastern and central United States. Zones 3–9, 9–1.

**105 *Echinacea purpurea* ‘Starlight’.** Height: 2–3 feet. This selection has vibrant carmine-rose ray petals surrounding burnt orange central disks. For additional information, see entry above.

**106 *Echinacea* spp.** *Echinacea* species mix. Includes *E. purpurea* and *E. purpurea* ‘Starlight’, as well as *E. purpurea* ‘White Swan’ (Height: 1–3 feet. A coneflower with flowerheads up to 4½ inches across composed of white ray petals around prickly, orange-brown central cones), and *E. purpurea* ‘Magnus’ (the petals of this purple flowering coneflower are held horizontally, providing a thick bold look to the bloom). For additional information, see entry 104.

**107 *Echinops bannaticus*.** Globe thistle. Height: 3–4 feet. An erect perennial that develops stands of sturdy stems with thistlelike leaves. Blue flowers, which bloom in midsummer, are tightly grouped into large, spherical, compound heads. Heat-tolerant, low-maintenance plant. Excellent for cutting and dried arrangements. Sow seeds indoors in late

winter at 70 degrees, or sow directly in the garden once the soil warms up. Germinates in 15–60 days. Southeastern Europe. Zones 5–9, 9–5.

**108 *Eupatorium rugosum*.** White snakeroot. Height: 4–6 feet. Clump-forming, rhizomatous perennial with stiff brown stems and gray green leaves with serrated edges. Clusters of small white flowers are produced from late summer through fall. Attracts butterflies. Cold condition seeds or sow outdoors in fall. Germinates in 21–30 days. Eastern North America. Zones 4–8, 8–2.

**109 *Gaillardia × grandiflora*.** Blanket flower. Height: 2 feet. Leaves are long, finely lobed, and hairy. This mix bears large red, gold, and yellow daisylike flowers in summer and fall. Drought tolerant. Sow seeds indoors 8–10 weeks prior to last frost or outdoors once soil warms. Germinates in 7–14 days. Western United States. Zones 3–8, 12–1.

**110 *Gazania rigens* ‘Daybreak’ series.** Treasure flower cultivar mix. Height: 8 inches. This tender perennial makes a good groundcover, border, or container plant. This mix includes bronze, orange, yellow, bright pink, and white large daisylike flowers that bloom all summer. Free draining soil. Drought tolerant. Sow seeds indoors 6–8 weeks before last frost date or outdoors in spring. Germinates in 7–10 days. South Africa. Zones 8–10, 10–8.

**111 *Gentiana andrewsii*.** Bottle gentian. Height: 1–2 feet. This erect perennial has opposite, lance-shaped leaves. In late summer, dark blue, urn-shaped flowers cluster in a terminal inflorescence. The flowers expand, but never open. Grows best in areas where summer nights are cool. Alternate cold and warm conditioning; germination is erratic and can take up to a year. Northeastern and central North America. Zones 3–7, 8–1.

**112 *Helenium autumnale*.** Sneezeweed. Height: 2½–6 feet. A tall plant with an erect habit. Elongated, alternate, serrated leaves and daisylike yellow flowers that bloom late summer to frost. Sow indoors 8–10 weeks before last frost date or outdoors in early spring. Germinates in 7–10 days. Eastern North America. Zones 4–8, 8–1.

**113 *Helenium* ‘Mardi Gras’.** Sneezeweed cultivar. Height: 2½–3 feet. Sturdy stems bear upright clumps of blooms of yellow petals splashed with orange-red that form a wild pattern around deep brown center cones. See entry above for additional information.

**114 *Helianthus maximiliani*.** Maximilian sunflower. Height: 7–10 feet. This statuesque plant has shallow-toothed, grayish-green, lance-shaped foliage up to 8 inches long. The 3-inch-diameter golden yellow flowers bloom in spiky inflorescences from late summer into autumn. Self sows and may become invasive. Sow seeds outdoors in

spring. Germinates in 1–3 days. North America. Zones 4–9, 11–3.

**115 *Hibiscus moscheutos*.** Rose mallow. Height: 3–6 feet. Strong growing woody based perennial with large pink, funnel-shaped flowers. Does well in wetlands and near water sources. Seeds should be sown, uncovered, in fall. Germinates in 15–30 days. Eastern United States. Zones 5–10, 12–1.

**116 *Hibiscus moscheutos* ‘Disco Belle White’.** Rose mallow cultivar. Height: 2–2½ feet. This compact cultivar with white flowers is often grown as an annual. See entry above for additional information.

**117 *Hosta* spp.** Hosta species mix. Height: 1–1½ feet. Mixture of large-leaf hostas with lavender flowers. Hostas grow best in part to full shade and moist, well-aerated soil. Sow outdoors in spring. Germinates in 10–14 days. China, Korea, Japan, and eastern Russia. Zone 3–9, 9–2.

**118 *Iris setosa*.** Arctic or Alaskan blue flag iris (white selection). Height: 1–3 feet. Extremely variable, beardless iris with sword-shaped, mid-green leaves often red-tinted at the bases. Each stem bears 2 to 12 flowers with white falls and bristle-like standards in late spring and early summer. Cold condition seeds or sow outdoors in fall. Germinates in 7–60 days. Western Asia, Alaska, northeastern North America. Zones 3–8, 8–1.

**119 *Leucanthemum × superbum* (formerly *Chrysanthemum × superbum*) ‘Alaska’.** Shasta daisy cultivar. Height: 2 feet. Erect, clumping perennial has dark green leaves with serrated edges. The bright white petals of this selection offer a sharp contrast to yellow centers and bloom from early summer to frost. Full sun or part shade. Pinch plants to encourage a fuller shape and deadhead to encourage rebloom. Sow seeds indoors in early spring, barely covered. Germinates in 1–2 weeks. Hybrid origin. Zones 4–8, 8–1.

**120 *Leucanthemum × superbum* ‘Becky’.** Shasta daisy cultivar. Height 2 feet. This selection has bright white flowers and an extended bloom season. For additional information, see entry above.

**121 *Liatris spicata*.** Spike gayfeather, blazing star. Height: 3–5 feet. Growing from tuberous roots, this upright perennial has a cluster of lance-shaped green leaves at its base; increasingly smaller and narrower leaves alternate up its smooth stems. Terminal spikes composed of 5–14 rosy purple florets bloom in early to midsummer. Good cut flower and attracts pollinators. May require staking. Tolerates drought and poor soils. Sow seeds outdoors in spring. May not bloom till second year. Germinates in 7–10 days. Eastern and central United States. Zones 3–9, 9–1.

**122 *Liatris spicata* ‘Kobold’.** Gayfeather, blazing star cultivar. Height: 1½–2 feet. This selec-

tion has deep purple flowers. For additional information, see entry above.

**123 *Ligularia dentata* 'Desdemona'**. Golden groundsel cultivar. Height: 3 feet. Bears large brownish green leaves with maroon-purple undersides and erect stalks of bright orange-yellow daisylike flowers from summer to fall. Thrives in moist soil in full sun or part shade. Good for bog gardens. Warm condition, then cold condition seeds. Germinates in 30–60 days. Asia and Europe. Zones 4–8, 8–1.

**124 *Lilium formosanum***. Formosa lily. Height: 5–7 feet. Abundant dark green leaves up to 8 inches long cloak the erect stems of this lily. Fragrant, trumpet-shaped, 5- to 8-inch flowers are white inside and maroon to wine colored outside. These bloom in leaf axils in late summer to early autumn. Grows best in moist, sandy soil; site to receive afternoon shade in warmer climates. May require staking. Sow seeds at 70 degrees in late winter. Germinates in 14–28 days. Taiwan. Zones 6–9, 9–1.

**125 *Limonium latifolium*** (syn. *L. platyphyl-lum*). Sea lavender. Height: 2 feet. Emerging from a basal rosette of leaves, branched wiry stems bear airy panicles of deep lavender-blue flowers in late summer. Excellent cut flowers. Sow seeds outdoors in fall or cold condition. Germinates in 10–15 days. Bulgaria to southeastern Russia. Zones 4–8, 8–3.

**126 *Lobelia cardinalis***. Cardinal flower. Height: 3–4 feet. Erect, clump-forming perennial with bright scarlet-lobed flowers that bloom on loose terminal spikes from midsummer through fall. Thrives in rich, moist soil in full sun or part shade. Attracts hummingbirds and butterflies. Self sows. Cold condition or sow outdoors in fall; do not cover seeds. Germinates in 14–21 days. Eastern North America and central United States. Zones 2–8, 8–1.

**127 *Lobelia siphilitica***. Great blue lobelia. Height: 2–3 feet. Erect, non-branching perennial featuring oval leaves and dense terminal racemes of bright blue flowers surrounded by leafy bracts. Blooms from late summer to early fall. Grows best in part shade and moist soil. Attracts pollinators. Sow outdoors in fall, or warm condition; do not cover seeds. Germinates in 14–28 days. Eastern and central North America. Zones 4–8, 8–1.

**128 *Lupinus* spp.** Russell hybrids. Hybrid lupines. Height: 2–3 feet. Leguminous perennials with an erect habit and palmately compound, blue-green leaves. In early summer, showy racemes of pealike flowers bloom in a spectrum of colors in red, pink, yellow, blue, and even bicolors. Lupines tend to be short lived, but will self sow. Site in afternoon shade in warmer regions. Scarify seeds or soak for 24 hours in tepid water before sowing. Sow outdoors in spring after last frost date, or start indoors. May take two years to

flower from seeds. Germinates in 14–60 days. Hybrid origin. Zones 5–11, 12–1.

**129 *Lycnis coronaria***. Rose campion. Height: 2–3 feet. Biennial or short-lived perennial. Bright magenta flowers borne on long stems contrast with rosette of ground-hugging, hairy, silver-gray, oval leaves up to 4 inches long. Blooms late spring into early summer. Tolerates part shade. Self sows. Sow indoors in late winter or outdoors in spring. Germinates in 7–30 days. Southern Europe. Zones 3–8, 8–1.

**130 *Panicum virgatum***. Switchgrass. Height: 5–9 feet. A clumping, upright grass that turns golden in fall and an attractive brown through winter. Feathery dark red to purple inflorescences emerge in mid- to late summer and gradually fade to a silvery gray or brown in winter. Tolerates poor soils, drought, swampy conditions, and salt spray. Self sows. Sow seeds outdoors in early spring. Germinates in 7–21 days. Eastern and central North America. Zones 5–9, 9–3.

**131 *Papaver nudicaule***. Iceland poppy. Height: 1–1½ feet. A short-lived perennial usually grown as an annual. From spring to early summer, fragrant, 2- to 4-inch-wide, bowl shaped, yellow to orange flowers bloom on leafless stems emerging from a basal clump of fernlike gray-green leaves. Sow seeds outdoors in late winter in cold-climate regions and in late fall in warm climates. Germinates in 10–30 days. Subarctic. Zones 2–7, 8–2.

**132 *Papaver orientale* 'Mrs Perry'**. Oriental poppy. Height: 2–3 feet. This clump-forming perennial has hairy, coarsely toothed basal leaves. Large, peony-type, pale salmon-pink flowers with black basal markings bloom on slender stems in late spring to early summer. Sow seeds indoors in late winter, or sow outdoors in fall. Germinates in 7–14 days. Caucasus, Turkey, and Iran. Zones 3–8, 8–1.

**133 *Persicaria virginiana*** (syn. *Polygonum virginianum*) '**Painter's Palette**'. Smartweed cultivar. Height: 2–3 feet. Loosely mounding rhizomatous perennial bears elongated oval green and creamy white variegated leaves highlighted by v-shaped pink blotches. Loose spikes of small cup-shaped green flowers develop in early summer, turning red as they mature. Self sows and can spread aggressively in moist, fertile soil. Sow seeds indoors, barely covered, in late winter. Germinates in 14–21 days. Himalayas, Japan, eastern North America. Zones 5–9, 9–5.

**134 *Platycodon grandiflorus***. Balloon flower. Height: 2–3 feet. Compact clump forming perennial with erect, sparsely leaved stems. In summer loose clusters of large balloon-shaped buds open into shallow bell-shaped purple-blue flowers. Site in afternoon shade in warm regions. Sow seeds indoors at 70 degrees in early spring. Germinates in 7–28 days. Eastern Asia. Zones 4–8, 9–1.

**135 *Rudbeckia fulgida***. Orange coneflower. Height: 2–3 feet. A clump-forming perennial with dark green, oblong to lance-shaped, basal foliage. Bright yellow to orange ray flowers surrounding a dark brown cone of disk flowers bloom from midsummer to fall. Spreads slowly by rhizomes to form large clumps. Unlike some *Rudbeckia* species, orange coneflower is resistant to powdery mildew. Sow seeds outdoors in fall or indoors 4 weeks before frost-free date. Germinates in 5–10 days. Southeastern United States. Zones 4–9, 9–1.

**136 *Scabiosa columbaria* ssp. *ochroleuca*** (syn. *S. ochroleuca*). Yellow pincushion flower, cream scabious. Height: 2–3 feet. Short-lived perennial that bears creamy white to yellow pincushion flowers on tall wiry stems above soft gray-green foliage from midsummer to early fall. Self sows. Sow seeds outdoors in spring or fall or start indoors in late winter. Germinates in 21–30 days. Southeastern Europe. Zones 5–7, 8–1.

**137 *Senna hebecarpa*** (syn. *Cassia hebecarpa*). Northern wild senna. Height: 4–6 feet. Multi-stemmed perennial with tubular yellow flowers in late summer followed by attractive seedpods. Tolerates part shade, moist soil, and heavy clay soil. Sow seeds outdoors in fall or cold condition. Soaking seeds in warm water for 24 hours or nicking the seed coat may speed germination. Germinates in 30–90 days. Northeastern and mid-Atlantic United States. Zones 4–7, 7–4.

**138 *Verbascum olympicum*** (syn. *V. longifolium* var. *pannosum*). Greek mullein. Height: 4–8 feet. A biennial or short-lived perennial that forms a basal rosette of large, pale woolly leaves. It bears a large, branching panicle of bright yellow flowers in mid- to late summer the second or third year after sowing, and often dies after flowering. Self sows. Sow seed in a cold frame in late spring or early summer. Germinates in 14–30 days. Greece. Zones 5–9, 9–5.

**139 *Vernonia noveboracensis***. New York ironweed. Height: 6 feet. This perennial has lance-shaped leaves on sturdy, erect stalks topped in late summer and early fall with loose heads of red-purple flowers. Attracts butterflies. Best suited to a large meadow or naturalistic garden. Cold condition seeds or sow outdoors in fall. Germinates in 7–14 days. Eastern United States. Zones 4–8, 8–3.

**140 *Veronica spicata* 'Sightseeing'**. Speedwell cultivar. Height: 2–2½ feet. Lance-shaped leaves frame tapered dense plumes of dainty florets in shades of blue, pink, and white that attract butterflies in summer. Full sun to part shade (in warmer regions). Sow seeds outdoors, lightly covered, in spring or fall. Germinates in 14–21 days. Europe and northern Asia. Zones 4–8, 8–2.

**141 *Yucca filamentosa***. Adam's needle. Height: 2½–3 feet. Clump-forming evergreen with a basal rosette of lance shaped leaves. In early to mid-

summer, 6- to 10-foot stalks rise from the center of the clump and bear nodding, bell-shaped, creamy white flowers. Sow outdoors in early spring. Germinates in 30–35 days. Eastern United States. Zones 4–II, 12–5.

## TREES AND SHRUBS

**142 *Camellia japonica*.** Japanese camellia. Height: 10–20 feet. Spread: 6–10 feet. A slow-growing evergreen shrub or small tree with glossy dark green, leathery foliage and winter-blooming flowers that range from white to red. Prefers part or dappled shade and moist, well-aerated, acidic soil high in organic matter. Site plants in areas that are sheltered from cold, dry winter winds. Cold condition seeds. Transplant when large enough to handle and grow over winter in a cool, well-lit position, such as a cold frame. Germinates in 30–180 days. China, Korea, Japan. Zones 7–8, 8–7.

**143 *Erythrina crista-galli*.** Common coral tree. Height: 20–28 feet. Spread: 10–12 feet. Open deciduous tree in warm regions, woody-based perennial (Height: 5–8) in cooler ones. Branches bear thick spines, foot-long leathery leaves with prickly stalks and three triangular leaflets. Deep red flowers in 1- to 2-foot terminal racemes are borne from summer to fall. Nick seed coat and soak overnight before sowing outdoors in late spring. Germinates in 2–14 days. Eastern Bolivia to Argentina. Zones 9–II, 12–8.

**144 *Larix kaempferi*.** Japanese larch. Height: 100 feet. Spread: 12–20 feet. Conical, deciduous coniferous tree with fissured and scaly bark. Gray-green to bluish needlelike leaves turn bright yellow in autumn before falling. Sow seeds in late winter. Cold condition. Germinates in 10–28 days. Japan. Zones 5–7, 7–4.

**145 *Lindera benzoin*.** Spicebush. Height: 10 feet. Spread: 10 feet. A rounded deciduous shrub with upright branches and obovate, aromatic, bright green foliage that turns a rich yellow in fall. In early spring, umbels of tiny, star-shaped, greenish yellow flowers bloom on bare stems. Later, red berries are borne on female plants. Cold condition. Germinates in 2–4 months. Eastern United States and Canada. Zones 4–9, 8–1.

**146 *Magnolia ×soulangeana*.** Saucer magnolia. Height: 20–30 feet. Spread: 20 feet. Deciduous shrub or multi-stemmed tree with obovate, dark green leaves. Produces large, goblet-shaped, fragrant pink flowers in mid- to late spring amid newly emerging foliage. Cold condition seeds, then sow outdoors in spring. Garden origin. Zones 5–9, 9–5.

**147 *Malus pumila* ‘Ralls Janet’.** Paradise apple. Height: 12–15 feet. An antique apple cultivar that may have been introduced by Thomas

Jefferson. Medium-large fruit have thin greenish-yellow skin with reddish striping. Yellow flesh is fine grained, crisp, and juicy. Ripens in October and keeps well. Sow in autumn. Cold condition. Shade young plant from harsh midday sun. Germinates in 10–90 days. Central Asia. Zones 5–8, 8–1.

**148 *Pyracantha* sp.** Firethorn. Height: 8 feet. Spiny evergreen shrub that produces small white flowers in clusters in late spring. Produces bright red berries in fall. Sow seed in containers in a cold frame in autumn. Germinates in 3–6 months. Mediterranean. Zones 5–9, 9–5.

**149 *Senna alata* (syn. *Cassia alata*).** Candlestick or ringworm cassia. Height: 6–20 feet. Spread: 6–15 feet. An erect or spreading evergreen shrub or tree that bears large yellow flowers on spiky racemes in late summer to autumn. Its compound leaves can be up to 2 feet long. Winged seedpods turn black when mature. Sow seeds in spring. Germinates in 2–3 weeks. Tropical Asia, Africa, and America. Zones II, 12–10.

**150 *Styrax japonicus*.** Japanese snowbell. Height: 20–30 feet with an equal or greater spread. A graceful, spreading, deciduous tree with a rounded habit and pointed oval leaves. White, bell-shaped flowers are borne on pendulous stalks in May and June. Grows best in a sheltered site in full or part sun. Seeds require alternating warm and cold conditioning. Germination can take up to a year. Eastern Asia. Zones 6–8, 8–6.

**151 *Tetradium daniellii* (syn. *Euodia daniellii*).** Bee tree. Height: 50 feet. Spread: 50 feet. Spreading, deciduous tree with dark green, pinnate leaves that turn yellow in autumn. Small, fragrant white flowers with yellow anthers are produced in 6-inch corymbs in late summer and early autumn, followed by clusters of red-brown fruit. Sow in autumn. Variable germination. China, Korea. Zones 5–8, 8–5.

## VINES

**152 *Campsis radicans* (syn. *Bignonia radicans*).** Trumpet creeper, trumpet vine. Height: to 30 feet. This vigorous climber has dark green, compound leaves and terminal clusters of tubular red flowers from summer to early fall that attract hummingbirds. Tolerates part shade. Provide sturdy support. Self sows and can become weedy—best for naturalistic gardens. Sow outdoors where it is to grow or in containers in a cold frame in fall; do not cover seed. Germinates in 20–45 days. Southeastern United States. Zones 5–9, 9–3.

**153 *Campsis radicans*.** Trumpet creeper, trumpet vine. Height: to 30 feet. Clusters of tubular orange flowers bloom from summer to early fall. See entry above for additional information.

**154 *Ipomoea alba*.** Moonflower. Height: 12–15 feet. Vigorous, twining vines with heart-shaped foliage. Fragrant, white funnel-shaped flowers open in the evening from summer to frost. Self sows. Scarify seeds or soak in tepid water overnight before sowing outside after last frost date. Germinates in 8–10 days. Tropical America. Zones II, 12–1.

**155 *Ipomoea purpurea* ‘Grandpa Ott’s’.** Heirloom morning glory. Height: up to 20 feet. Vigorous, twining vines with heart-shaped foliage. ‘Grandpa Ott’s’ has intensely purple flowers accented with a wine-red star. Blooms profusely from midsummer to frost. Provide well-anchored supports. Scarify seeds and soak in water for 24 hours before sowing outdoors after last frost date. Germinates in 7–10 days. Mexico. Zones 0–0, 12–1.

**156 *Ipomoea tricolor* ‘Crimson Rambler’.** Morning glory cultivar. Height: 8–10 feet. Vigorous, twining vines with heart-shaped foliage. Pinkish red funnel-shaped flowers with a white eye bloom from summer to frost. Self sows. Soak seeds in tepid water overnight before sowing outside after last frost date. Germinates in 8–10 days. Tropical America. Zones II, 12–1.

**157 *Lablab purpureus* (syn. *Dolichos lablab*).** Purple hyacinth bean. Height: 6–15 feet. Grown as an annual north of USDA Zone 9, this ornamental member of the pea family has compound leaves and clusters of fragrant, pinkish-purple flowers. Blooms from midsummer to fall, followed by decorative purple seedpods. Provide sturdy support for climbing. Sow outdoors after danger of frost. Germinates in 7–20 days. Tropical Africa. Zones 9–II, 12–1.

**158 *Lablab purpureus* ‘Alba’ (syn. *Dolichos lablab*).** Purple hyacinth bean cultivar. Height: 6–15 feet. Fragrant, white flowers bloom from midsummer to fall, followed by decorative purple seedpods. See entry above for additional information.

**159 *Lathyrus odoratus* ‘Cupani’.** Sweet pea cultivar. Height: 6–8 feet. A heat tolerant heirloom cultivar that produces bicolored flowers with maroon and violet petals. Provide support for climbing. Attracts bees and butterflies. **Cautions: All parts are poisonous if ingested.** Sow indoors 6 weeks before last frost date or sow outdoors as soon as soil can be worked in spring. Germinates in 12–24 days. Mediterranean. Zones 0–0, 8–1.

**160 *Lathyrus odoratus* ‘Knee Hi’.** Sweet pea cultivar. Height: 2–3 feet. A dwarf cultivar that does not require staking or other support. Its fragrant flowers blooms in a mix of colors, from pink and red to blue and white, from early spring through midsummer. See entry above for additional information.

## HERBS

**161 *Anethum graveolens*.** Dill. Height: 3 feet. An annual herb with feathery, compound blue-green leaves. Tiny, pale yellow flowers appear in flat umbels from July to September. Aromatic leaves and seeds are used to season foods. Attracts beneficial insects. Self sows. Sow outdoors in early spring after danger of frost. Germinates in 3–4 weeks. Southwestern Asia to India. Zones 0–0 12–1.

**162 *Angelica archangelica*** (syn. *Angelica officinalis*). Angelica. Height: 5–6 feet. Biennial. Umbels of small greenish-white flowers appear in midsummer. The large, three-part leaves can be cooked as a vegetable. Young stems and petioles can be candied. Grows best in moist soil and cool temperatures. Tolerates some shade. Sow outdoors in late fall or indoors in early spring after cold conditioning. Germinates in 30 days. Northern Europe. Zones 4–9, 9–1.

**163 *Chenopodium bonus-henricus*** (syn. *Chenopodium esculentus*). Good King Henry, goosefoot. Height: 1½ feet. Annual herb with dark-green, arrow-shaped, succulent leaves and tiny yellowish-green flowers on numerous 2-inch-long spikes. The fruit is bladderlike, containing a single seed. Flowers, leaves, and seeds are edible and have medicinal uses. Central and southern Europe. Zones 5–11, 12–5.

**164 *Coriandrum sativum* ‘Santo’.** Cilantro cultivar. Height: 1–1½ feet. This annual herb has pungently aromatic, finely divided foliage. Small lacy umbels of white, rose, or lavender flowers bloom in summer. Both the seeds (coriander) and leaves (cilantro) are used as seasonings. This variety is slower to bolt and bloom than other cilantro varieties. Pick leaves throughout growing season and harvest seed when fruits begin to change color and become pleasantly aromatic. Self sows. Sow seeds outdoors in early spring and again in late summer for fall crop. Germinates in 7–14 days. Eastern Mediterranean. Zones 0–0, 10–1.

**165 *Levisticum officinale*.** Lovage. Height: 2–6 feet. A perennial herb reminiscent of celery but with a stronger flavor. Fibrous fleshy stalks are topped with serrated gray-green foliage. Small summer-blooming white flowers yield seed that can be used like celery seed. Stalks and foliage are used in soups, stews, and raw in salads. Tolerates part shade. Sow outdoors in the spring or fall. Self sows. Germinates in 10–14 days. Asia. Zones 4–8, 8–10.

**166 *Matricaria recutita*.** German chamomile. Height: 1 foot. This clump-forming annual has aromatic, feathery foliage and inch-wide, daisylike flowers with white ray florets around a yellow center. It shares both the appearance and some of the herbal properties attributed to perennial chamomile (*Chamaemelum nobile*). Tolerates part shade. Self

sows. Harvest the blossoms when just open and air dry in a single layer for several days. Steep briefly in boiling water to make a fragrant, fruit-scented tea. Sow seeds outdoors in early spring. Germinates in 7–21 days. Eurasia. Zones 0–0, 12–1.

**167 *Matricaria recutita* ‘Bodegold’.** Height: 2–2½ feet. German chamomile cultivar. Taller and more uniform than the species, this cultivar blooms several weeks earlier with larger flowers. See entry above for additional information.

**168 *Myrrhis odorata*.** Sweet cicely. Height: 2–3 feet. This perennial herb is distinguished by fern-like leaves that smell like anise when crushed. Tiny white flowers bloom in umbels from spring to early summer. Fruits, shaped like elongated, ribbed footballs, are green at first, then turn black as they ripen. The green anise-flavored seeds are eaten raw, sprinkled on salads, or used to flavor vinegars and liqueurs. Fresh leaves are also used in cooking. Grow in light shade. Cold treat and sow seeds outdoors in spring. Germinates in 2–5 weeks. Europe and Asia. Zones 3–8, 8–1.

**169 *Nepeta cataria*.** Catnip, catmint. Height: 3 feet. An upright, rhizomatous member of the mint family. Opposite, hairy, heart-shaped, gray-green leaves with serrated edges. Tubular white flowers with purple spots bloom in clusters on erect spikes starting in midsummer. Cats find the scent of the leaves irresistible, so don't grow it near fragile or valuable plants. Grow in full sun to light shade. Tolerates drought and poor soils. Spreads by rhizomes and self sows, so can be invasive. Germinates in 1–3 weeks. Europe, Asia. Zones 3–7, 7–1.

**170 *Ocimum basilicum*.** Sweet basil. Height: 1 foot. Large green, aromatic foliage and tiny, whorled, white flowers. Pinch back new leaves and flower buds to produce more growth and a bushier habit. Sow seeds, uncovered, indoors 4–6 weeks before last frost, or outdoors once soil has warmed. Pinch back seedlings when 6 inches tall to produce bushier plants. Germinates in 7–10 days. Asia. Zones 9–11, 11–1.

**171 *Origanum majorana*.** Sweet marjoram. Height: 1–1½ feet. This half-hardy perennial herb forms a mound of small-leaved, fuzzy, gray-green sprigs. In summer, tiny white or pink flowers bloom on spikes. The leaves have a sweeter pungency than its cousin, oregano. Can be dried, but tastes best fresh. Drought tolerant and grows best in free-draining soil. Sow seeds indoors, lightly covered, in early spring, or outdoors after last frost date. Germinates in 14–21 days. Southwestern Asia, northern Africa. Zones 9–11, 11–2.

**172 *Origanum vulgare*.** Oregano. Height: 1–1½ feet. Aromatic oval leaves cover low-growing stems of this vigorous, spreading perennial that bears small clusters of white flowers in late summer. Leaves can be used fresh or dried for culinary purposes. Drought tolerant and grows

best in free-draining soil. Sow seeds indoors, lightly covered, in late winter, or outdoors after last frost date. Germinates in 7–14 days. Mediterranean. Zones 4–9, 10–2.

**173 *Petroselinum crispum* var. *neapolitanum* ‘Gigante’.** Italian flat-leaf parsley cultivar.

Height: 1–2 feet. Biennial herb with large, glossy leaves that have a sweet, mellow flavor. Can be used fresh or dried to season food. Soak seeds overnight, then sow outdoors after last frost date. Germinates in 2–3 weeks. Mediterranean. Zones 5–9, 9–1.

**174 *Porophyllum ruderale*.** Papalo. Height: 2–4 feet. An annual herb with a flavor similar to cilantro, but stronger. Very tolerant of heat and humidity. Self sows. Sow indoors 4–6 weeks before last frost date. Germinates in 7–14 days. Central to South America. Zones 0–0, 12–1.

**175 *Rosmarinus officinalis*.** Rosemary. Height: 1–4 feet. Upright, evergreen, shrubby herb with aromatic, gray-green, needlelike leaves used to season food. Whorls of tubular white or purple flowers appear in summer. Sow outdoors in spring after last frost date. Germinates in 10–21 days. Mediterranean. Zones 8–11, 12–8.

**176 *Tanacetum parthenium*** (syn. *Chrysanthemum parthenium*). Feverfew. Height: 1½–2 feet. Short-lived, aromatic, perennial herb with fern-like, citrus-scented foliage and daisylike flowers with neat, button-sized, white ray florets surrounding yellow disk florets. Plants self sow if flowers are not removed. Sow seeds indoors or outside in spring. Germinates in 10–15 days. Eurasia. Zones 4–10, 12–1.

**177 *Tanacetum parthenium* ‘White Wonder’.** Height: 2 feet. This selection blooms with snow white, ½-inch double flowers. See entry above for additional information.

## VEGETABLES/FRUITS

**178 *Abelmoschus esculentus* ‘Clemson Spineless’.** Okra cultivar. Height: 4–6 feet. This warm season vegetable develops tall, branched stems and hibiscuslike flowers that are followed by the spineless, edible pods. Harvest pods when they are 3–4 inches long. Sow seeds directly in the garden after all danger of frost has passed. Germinates in 1–2 weeks. Matures in 56 days. Tropical Asia. Zones 0–0, 12–6.

**179 *Allium cepa*.** Spanish onion variety. Height: 1–2 feet. A sweet and mild-flavored globe-shaped onion with brownish-yellow skin. Mature onions are about 5 inches in diameter and keep reasonably well. Sow seeds indoors in late winter and transplant outdoors once soil is warm. Germinates in 4–10 days. Matures in 120 days from seed. Northern hemisphere, central Asia. Zones 10–11, 12–5.

**180 *Allium fistulosum* 'Green Feast' and 'Red Robin'**. Scallion mix. Height: 2 feet. Green, hollow, tubular leaves atop white or red stems. These varieties are heat tolerant and disease resistant. Sow outdoors in spring and again in late summer for fall harvest. Germinates in 10–20 days. Matures in 65–70 days. Asia. Zones: 6–9, 9–1.

**181 *Allium tuberosum***. Garlic chives. Height: 1½ feet. This perennial's flat, grasslike leaves have a delicate garlic flavor. Striking, loosely globular clusters of fragrant white flowers bloom on narrow stalks in late summer to early fall. Both the flower buds and leaves are edible. Self sows and can be somewhat invasive. Sow seeds outdoors in fall or cold condition. Germinates in 14–28 days. Southeastern Asia. Zones 4–8, 8–1.

**182 *Beta vulgaris***. Beet cultivar mix. Height: 1 foot. Includes 'Bull's Blood' with deep red tops, 'Chioggia' with interior rings of pink and white, 'Golden' with yellow flesh, 'Boro' with deep red roots, and 'Detroit Dark Red', an heirloom variety with dark red roots. Plant in early spring, 3 to 4 weeks before last frost date, and in late summer for a fall crop. In frost free areas, sow in early fall for a late winter harvest. Germinates in 5–25 days. Matures in 60–65 days. Africa, Europe, Asia. Zones 8–9, 9–1.

**183 *Brassica oleracea* (Acephala group) 'Nagoya White'**. Kale cultivar. Height: 1 foot. This attractive plant does double duty as an ornamental for the border and as a vegetable. White on dark green leaves are fringed on their edges. Color and flavor intensifies with cooler weather in fall. Does not tolerate hot summers well. Matures in 82 days. Start seeds indoors in late winter and transplant outdoors after hardening off, or sow seeds in mid-summer for fall crop. Germinates in 1–2 weeks. Mediterranean to Asia. Zones 8–9, 9–1.

**184 *Brassica oleracea* (Gongyloides group) 'Purple Vienna' and 'White Vienna'**. Kohlrabi cultivar mix. This cabbage family member produces a swollen spherical stem just above the soil line. Its flavor and crisp texture are reminiscent of radishes or turnips, but milder and sweeter. Its leaves also may be eaten. 'Purple Vienna' has purple skin while 'White Vienna' is pale green but when peeled away, both varieties are pale green. Sow in early spring, 4–6 weeks before last frost and again in late summer for a fall harvest. Germinates in 10–14 days. Matures in 55 days. Europe. Zones 8–11, 9–1.

**185 *Citrullus lanatus* 'AU Producer'**. Watermelon cultivar. High yields and excellent quality of blocky shaped, striped fruit that reach 20–22 pounds in weight. Red flesh with a high sugar content and small dark brown seeds. Plants tolerate fusarium wilt, downy mildew, and some anthracnose diseases. Sow 1 inch deep, when soil warms. Germinates in 3–8 days. Matures in 85 days. Africa. Zones 11, 12–4.

**186 *Citrullus lanatus* 'Sugar Baby'**. Watermelon cultivar. Small icebox type watermelon with tough rind that is distinctly striped when immature but dark green with yellow belly when ripe. Red flesh is tender and sweet. Fruits weigh 6–10 pounds. Sow 1 inch deep, when soil warms. Germinates in 3–8 days. Matures in 85 days. Africa. Zones 11, 12–4.

**187 *Cucumis melo* 'French Charentais'**. Casaba melon cultivar. Height: 10–14 inches. A winter melon variety, closely related to cantaloupes, that has a wrinkled rind and thick white, yellow, or orange flesh. Flesh is not as sweet as a honeydew or musky scented like cantaloupe. Sow seeds outdoors after soil has warmed or start indoors 4–6 weeks before last frost date. Germinates in 5–10 days. Matures in 120 days. Asia Minor. Zones 0–0, 12–3.

**188 *Cucumis melo* 'Imperial 45'**. Cantaloupe hybrid. Height: 10–14 inches. This melon was a 1935 All-America Selections winner. It produces round fruit with orange flesh and a small seed cavity. Tolerates heat and humidity and holds flavor well. Sow seeds outdoors after soil has warmed or start indoors 4–6 weeks before last frost date. Germinates in 5–10 days. Matures in 87 days. Asia Minor. Zones 0–0, 12–3.

**189 *Cucumis sativus* 'Poinsett 79'**. Cucumber cultivar. High-yielding plants produce many smooth dark green fruits, averaging 8–9 inches long. Disease resistant. Pick ripe fruit to encourage production. Start seeds indoors 4 weeks prior to last frost or sow directly outdoors after soil warms. Germinates in 7–10 days. Matures in 65 days. Asia and Egypt. Zones 0–0, 12–1.

**190 *Cucumis sativus* 'Straight Nine'**. Cucumber cultivar. Very uniform, dark green, 9-inch fruit. Vigorous vines are downy and powdery mildew tolerant. Start seeds indoors 4 weeks prior to last frost or sow directly outdoors after soil warms. Germinates in 7–14 days. Matures in 65 days. Asia and Egypt. Zones 0–0, 12–1.

**191 *Daucus carota***. Carrot cultivar mix. A mix of orange, purple and white carrots including 'Little Finger', 'Royal Chantenay', 'New Kuroda', 'Crème de Lite', and 'Purple Haze'. Sow outdoors in deep, loamy soil after last frost date and in fall. Germinates in 1–3 weeks. Matures in 50–70 days. Europe. Zones 9–11, 10–1.

**192 *Daucus carota* 'Danvers Half-long'**. Carrot cultivar. Height: 6–10 inches. This tapered, 6- to 8-inch-long, nearly coreless heirloom carrot originated among market gardeners in Danvers, Massachusetts. See entry above for additional information.

**193 *Eruca sativa***. Arugula, rocket salad. Height: 6–12 inches. A leafy plant with peppery-tasting leaves. Sow in early spring, then sow again every two weeks until early summer to ensure an

ongoing supply. Germinates in 5–10 days. Tends to bolt in the summer heat and leaves become very pungent, so start sowing again in late summer for a fall crop. Matures in 21–30 days. Mediterranean. Zones 0–0, 9–3.

**194 *Lactuca sativa***. Lettuce cultivar mix. A blend of 'Red Salad Bowl', 'Red Oakleaf', 'Royal Oakleaf', 'Tango', 'Parris Island Cos', 'Buttercrunch', and 'Waldmann's Green' lettuce. Sow outdoors in early spring or in late summer for fall harvesting. Lettuce needs light to germinate, so cover seeds lightly. Germinates in 7–10 days. Matures in 30–45 days. Northern Hemisphere. Zones 0–0, 12–1.

**195 *Lactuca sativa***. Lettuce cultivar mix. A blend of 'Rouge Grenobloise', 'Royal Oakleaf', 'Cimarron', 'Sucrine', 'Blonde Batavia', and 'Red Salad Bowl' lettuce. These lettuces offer a variety of colors, textures, and flavors. See entry above for additional information.

**196 *Lactuca sativa* 'Grand Rapids'**. Lettuce cultivar. Height: 6–14 inches. Sweet-crisp light green leaves are tightly curled, great in salads. Fast growing and slow to bolt. See entry 194 for additional information.

**197 *Lactuca sativa* 'Green Salad Bowl'**. Lettuce cultivar. Height: 6–14 inches. Tightly packed crinkled leaves have excellent flavor. Tolerates heat and is slow to bolt. See entry 194 for additional information.

**198 *Lycopersicon lycopersicum* 'Black Krim'**. Heirloom tomato. Height: 4–6 feet. A high-yielding variety from Russia that produces brownish-red, beefsteak-type fruits often weighing more than 1 pound. Fruits are prone to cracking, but have a rich, musky flavor. Indeterminate cultivar, so needs pruning and staking. Start seeds indoors 4–6 weeks before last frost. Germinates in 7–14 days. Matures in 75–90 days. South America. Zones 11, 12–1.

**199 *Lycopersicon lycopersicum* 'Flavor King'**. Tomato hybrid. Height: 4–6 feet. Produces large, round tomatoes that are sweet and meaty. Resistant to cracking and diseases. Indeterminate cultivar, so needs pruning and staking. See entry above for additional information.

**200 *Lycopersicon lycopersicum* 'Roma'**. Plum tomato. Height: 4 feet. Produces an abundance of bright red, oblong, meaty fruits with few seeds. Determinate cultivar, so most fruits ripen over a period of 3–4 weeks. See entry 198 for additional information.

**201 *Phaseolus vulgaris* 'Kentucky Wonder' and 'Romano'**. Pole bean mix. Height: 6–8 feet. 'Kentucky Wonder' produces heavy crops of 9-inch-long oval pods that are stringless when young. 'Romano' has a nutty flavor and produces over a long period of time. Plant in spring after last frost. If weather is still cool and wet, wait

until it warms up. Germinates in 10 days. Matures in 63–75 days. Tropical America. Zones 0–0, 12–1.

**202 *Pisum sativum*.** Pea cultivar mix. Height: 2–3 feet. A blend of ‘Green Arrow’ (shelling pea), ‘Oregon Sugar Pod II’ (snow pea), and ‘Cascadia’ (snap pea). Plant in early spring as soon as soil temperatures stay above 40 degrees. In USDA zones 8 or warmer, plant in fall or winter for winter harvest. Germinates 5–10 days. Matures in 60 days. Mediterranean. Zones II, 8–1.

**203 *Raphanus sativus* ‘Cherry Belle’.** Radish cultivar. Height: 4–6 inches. An All-America Selections winner, this selection has mild flavor and crisp, white flesh. Sow in early spring as soon as soil temperature is above 40 degrees. Germinates fastest at 60 degrees. Sow again in late summer for fall harvest. Germinates in 5–10 days. Matures in 24 days. China. Zones 0–0, 7–1.

**204 *Raphanus sativus* ‘White Icicle’.** Radish cultivar. Height: 4–6 inches. White, 5- to 6-inch-long tapered radish with mild flavor. More heat tolerant than other radishes. See entry above for additional information.

**205 *Rheum rhubarbarum*.** Rhubarb. Height: 2–3 feet. A perennial that grows in clumps of ruffled red or green leaves held on bright red celery-like stalks. The edible stalks are commonly used to make jellies and pies, **but the leaves are poisonous and should not be eaten.** Rhubarb is a cool-season crop that requires at least two months of cool weather to mature. It does best in areas that have cool, moist springs. It takes about two years to get a crop from seeds. Sow seeds indoors in late winter and transplant outdoors after hardening off in early spring. Germinates in 3–6 weeks. Asia. Zones 3–9, 9–1.

## MIXES

**206 Cat Treats Gourmet Greens.** A blend of organically grown grasses including equal parts rye (*Secale cereale*), oats (*Avina sativa*), barley (*Hordeum vulgare*), and wheat (*Triticum* spp.). Aids digestion and freshens breath for pets such as cats and rabbits. For best results, sow in 2 containers indoors and allow pets access to only one container at a time. Germinates in 3–7 days. Matures in 10–14 days.

**207 Prairie Wildflower Mix.** Height: 2–4 feet. A mix of native annuals and perennials including black-eyed Susan (*Rudbeckia hirta*), blanket flower (*Gaillardia pulchella*), blue flax (*Linum perenne*), butterfly weed (*Asclepias tuberosa*), coreopsis (*Coreopsis lanceolata* and *C. tinctoria*), prairie blazing star (*Liatris pycnostachya*), grayhead prairie cone (*Ratibida pinnata*), leadplant (*Amorpha canescens*), partridge pea (*Cassia chamaecrista*), coneflower (*Echinacea pallida* and *E. purpurea*), prairie clover

(*Dalea candida* and *D. purpurea*), wild bergamot (*Monarda fistulosa*), perennial lupine (*Lupinus perennis*), and pitcher sage (*Salvia azurea*). Sow in spring or late fall. Zones vary.

**208 Salad Mix.** Contains seeds of ‘Troutback’, ‘Blush Butter Cos’, ‘Red Ruffled Oak’, ‘Red Devil’s Tongue’, ‘Succrine’, ‘Tango’, ‘Oak Leaf’, ‘Red Salad Bowl’, ‘Black Seeded Simpson’, ‘Grand Rapids’, ‘Red Sails’ lettuce as well as mizuna, green endive, and arugula. Sow outdoors in early spring or in late summer for fall harvesting. Germinates in 7–14 days. Matures in 40–45 days. Zones 0–0, 12–1.

**209 Winter Greens Mix.** A blend of ‘Glory’ endive, ‘Elysee’ escarole, and ‘Presto’ radicchio. Mild and nutty French curly endive has finely-cut, delicate, lacy leaves with crispy ribs. Escarole produces rosettes of crunchily outer leaves that fold closely around dense hearts. Radicchio’s red leaves add a bitter note. All three are cold-tolerant but require consistent moisture. Sow outdoors in mid to late summer. Germinates in 7–14 days. Matures in 80 days. Zones 0–0, 12–1.

## BONUS SEEDS

**210 California Wildflower Mix.** Height: 1–2 feet. Contains plains coreopsis (*Coreopsis tinctoria*), globe gilia (*Gilia capitata*), mountain phlox (*Linanthus grandiflorus*), California poppy (*Eschscholzia californica*), California goldfields (*Lathenia californica*), Chinese houses (*Collinsia heterophylla*), godetia (*Clarkia amoena*), five spot (*Nemophila maculata*), and sky lupine (*Lupinus nanus*). This mix of annual wildflowers blooms in a wide array of forms and colors. Sow seed directly outdoors in very early spring after last frost date. Large packet covers approximately 100 square feet. Zones 0–0, 12–1.

**211 *Citrullus lanatus* ‘Black Seeded Ice Cream’.** Heirloom watermelon cultivar. Round fruits with white rind and reddish-pink flesh with black seeds. Fruit reaches about 12 inches in diameter. Sow 1 inch deep, when soil warms. Germinates in 3–8 days. Matures in 90 days. Africa. Zones II, 12–4.

**212 *Clematis crispa*.** Blue jasmine, marsh clematis. Height: 8 feet. Deciduous late blooming flowering climber. Blooms with solitary, bell-shaped, lavender blue flowers in summer. Sow seeds outdoors in fall in a cold frame or cold condition. Cover seeds lightly. Germinates in 10–30 days. Southeastern United States. Zones 5–II, 9–6.

**213 *Helianthus annuus*.** Common sunflower ‘Autumn Beauty’ mix. Height 4–7 feet. Fast-growing plant with dark green, heart-shaped, coarse leaves on thick hairy stems. Mix of rich gold, bright yellow, burgundy-red, and bicolored daisy-

like flowerheads up to 12 inches across with brown central disks that bloom in mid- to late summer. Heat tolerant. Sow outdoors in early spring. Native of Southwestern United States and Mexico. Germinates in 10–14 days. Large packet covers approximately 250 square feet. Zones 0–0, 12–1.

**214 Hummingbird & Butterfly Flower Mix.** Height: 1–3 feet. Contains dwarf sunflower (*Helianthus annuus*), nasturtium (*Tropaeolum* sp.), zinnia, calendula, love-in-a-mist (*Nigella damascena*), scarlet flax (*Linum rubrum*), blanket flower (*Gaillardia pulchella*), larkspur (*Consolida ajacis*), spurred snapdragon (*Linaria maroccana*), and sweet alyssum (*Lobularia maritima*). This mix of annual flowers attracts and feeds butterflies and hummingbirds. Sow outdoors after the last frost date. Large packet covers approximately 100 square feet. Zones 0–0, 12–1.

**215 *Lathyrus odoratus* ‘Royal Family Mix’.** Sweet pea cultivar mix. Height: 5–7 feet. Vigorous annual climber with fragrant pealike flowers from early spring through midsummer. This old-fashioned, heat tolerant variety blooms in shades of maroon, red, orange, pink, purple, and white. Provide support for climbing. Attracts bees and butterflies. **Caution: All parts are poisonous if ingested.** Sow indoors 6 weeks before last frost date or sow outdoors in spring. Germinates in 12–24 days. Mediterranean. Large packet contains approximately 300 seeds. Zones 0–0, 8–1.

**216 *Lycopersicon lycopersicum* ‘Cherokee Purple’.** Heirloom tomato cultivar. A disease-resistant variety with medium to large dusky rose fruits with a well-balanced, sweet flavor. Start seeds indoors 4–6 weeks before last frost. Germinates in 7–14 days. Matures in 70–80 days. South America. Zones II, 12–1.

**217 *Mahonia japonica* ‘Bealei’** (syn. *M. bealei*). Leatherleaf mahonia. Height: 6 feet. Spread: 10 feet. Erect shrub with thick branches and leathery, blue-green leaves divided into broad leaflets. Upright racemes of fragrant yellow flowers appear in winter and early spring, followed by blue-purple berries. Sow outdoors in spring. Germinates in 3–6 months. China. Zones 7–8, 8–7.