

HERBACEOUS ORNAMENTALS

JoAnn Robbins

Former Extension Educator,
Jerome County, Jerome

W. Michael Colt

Extension Horticulturist
Emeritus
Parma Research and Extension
Center

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HERBACEOUS ORNAMENTALS

Learning Objectives

- Learn the art of designing with herbaceous ornamentals, using color, texture, shape, and size
- Learn about the number of different ways that herbaceous ornamentals are used
- Learn about container gardening and how to maintain them
- Learn about annual plantings and the maintenance requirements
- Learn about a selected list of annual flowers commonly used in Idaho
- Learn about biennials and perennials and how to care for and maintain them
- Learn about a selection of perennials for Idaho gardens

Introduction

Herbaceous ornamentals comprise the nonwoody portion of the garden landscape. These plants generally add color and interest to a basic landscape design and landscape structure. Whether that structure is a backdrop or basic design of trees and shrubs or a purposeful laying out of beds and other types of planting areas, the addition of herbaceous ornamentals can enhance a landscape significantly. These plants are also forgiving because they are easier to dig and rearrange than most landscape trees and shrubs. Learning to use herbaceous ornamentals to the best advantage is easy; simply follow the guidelines outlined in this chapter.

The Art of Design

COLOR

Herbaceous ornamentals are generally grown for their addition of color, through their flowers and foliage, to the landscape. Understanding the impact of colors and how to combine them can form a basis for use of these versatile landscape plants (Figure 1).

Several color schemes can be created in a single garden by planting early season blooming plants in one color scheme and late-blooming plants in a different scheme. An interesting overlap can occur in plans of this type.

The primary colors are red, yellow, and blue. Other colors are combinations of these primary colors. A pure color is a hue. A lighter version of a hue is a tint, which is accomplished by combining a hue with white. A darker version of a hue is a shade, a color made by combining a hue with black. A tone is made by combining various amounts of black and white, or gray, with a hue. The value of any color is the brightness of that color compared to another. Pure yellow has a greater value than pure blue.

The warm colors of yellow, red, and orange brighten cool, shady areas. These colors are attention getting and can be used to shorten the perspective at the back of a long bed. The cool colors of violet and blue, by contrast, recede and are good for close-up viewing. Cool colors also give the impression that an overheated area, like a concrete patio, isn't as hot.

Color schemes effectively used with herbaceous ornamentals are

1. **Polychromatic** — Uses all the colors and their tints, shades, and tones. This can produce a carnival effect and often results in some very pleasing color combinations.
2. **Monochromatic** — Uses the various tints, shades, and hues of only one color. Gardens using this color scheme are particularly dramatic.
3. **Analogous** — Uses adjacent colors on the color wheel such as blue, violet, and red. Such a color scheme can be expanded by using the various tints and shades of each of the colors.
4. **Complementary** — Uses opposite colors on the color wheel such as red and green, orange and blue, and yellow and violet. This type of color scheme is most effectively used with pure hues (not tints or shades) and creates a very bold effect. This color scheme is not recommended for the small garden.
5. **Split Complementary** — Uses a pure color and a color from either side of its complementary counterpart. An example of this is starting with blue and combining it with red or yellow, the colors bordering orange on the color wheel.

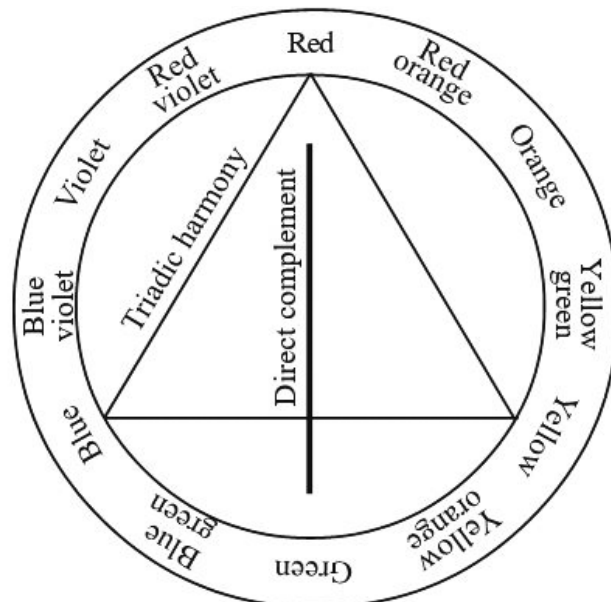


Figure 1. The color wheel.

6. **Triadic** — Uses three colors that are equidistant from each other on the color wheel. The result of this unusual combination is striking.
7. **White** — This color deserves a special comment. There have been many famous gardens planted in white flowers alone. There is a special appeal in the contrast of white against the green foliage of plants. White will give your garden a well-planned and orderly look. It is the last color to fade from sight as darkness falls, so it is a good choice for “evening” gardens. Cream and ivory flowers blend well with all colors except yellow.

TEXTURE

This is dictated by the density and size of individual leaves and flowers. Plants with large leaves and large bold flowers have a coarse texture, tend to be dominant in a garden, and appear to advance to your field of vision. Plants with tiny leaves and small flowers lend a fine texture to the landscape and tend to recede in your field of vision. Choose herbaceous ornamentals according to the textural “feel” you wish to attain. Often a mix of all textures is the most visually pleasing.

SHAPE AND SIZE

Herbaceous ornamentals come in all sizes and shapes. Size is comprised of **height** (tallness) and **spread** (the extent to which the herbaceous ornamental covers the ground at maturity). A shape

is the same as the habit or form of a plant. Some herbaceous ornamentals hug the ground, while others tower 6 feet or more; others are vines. Some are compact ball-shaped plants while others are open and upright. There are herbaceous ornamentals perfect for any location. Be sure to space plants far enough apart to allow room for each to develop to maturity.

What to Plant

EXPOSURE

Herbaceous ornamentals can be adapted to all types of sites from full sun to pure shade. Choosing a plant according to the exposure of the site ensures success with these plants.

SEASON OF FLOWERING

Some herbaceous ornamentals are tolerant of cool temperatures and bloom in early spring. Others need warmer weather and bloom in the summer. Still others bloom in the fall. Choose the proper herbaceous ornamental based on when color in a particular area is most desirable.

CUT AND DRIED FLOWERS

Some kinds of herbaceous ornamentals hold up better as cut flowers while others dry beautifully. Choose herbaceous ornamentals that are adapted to fresh or dry display.

Special cutting gardens can be completely harvested for flowers without concern for how the garden looks. However, plants valuable for cut flowers can usually be incorporated into the main garden.

When cutting for air drying, choose flowers just reaching maturity. Strip off the foliage and hang it upside down in small bunches in a dry, shady spot. Some flowers will dry well standing upright in a container.

HERBACEOUS ORNAMENTALS THAT NATURALIZE

Some herbaceous ornamentals, such as native plants or wildflowers, reseed themselves prolifically and eventually naturalize an area. Know which plants have this tendency and choose the proper annuals for naturalizing. Remember, any hybrid ornamentals that reseed will not come true-to-type and usually produce an offspring of inferior plant quality. Seedlings of this type are not desirable.

SPECIAL-USE GARDENS

Herbaceous ornamentals are used to create gardens with special qualities such as rock gardens, bog gardens, prairie and meadow gardens, cottage gardens, cutting gardens, fragrance gardens, herb gardens, or traditional herbaceous perennial gardens.

How to Plant (Design)

FORMAL AND INFORMAL

Once you have decided where to plant herbaceous ornamentals, decide on a design. Formal designs are composed mostly of straight lines and symmetry. What appears on the right side of the garden is matched on the left. A formal design is easy to lay out and, because of its visual simplicity, is the best choice for a small lot. Informal gardens are composed of curved flowing lines and a disregard for symmetry.

BEDS AND BORDERS

Beds are large blocks of planted areas. The bed requires a relatively large area around it to look its best. If you have a large yard you may have the perfect spot for a bed.

Borders run along the edges of shrub beds, buildings, fences, walkways, and lawns. They conserve space and soften the edges of whatever they border.

As a general rule, the sum of the widths of the beds and borders should not exceed one-third of the width of the yard. Also, individual beds should be no more than five-eighths to two-thirds as long as the long axis of the yard.

Herbaceous ornamentals can also be tucked here and there in a shrub or perennial bed or border to provide a spot of seasonal color. Avoid spots, however, where water-greedy roots of trees and shrubs will interfere with growth. In these spots, a container of herbaceous ornamentals provides better results.

PLANT CHOICE

Choice of materials to use depends on the desired effect and will be influenced by color scheme, season of flowering, texture, diversity, type of background plants, and available space. When designing the bed or border, remember to place the lower-growing plants to the front so that they will be visible and not shaded out by taller types.

Since it is easier to place the tallest plants first, design the border from the back to the front and the bed from the middle to the edge. Design from fall to spring rather than spring to fall. This ties in with the suggestion to design from the back to the front of the border and from the middle to the edge of the bed, since fall plants are often taller and would logically be placed in the back of the border or the middle of the bed. Finally, because you read from left to right, design from left to right.

Plant in clumps or drifts of plants using groups of the same species or cultivar. When planting in groups of less than ten, plant odd rather than even numbers of the same plant. These design suggestions help avoid the “zoo” effect (a collection of one of everything) by leading the eye through the planting.

Gardening in Containers

Almost any annual can be grown in a container. Plants that spread or cascade are suitable for the outer rim of regular containers and for hanging baskets. If plants are mixed in a container, all should have similar sun and water requirements. Containers and hanging baskets allow the gardener to provide spots of color almost anywhere around the home grounds.

CONTAINERS

Choose a container with holes in the bottom to drain the water. A tray underneath will catch any drainage. Avoid letting pots rest in standing water, as roots may begin to rot. Glazed clay pots and plastic containers do not breathe and will not need watering as often as clay. Darker colors absorb more heat, which warms the soil but causes more water loss. Therefore, light-colored containers may be the best choice for most gardeners.

SOIL

For containerized plants, purchase a commercial potting mix that is a blend of peat, perlite, and other components and contains no soil. Mixes are blended to hold water and nutrients and to drain well. Mix some slow-release fertilizer with the mix or liquid feed about every two weeks. Water containers well before applying the liquid fertilizer.

PLANTING

Containers look best when packed with plants. A planted container should look attractive immediately after or within a few weeks of planting.

WATERING

Plants in containers require regular watering. Always water until the water runs out of the drain holes. Water can run right through very dry soil without actually wetting it. If you have doubts, tip the container up to test that it has become much heavier with water.

MAINTENANCE

Herbaceous annuals make excellent long-flowering container plants. However, perennial container plants can be placed in the garden after their limelight. If containerized perennials are not planted out in the garden, place them in a cold frame or garage to protect their roots from freezing during the winter.

Getting Started with Annuals

An annual plant completes its life cycle in a single year. Unless the plants reseed themselves, new annuals need to be planted every season. Some hardy annuals have seeds that germinate and grow in cooler soil. The plants withstand some freezing and thawing. Half-hardy annuals take some cool, damp weather but a frost will kill them. Tender annuals can take no cool weather at all. Some annuals reseed depending on the variety and climatic conditions.

Annuals serve many functions in the garden, but their primary use is to provide color. They grow quickly and easily, are great for cutting, and are generally inexpensive. Annuals generally bloom for most of the season. An added bonus is the fragrance that some annuals bring to the garden. Annuals come in a variety of sizes, shapes, and colors.

PROPAGATION

Seeds— Come in mixtures and single cultivars. Hybrid seeds are usually more expensive but often produce spectacular flowers. If you save your own seed, be aware that most flowers, and especially hybrids, will not breed true-to-type. Seeds will lose their viability if stored for many years, so starting with fresh seed packaged for the growing year will get you off to the best start.

Seeds that are started indoors or in a greenhouse should be growing 4–6 weeks before you place them in the garden. The warm weather annuals should be transplanted outdoors after the danger of frost.

The easiest way to begin annual plants is to plant the seeds directly where you wish the plants to grow. The seedlings can be thinned to achieve the desired density. Follow the seed package instructions for time and depth of planting.

Transplants — Plants from the garden center save you time and effort. They are, however, more expensive than growing your own. Some flowers such as petunias, impatiens, and geraniums have very small seeds, are slow to germinate, and their seedlings take longer to reach transplant size. They can be started indoors, but they demand precise growing conditions and vigilant care. It is easier to buy transplants for these types of plants.

Pick good plants. Make sure plants are healthy and growing vigorously. Plants that have obviously dried out, have overgrown their containers, or are yellow or leggy should be avoided because they will bloom poorly and require constant watering.

Slip plants out of their containers to check the roots. Look for a fine network of healthy roots supported by visible soil. Avoid plants with a mass of dense, white, tangled roots.

GROWING, CULTURE, AND MAINTENANCE

Soil preparation — A soil test is always a good idea if there is any doubt about the fertility or pH of the soil. Amend the soil appropriately before planting to adjust the acidity and provide the proper nutrients for growth.

Amendments, such as compost, peat moss, and manure added to the soil will increase organic matter and thereby increase water-holding capacity and soil fertility. Covering the soil surface with a 3-inch layer of amendment and digging it into a 12-inch depth provides a good planting area.

Planting — Seeds will germinate when the soil is warmed to the proper temperature. The exact temperature will depend on the annual species being planted.

After the soil is prepared, sprinkle the seed either randomly or in rows with indentations in the soil. Cover the seed with loose, organically amended soil, so the soil will not crust over the seeds. Water with a light misting of water and keep the soil evenly moist until germination occurs. Be sure not to plant the seed any deeper than suggested on the seed package label.

Acclimate transplants before placing them in the soil. Place them in a protected space outdoors for several days and make sure the plant does not dry out. At planting time, tap or tip the plants out of their pots and set them in a prepared hole large enough for the root ball to fit comfortably. Set the plant in the hole, making sure the top of the root ball is even with the surrounding soil surface. Recent research has shown that breaking up the root ball of even the most pot-bound of annuals only slows down their development. Plant the roots as they come out of the container. Do not let the root ball dry out. Firm the soil around the roots and water well. Protect plants against excessive sun, wind, or cold while they are getting started. Inverted pots or milk cartons or row covers can be used.

Fertilizing — Dry or liquid fertilizers work for annuals. Nitrogen stimulates leafy growth, while phosphorus and potash promotes flowering, fruiting, and root growth. Fertilizers with a ratio of 1-1-1, 1-2-1, or 1-2-2 are best for annuals. Remember that the numbers on the package indicate both the ratio and the percentage of active ingredients per pound of nitrogen-phosphorus-potassium.

Dry fertilizer amendments added at planting will last for about 6 weeks. Application of dry fertilizers, followed by a watering (or liquid fertilizer applied to damp soil) maintains the quality of the plants and blooms.

Watering — Young plants need more frequent watering until their roots get established. Sown seeds may need multiple daytime watering. As plants become established, gradually water less frequently. Watering established plants depends on plant size, soil characteristics, and weather. During hot weather, large plants in sandy soil require frequent watering. Strive to keep the plants evenly moist. If plants are allowed to dry out, they may be permanently stunted.

Overhead watering with sprinklers is a common technique. However, some flowers are more susceptible to disease if their leaves and flowers are constantly wet. Overhead watering can also cause taller plants to tip over.

Furrow watering is a common technique if planting is done in rows. Furrows must be tended so the water flows properly and there must be a gentle slope from one end to the other. Once plants get large, the furrow system can be difficult to maintain.

Drip irrigation is the most efficient way to deliver water. Use drip emitters or perforated tubing to deliver water directly where you want it. Infrequent deep watering is better than frequent light applications.

Mulching — This helps annual plants conserve moisture and keeps the soil cooler. Be sure to apply the mulch after the soil has warmed in the spring, otherwise warming will be delayed. Mulches also help in weed control and provide an attractive appearance. Organic materials, such as bark or sawdust, can be incorporated into the soil at the end of the season as an organic amendment.

Mulch materials must allow water to move through. Organic materials must be loose and coarse. Remember that many organic materials draw nitrogen to the soil to aid in breakdown. These materials, when used as mulch, must be augmented with nitrogen fertilizer. Wood by-products, such as bark chips and sawdust, as well as compost make good mulch for annuals. Pine needles and grass clippings can also be used. Spread grass clippings in one thin layer and allow them to dry before adding another layer. Landscape fabric can be spread over the soil surface and covered with bark chips or other organic materials. The fabric stops weed growth, but allows air and water to penetrate the soil.

Thinning — Seedlings grown from directly planted seeds need to be thinned. This process is little more than pulling out the excess seedlings to establish the proper spacing for the type of annual grown.

If pulling disrupts the roots of the remaining plants in the garden, clip off the extras at the soil line with shears. Leaving more plants than necessary at this first thinning will provide some plants for transplantation elsewhere and also allow a margin of safety in case of disease or frost problems. After plants are well established, a second thinning will leave plants with plenty of room to attain a mature growth. Properly spaced plants are healthier and produce more blossoms.

Pinching — Removing the terminal growth on young annual plants helps make them bushier and more compact. Many annuals are now bred to be compact and well branched. However, any plant that has become too leggy or too tall will be improved by pinching. Examples are petunias, geraniums, and many chrysanthemums.

Pinching out the first blossoms that form on some plants stimulates more overall bloom. Examples are marigolds and zinnias.

Weeding — Weeds rob annual plants of nutrients and water and make them look unkempt. Weed problems can be reduced by proper soil preparation and mulching immediately after transplanting. In direct-seeded areas, apply mulch to retard weed growth after the plants have been thinned. If weeds grow among annuals, hoe only deep enough to sever the weeds just below the surface. This will avoid any damage to the shallow feeder roots common to annuals. If weeds are large, pull them by hand.

Deadheading and grooming — Removing the faded flowers (deadheading) will help keep the garden looking neat and will prolong bloom on most garden annuals. A plant that is ripening seeds produces less blossoms. Pinch off or cut spent flowers back to the next branch. Shearing the flower heads with pruning shears works well for smaller-flowered plants. Be careful not to cut back too far. Remove less than one-third of the plant.

Grooming annuals involves removing dead leaves and thinning extra branches. Grooming keeps plants looking good and, by removing dead foliage before it can mold on the plant, keeps diseases from gaining a foothold.

Thinning the foliage keeps the air circulating through the plants, keeps the plants dry, and cuts down on diseases. Thinning also allows light to penetrate the interior of the plant. Often insect pests, which otherwise might be overlooked, are discovered during the grooming.

Staking — Tall-growing annuals such as larkspur and marigolds need protection from wind and rain or overhead sprinklers. Stakes help them grow straight and keep them from being knocked over.

Stakes can be made of wood, bamboo, or any similar material. To be less conspicuous, stakes should be small in diameter and about 6 inches shorter than the mature plant to avoid being visible above the plant. Secure the stems to the stakes with paper-covered wire, plastic ribbon, or other material that will not cut into the stem. You can also support the plants with a framework of stakes and strings in crisscrossing patterns. Commercial support frameworks are available for herbaceous annuals.

Stake plants before they have a chance to fall over or begin to grow crooked. When the plants are about one-third of their mature size, begin staking. Place stakes or frames close to the plant, but take care not to damage the root system. Secure the plant stems to the stake or frame as the plant grows taller.

Insects — Although ornamental annuals are generally pest-free, the following insects can sometimes cause problems: aphids, beetles, caterpillars, thrips, whiteflies, earwigs, and mites.

Annuals that are well maintained can withstand most attacks by insects. Plants under water stress or those lacking plant nutrients become more susceptible to insect attack. Keeping annuals healthy and growing is the first line of defense. Many insect pests are naturally controlled by predator insects. Chemical sprays destroy these predators and should be avoided.

Insects, such as aphids, mites, thrips, and whiteflies, can be controlled with insecticidal soaps. Caterpillars can be controlled with Bt (*Bacillus thuringiensis*) spray. Earwigs can be trapped in rolled newspapers and then destroyed.

If chemical treatment becomes necessary, make sure your pest is positively identified and use a chemical appropriate for its control. Always follow label directions.

Diseases — Since annuals are only in the garden for one season, diseases are not as serious a problem as they are for perennials. The following diseases, however, can sometimes cause problems: the fungus diseases botrytis blight (gray mold), damping-off fungus, powdery mildew and rust, and the virus diseases mosaic and aster yellows.

Moist conditions and splashing water favor and spread the fungus diseases rust, powdery mildew, damping-off fungus, and botrytis blight. Spacing and grooming plants correctly to maintain a good airflow helps to prevent these diseases. Sprinkler watering in the morning so the foliage will dry during the day or drip irrigating so the foliage stays completely dry is also useful. Damping-off can be prevented by planting seeds after the weather warms and not keeping the seeds and seedlings too wet.

Botrytis gains a foothold in dead plant parts. Deadheading and grooming can help to keep this disease out of annuals. Insects such as aphids and leafhoppers spread the virus diseases mosaic and

aster yellows. Starting with virus-free plants and then excluding insect pests detours these diseases. No control is available for the virus diseases. Plants must be pulled and destroyed. The fungus diseases are controlled with fungicides. Check the label of each chemical for the organisms it controls and the proper application methods.

Other pests — Slugs and snails are very common and can chew small annuals down to nothing. Handpick, trap, and destroy the pests or use commercial baits.

DESCRIPTION OF SELECTED ANNUALS

***Antirrhinum majus* (Snapdragon)** — Available in many colors. Grows in full sun. Height varies from 12 inches for dwarf plants to 36 inches for the tall varieties. Plants can be directly seeded or transplanted in early spring. These plants often reseed themselves under Idaho conditions.

***Begonia semperflorens* (Bedding begonia)** — Colors in shades of red and pink and white. Leaves are bright green or bronze red and waxy looking. Grows in partial sun to shade. Height is 6–12 inches at maturity. Seeds are slow to start and are best used as bedding plants or houseplants.

***Calendula officinalis* (Pot marigold)** — Flowers are white, cream, orange, yellow, and apricot. Grows in full sun. Mature height is 12–30 inches. Sow seeds directly in early spring. Flower petals are edible and the flowers make long-lasting cut flowers. These plants are very easy to grow and will reseed profusely.

***Callistephus chinensis* (China aster)** — Asters come in white, light yellow, pink, red, blue, and lavender or purple. Grows in full sun. Height varies from 6 to 30 inches. Sow seeds directly into garden in spring. These plants dislike being transplanted. Many flower forms are available and they all make excellent cut flowers.

***Centaurea* sp. (Bachelor's button)** — Colors vary from blue, pink, rose, purple, yellow, and white. Grows in full sun. Height is 12–36 inches tall. The different species have differing planting and growth requirements.

***Cosmos* sp. (Cosmos)** — Colors are yellow, orange, red, white, pink, and bicolors. Grows in full sun to partial shade. Height is 2–7 feet. Easy-to-grow plants make good backgrounds for other annuals. Several different species have differing planting and growth requirements. These plants will reseed.

Dahlia sp. (Dahlia) — Comes in all colors except blue. Requires full sun for at least half the day. Height is 12–20 inches. These seed-grown plants form tubers that can be dug and stored over the winter. To assure vigorous bloom, however, replant each spring from seed. These showy plants bloom profusely in the first year.

Ipomoea tricolor (Morning glory) — Colors include blue, white, pink, red, chocolate, crimson, lavender, and violet. Grows in full sun. This climbing plant grows to 10 feet, but some dwarf forms are available that grow to 5 inches. This fast-growing vine is attractive on trellises and fences. Flowers on old varieties are open only at night, but the newer varieties stay open most of the day. Several different species are available. Some reseed.

Lathyrus odoratus (Sweet pea) — Comes in pink, red, purple, lavender, white, cream, apricot, salmon, maroon, and bicolors. Prefers full sun. Climbing types will grow to 5 feet while bush types grow to 12–36 inches. Can be planted very early. Keeping seedpods off plants will keep it blooming.

Limonium sinuatum (Statice) — Colors include blue, lavender, white, rose, yellow, apricot, and peach. Prefers full sun. Grows 10–48 inches tall. This plant is easily dried and is decorative in bouquets. Various forms yield plants of differing heights. *L. sinuatum* has flowers in flat-topped clusters while *L. suworowii* has curved spikes of bright rose or lilac flowers.

Lobelia erinus (Lobelia) — Colors include white, cream, rose, pink, purple, violet, and lavender. Grows in full sun to light shade. Height is 4–6 inches. Lobelias are easy to establish as transplants. Flowers best when nights are cool. Attractive in front of other annuals and in containers and hanging baskets.

Pelargonium sp. (Geranium) — Comes in shades of red, pink, orange, violet, white, and bicolors. Grows in full sun to partial shade, depending on variety. Height is 8–36 inches. These popular annuals can be planted as rooted cuttings or as transplants in spring. Several different species have differing growth habits. All make good houseplants. They can also be overwintered in a cool, unheated cellar.

Petunia hybrida (Garden petunia) — Colors available include shades of pink, red, salmon, coral, yellow, cream, blue, purple, white, and bicolors. Plants prefer full sun. Height is 8–27 inches. They are best started

as transplants. The long blooming period of petunias make them a popular annual. Flowers are single or double. The plants adapt to a wide range of soil and water conditions. They also make good cut flowers.

Portulaca grandiflora (Moss rose) — Colors include white, cream, yellow, orange, red, and pink. Grows in full sun. Height is 6 inches. Sow seeds directly or set out transplants. This favorite grows in sunny, dry areas where many other plant will not grow. Plants have a trailing habit and the leaves are succulent. Flowers are single or double and open in the sun and close in late afternoon. These plants look good in rock gardens, containers, and hanging baskets.

Tagetes sp. (Marigold) — Colors available include white, off white, yellow, orange, and orange red. Plants grow in full sun. Height is 4 inches–4 feet. They easily establish from seed or as transplants. Marigolds bloom continuously from early summer until frost. All are good as cut flowers. The many different species have various flower forms and plant-growth habits.

Tropaeolum majus (Nasturtium) — Colors include cream, yellow, orange, red, and pink. Plants grow in full sun. Height varies from 15 inches in the dwarf varieties to 10 feet in the climbing types. They easily establish from seed, but plants do not transplant well. Young leaves and blossoms have a peppery flavor and are edible. Blooms profusely throughout the summer until frost.

Viola sp. (Pansy) — Colors available include white, yellow, orange, red, purple, blue, and bicolors. Plants grow in full sun or partial shade. Height of plants is 8 inches. Violas establish easily as transplants and are popular to bed in containers, hanging baskets, and rock gardens. These plants grow best in early spring through early summer. Some varieties are more heat tolerant than others. The various species have various flower and growth characteristics. They bloom all summer in cool regions if plants are dead-headed but need to be replaced in hot summer climates.

Zinnia elegans (Garden zinnia) — Comes in shades of white, yellow, orange, red, pink, purple, and bicolors. Plants grow in full sun. Height is 6–36 inches. Zinnias are easily started from seed. These plants grow easily and bloom through the heat of summer and into late summer when most other annuals have finished. Available in dwarf and tall-growing varieties.

Getting Started with Biennials

Biennial plants complete their life cycle in two years. During the first year plants produce leaves that are often close to the ground and arranged in circular patterns. The rosette of leaves overwinters; the winter cold period stimulates flowering during the second year. The plants bloom and then die.

Biennial seeds can be planted in midsummer to produce plants that develop in the fall. The plant then blooms the next year. Popular biennials are stock, foxglove, silver dollar, and hollyhock.

Culture of biennials is the same as for annuals except the plants remain for two years.

Getting Started with Perennials

Historically, herbaceous perennials have always been an important component of the ornamental garden. Recently there has been an upsurge of interest across the United States in the culture of herbaceous perennials. Despite this renaissance, many gardeners are reluctant to try growing herbaceous perennials because they still lack appreciation and knowledge about them.

Herbaceous perennials take the name *herbaceous* from the word **herb**, a seed-producing annual, biennial, or perennial that does not produce woody stems. Herbaceous perennials are termed **perennial** in that they take one or more seasons to go from seed to seed and then generally, but not necessarily, live for three or more seasons. Some such as columbine may be short-lived, while others such as peony will outlast several generations of the same family in the same site without being divided or moved.

The tops of the plants, the flowers, the leaves, and the stems of herbaceous perennials usually die back to the ground with the first fall frost. The hard, fleshy subterranean portions of the plant, the crown and roots, survive the winter and resume growth in spring. Those herbaceous perennials that survive the winter with little or no protection are termed **hardy**. Those herbaceous perennials that need some protection to survive the winter outdoors are said to be **half-hardy**. Some herbaceous perennials must be lifted as tubers, rhizomes, or bulbs, stored overwinter or placed in a greenhouse, and then be replanted in spring. These plants are termed **tender** herbaceous perennials.

Herbaceous perennials are available in an unlimited variety of flowers, foliage colors, textures, forms, spreads, and height. As a group, they are the first plants to bloom in the spring and the last to fail with the fall frosts. They seldom bloom more than a few days to several weeks as individuals, but afford a continuity of bloom as a bed or border.

Being herbaceous rather than woody, herbaceous perennials have the capacity to bend in the breeze and lend interest and movement to a static landscape. They have the advantage, unlike trees and shrubs, of obtaining a definite size each season, somewhere between a few inches to 10 feet tall. Generally, they need division and no pruning. They vary in their environmental preferences from wet to dry, fertile to infertile, low to high pH, sandy to loam to clay soils, as well as shady to sunny sites. They also vary widely in the amount of care they need. While there are no maintenance-free herbaceous perennials, many require low maintenance.

THE PURPOSE OF A PERENNIAL GARDEN

A perennial garden may have different purposes and fill many needs. The great English gardener, Gertrude Jekyll (1843–1932), perhaps said it best when she penned:

The first purpose of a garden is to give happiness and repose of mind, which is more often enjoyed in the contemplation of the homely border . . . than in any of those great gardens where the flowers lose their identity, and with it their hold of the human heart, and have to take a lower rank as mere masses of color filling so many square yards of space.

The benefits and opportunities a perennial garden offers include the following:

- Enhances those outdoor areas where you will spend much of your time from spring to fall.
- Creates an attractive privacy screen.
- Softens and makes attractive a steep slope by terracing it and planting herbaceous perennials.
- Creates a bog garden where it is too wet for a lawn.
- Creates an inviting entrance to your house.
- Grows flowers that provide indoor or outdoor fragrance.

- Integrates the other features of the landscape into a whole.
- Creates a special place to exhibit your skill at raising specimen plants.
- Masks unattractive aspects of a yard such as toolsheds, garbage cans, compost bins, etc.
- Allows you to use a rocky outcropping as a rock garden (no need to remove the rocks).
- Creates a stunning view from inside the house.
- Adds color, shape, and dimension to small yard patches next to entrances, which softens the hard features of an existing backdrop.

SEXUAL PROPAGATION BY SEED

This method is advantageous because disease is not as easily carried over on the seed as it may be through vegetative propagation. To start herbaceous perennials from seed, harvest the seed when it is ripe but before the spent flower heads self-sow. Keep in mind that seeds of many horticultural cultivars will not come true-to-type owing to their hybrid parentage. To start perennials from seed indoors, start them in midwinter to early spring so some of them will bloom during the first growing season. Seeds may be started in a greenhouse or on a sunny windowsill but most commonly are started under lights.

VEGETATIVE PROPAGATION BY DIVISION, STEM CUTTINGS, ROOT CUTTINGS, LAYERING, GRAFTING, OR TISSUE CULTURE

Vegetative propagation guarantees that the offspring will be identical to the parent. Usually it takes far less time to have a fully mature blooming herbaceous perennial when it is vegetatively propagated.

Division— This is the simplest and most certain way to propagate, control the size of, and rejuvenate herbaceous perennials. Generally, perennials become larger each year and eventually begin to choke out other plants. Their outer edge thrives while the center of the clump suffers from competition for water, nutrients, root run, and sunlight. Often an advanced-age clump looks like a doughnut with a thriving outer ring and a dead center. Such a clump is a prime candidate for division. Shasta daisies, chrysanthemums, and phlox are good examples of plants where this condition exists after 2–3 years.

The time to divide a perennial clump depends upon the particular perennial, the time of year that the perennial blooms, and the climate. In United States Department of Agriculture Plant Hardiness Zone 5 or colder (less than 5), most division is done in the spring while the perennials are still slightly dormant. Division is usually necessary only every 2–4 years for most perennials. Some perennials, such as the chrysanthemum, benefit from being divided every year while others, such as the oriental poppy, are best left undisturbed for as long as possible or never divided.

Different types of perennials are handled in other ways depending upon their growth habit when they are dug and divided. For example, compact shallow-rooted plants are divided by digging the entire clump and pulling it carefully apart into smaller plants. Solid clumps of plants such as daylilies, hosta, phlox, and Siberian iris are divided by digging up the entire clump and using two spading forks back-to-back to pull the clump into sections. If the center of the clump is deteriorated, it must be discarded. If you wish to have a small section of an existing clump for use elsewhere, use a sharp spade to dig a healthy section away from the parent clump without disturbing the parent clump.

Shallow-rooted ground covers such as vinca and creeping phlox are divided anytime during the growing season by digging them up and cutting them apart. Fibrous-to woody-rooted perennials such as lupine must be dug carefully, the soil rinsed from the roots, and then the crown carefully divided with a sharp knife, making sure that each segment contains two to four strong taproot segments and two to four eyes or shoots.

Tip or stem cuttings— These are rootless sections of plants that are placed in a rooting medium where they are induced to develop adventitious roots. Cuttings may also be taken from actively growing roots.

Tip or stem cuttings are propagated by taking a terminal, 3–6-inch long firm portion of a vigorous nonblooming shoot that includes several nodes. Spring is the best time to take cuttings from herbaceous perennials that bloom in summer. Early summer is the best time to take cuttings from those that bloom in spring or fall.

Most perennials cuttings should begin to develop roots in 1–2 weeks. Bottom heat will speed the rooting process but is not necessary.

Sometimes young, virtually rootless tufts of shoots develop at the base of the perennials. These may be pulled away from the parent plant and treated the same as any cutting.

Root cuttings — These cuttings are best made in early spring. While it is easiest to take cuttings from perennials when they are being lifted from the bed or border, cuttings can also be taken from the parent plant by digging around the periphery of the parent plant with a shovel. Fine-rooted plants, such as *Achillea*, are propagated from root cuttings by scattering 1–2-inch long sections of root horizontally on the surface of a 2–3-inch deep layer of moist soilless medium in a flat (a shallow box in which seedlings are started). Cover the pieces of root with ½ inch of moist sifted, soilless mix.

Fleshy-rooted perennials such as baby’s breath, bleeding heart, peonies, and oriental poppies are propagated by taking 1½–2-inch long sections of roots, dusting the bottom end with a rooting compound, and sticking the root cutting bottom end down in a 50-50 mixture of peat moss and sand in pots or deep flats, with ¼ inch of the cutting sticking above the rooting medium. For peonies, take 3-inch-long root cuttings and keep the medium moist but not wet. When the cuttings begin to grow, treat them the same as any other seedlings.

Layering — This is an easy way to propagate vine-type plants and ground covers. Bend the supple stems, without severing the stem from the parent plant, down to the soil into a shallow trench and cover several nodes with soil or bend the stems into pots of soil.

Notching or wounding the area just below a soil-covered node will encourage rooting. Many upright plants can also be rooted with this technique by carefully bending their younger, more flexible stems downward to the ground.

Grafting — This is the joining of the top of one plant, the **scion**, to the bottom of another plant, the **stock**. This technique is possible but rarely used in propagating perennials.

Tissue culture — Millions of disease-free plants from a single small clump of apical cells in a single

season can be generated from a tissue culture. This method is beyond the facilities and capabilities of the ordinary homeowner.

VEGETATIVE PROPAGATION BY SPECIALIZED STEMS AND ROOTS

These function primarily as food-storage organs and can also function in vegetative reproduction.

Bulbs — Tunicate bulbs have outer-bulb scales that are dry and membranous and are typical of the tulip, hyacinth, bulbous iris, and daffodil.

Nontunicate or scaly bulbs are represented by the lily. These bulbs do not have the dry covering and the scales are separate and attached to a basal plate. Propagation is accomplished by periodically removing the small bulbs or offsets that grow off the main bulb. This is usually done whenever the plants are dug. Digging these perennials is necessary when the clumps become too crowded and is done after the foliage has died down naturally in the late summer or fall. Bulbs should be planted or replanted at that time. The small bulbs may need to grow for several seasons before they are large enough to flower. Lilies are propagated by removing some of the outer scales of the mother bulb, planting them, and allowing them to develop small bulbs.

Corms — Gladiolus and crocus are typical plants with corms. Gladioli are semihardy to tender in Idaho and must be stored overwinter in areas with severe winters. The corm is a swollen base of the stem that is enclosed by dry, scaly leaves. Propagation is accomplished by separating the small corms or cormels from the mother corms. Plant these small corms shallowly and expect no flowers until they grow large enough, usually 1 or 2 years.

Tubers — These are a modified stem that serves as a storage organ. Caladium is an example of a tuberous plant. Tubers can be propagated by planting the whole structure or by cutting tubers into sections, each containing one or more buds or “eyes.” This division is done shortly before planting.

Tuberous roots and stems — These thickened structures are botanically different from true tubers but are often simply called “tubers.” Tuberous roots are typical of several types of perennials, including the dahlia. Propagation is done by separating the tuberous roots, making sure that each root has a section of the crown with a shoot bud. Divide in late

winter or spring, shortly before planting. Tuberous roots are biennial, meaning the old root disintegrates in the second year after new tuberous roots are produced.

Tuberous stems include the tuberous begonia and cyclamen. These structures are usually vertical in orientation and have vegetative buds on the upper end. These tuberous stems continue to grow larger and larger from year to year. Divide these structures early in the spring, making sure each has a bud.

Rhizomes — These specialized stem structures grow horizontally on top of or just below the soil surface. Rhizomatous iris and lily of the valley are two perennials that can be propagated by their rhizomes. Remove sections of shoots and roots early in the spring or in late summer or fall.

GROWING, CULTURE, AND MAINTENANCE

Site selection — Because herbaceous perennials can be left in a given place for a long period of time, proper site selection is critical. Most plants prefer a site that has a fertile, well-drained, organically rich soil with a pH of 5.5–6.5. Good drainage is important, especially during the winter, and most soils will have to be improved. The site should receive full sun or shade all day. Be sure to consider not only the present shade, but also the future shade. Take into account the growth of your trees and shrubs as well as your neighbor's. The site should be flat to only slightly sloped. It should be out of the drying, stem-snapping wind but have enough breeze to provide the air circulation essential to minimize the slow foliage-drying conditions conducive to disease.

Soil preparation — The best opportunity to tailor the soil needs of a perennial is the first time it is prepared. Try to start soil preparation long before planting the bed or border. Start in spring for a fall planting and in fall for a spring planting. This will allow plenty of time for any organic soil amendments and/or pH modifications to take effect. To prepare the site for planting perennials,

- Clear all large debris from the site. Kill and remove all existing vegetation from the site for composting. It may be necessary to re-treat the site to kill persistent perennial weeds such as quack grass.

- Spread 2–3 inches of organic matter such as well-decomposed compost, aged manure, or peat moss over the surface of the soil before beginning to work it. Rototill or spade the organic matter into the soil to a depth of 8–12 inches. Add no more organic matter than one-third of the final amended soil volume. Do not work the soil when it is wet. Organic matter incorporation improves soil structure by providing the lignin that glues together the soil particles. Improved soil structure encourages water percolation and retention, aeration, and root penetration. Spread an organic mulch over the prepared bed or border. It is easier and tidier to spread the mulch before planting.
- Edge the bed or border in some fashion. An edging will be attractive and will help reduce the encroachment of the lawn.

Planting and transplanting — While bare-rooted perennials are best planted either in the spring or fall, container-grown perennials may be planted at any time during the growing season, though it is more difficult during the drought months of July and August. Freshly dug plants are best transplanted in spring or fall but may be moved all summer if you are careful. Perennials such as bearded iris, bleeding heart, peonies, and oriental poppies are best transplanted immediately after their brief dormant period after bloom. When planting herbaceous perennials,

- Dig a hole two times the size of the root spread of bare-root perennials and one and one-half times the size of the root ball of container-grown perennials.
- Soak the roots of bare-root plants for several minutes in a starter solution of 1 tablespoon of 16-12-10 or 20-20-20 water-soluble fertilizer dissolved in 1 gallon of water.
- Water the potted herbaceous perennials with a starter solution before knocking them out of the container. Place your hand over the top of the pot with your fingers grasping the main stems, turn the pot upside down, and tap the pot rim on the edge of a hard surface or tap the bottom of the pot sharply with a planting trowel. Remove fiber pots from perennials because often pots do not decompose. Be sure to at least peel back the rim

of peat pots below soil level or the rim will act as a wick, drying out the pot and the contained soil.

- Some pot-bound plants may have to have the container cut away with snips. Score the soil ball, making three to five vertical cuts into it, top to bottom, with a sharp knife. The depth of the cuts will vary from ½–1½ inches deep, depending upon its size. Tease some of the soil away from the top, sides, and bottom of the soil ball.
- Place the plant in the planting hole, making sure that the crown of plant is at the same depth as it was while previously growing.
- Work some organic matter one-fourth to one-third by volume into the soil. Place this mixture around the roots until the hole is half full. Settle the soil around the root system by mucking it in with the starter solution. Finish filling the hole with the soil–organic matter mixture.
- Tamp the soil firmly around the root system. Leave a berm to facilitate watering. Water the newly planted perennials with the starter solution. Label the plants or make a map of the garden for future reference.

Fertilizing — Perennials need steady, but light fertilizing first in late March to early April, right after the last of the mulch is removed and growth starts. Use a 5-10-5 fertilizer at the rate of 2 pounds per 100 square feet of bed space. Fertilize two more times at the same rate about 6 weeks apart. Fertilize a final time in very late summer for fall-blooming perennials.

If the perennial bed or border begins to lag a bit in midsummer, use a water soluble foliar fertilizer as a boost. Foliar feeding should always be thought of as supplemental to, rather than as a substitute for, granular fertilizers.

MASTER GARDENER TIP

Overfertilizing, especially with nitrogen, promotes vegetative growth at the expense of flowering and increases the need of staking for support.

Watering — Frequency is dictated by climate and the presence of a mulch. Water early in the day to avoid going into the evening with wet, disease-susceptible

foliage. Water thoroughly, to a depth of 8–10 inches, to encourage deep root penetration. Soil should dry out a bit between watering. Waterlogged soil will encourage root disease and excludes oxygen, resulting in shallow-rooted, drought-prone, unstable plants.

Mulching — Helps control weeds, reduces water loss, moderates soil temperature changes, prevents mud splattering of foliage and flowers, helps preserve surface soil structure, and adds nutrients to the soil as the mulch biodegrades.

Winter mulch can protect perennials from excessive cold temperatures and harmful thawing on freezing cycles. Apply after the first cold weather has occurred and after the soil has frozen. Cover crowns with 2–6 inches of light, porous mulch. Remove mulch in the spring or before plant growth begins.

Summer mulch can be applied after the soil warms up, about 4–6 weeks after the last of the winter mulch is removed. Try to coordinate the placement of the summer mulch so that it follows one of the fertilizations and weed-destroying cultivations. Apply between 1–2 inches of mulch. Be sure to keep the mulch away from the crown of the herbaceous perennial.

The best mulches to use are those that biodegrade to the point that they can be worked into the soil in late fall or early spring. Mulches in this category include compost, peat moss, or smaller-sized bark.

Thinning — Removing some of the stems increases the potential size of the individual blooms produced by the plant. For the most part, thinning is not necessary as it decreases the mass of the plant and may reduce the overall bloom impact of the plant.

Pinching — Inhibits the natural legginess of many perennials such as chrysanthemums. Pinching the growing tips or shoots of the individual stems once in May or June removes the inhibition of the shoot tip, producing multibranched shoots. This produces a whole bouquet of smaller-than-usual individual blooms. The combined branched shoots give the entire plant a much greater overall blooming mass despite the smaller individual blooms. Chrysanthemums are pinched every 3–4 weeks with the last pinch occurring about July 15.

Pinching also delays blooming. A soft pinch, just the tip of the stem, does not delay flowering as long as a

hard pinch, which removes several inches and several nodes from the stems. Pinching also decreases the need to stake herbaceous perennials as the plants are more compact.

Weeding — This is important because weeds compete for nutrients and water. Weeds may be grassy or broad-leaved and annual, biennial, or perennial. The unwanted offspring of existing perennials may also be considered weeds since many of them, especially those from hybrid parents, will not come true-to-type. Your first chore is to be able to distinguish weeds, even at the seedling stage, from desirable perennials. Once so distinguished, weeding can be done by hand, with shallow cultivation or herbicides, or largely avoided by using mulches.

Deadheading — Removal of spent blooms or inflorescence improves the appearance of herbaceous perennials and prevents the investment of energy in seed production. It also encourages the plant to continue blooming and stimulates a second flush of weaker blooms in those plants such as delphinium and foxglove.

A few perennials such as sedum 'Autumn Joy,' black-eyed-Susan, and ornamental grasses should be allowed to retain their seed heads for their winter interest.

Disbudding — The removal of all except the tip-most bud on each individual stem or branch of a multibranching stem produces large flowers on each stem or branch of that stem. Peonies are often disbudded in this fashion. The most spectacularly sized blooms can be achieved by taking a rooted cutting and limiting it to a single terminal bud on a single stem. One shortcoming of disbudding is that the second flush of bloom, which occurs after the terminal bud blooms and the axillary buds develop, is lost. Some gardeners remove the terminal bud to obtain a host of relatively large axillary blooms.

Staking — Giving a physical support to individual stems or to the plant as a whole is often necessary for those perennials with a natural tendency to fall over because of their height, habit, or weight of blooms and foliage.

Tall, single stems of perennials such as delphiniums, gladioli, and hollyhocks may require individual stakes for support. Select bamboo, plastic, or metal

stakes that will be at least three-quarters as tall as the individual stems they are to support when firmly anchored in the soil.

Tie the stems to the stakes with a figure-eight loop with one loop around the stake and the other around the stem. This double loop acts as a spring giving the stem a chance to sway in the breeze. The loops can be made with paper-covered wire, floral tape, or other soft material.

Stake bushy, multistemmed, floppy perennials such as asters, chrysanthemums, and coreopsis by pushing a ring of stakes into the soil at a point slightly to the interior of the perennial. Select stakes that are 6–12 inches shorter than the ultimate height of the plant. Weave a cats' cradle of support between the stakes with green yarn or floral tape. Start 1 foot above the soil level and continue upward at 1-foot intervals until the last cats' cradle is 8–12 inches below the top of the stems.

Alternatively, push appropriate lengths of multibranching tree or scrub prunings or branched bamboo canes into the soil at the fringes of the perennial. Let the interweaving branches supply most of the support. Some twine or floral tape may still be needed to contain the stems of the perennials.

Place very strong, multilegged 18–20-inch-tall wire hoops around perennials such as peonies and oriental poppies that have very heavy blooms on supple stems.

Insects and diseases — Practices to prevent or reduce the chance of insect and disease problems include:

- Select insect and disease-resistant perennials.
- Give your perennials the very best growing conditions possible from the standpoint of soil, nutrition, watering, spacing, sunlight, and air circulation.
- Grow a variety of plants. A monoculture of a cultivar or of a few cultivars will be far more susceptible to insect and disease problems.
- Remove spent flowers, dead leaves, and other plant litter during the growing season when it can be a source of infestation. Clean up the bed or border thoroughly before winter to avoid building up any refuse-harboring insects and disease over the winter.

- Keep weeds out of the bed or border and the immediate area because they are a source of both insect and disease problems.
- Know what the most likely common pests of your perennials are and then monitor for them.
- Do not compost any diseased plants. If your compost pile reaches 140°F–160°F, most disease organisms and insect eggs will be killed. However, most piles never get this warm, especially in the outside portion. Fungus organisms will spread along with compost.
- When a problem is encountered, act immediately without using pesticides if possible. Cut off diseased portions of the herbaceous perennial or remove seriously damaged plants entirely. Handpick large insects.

Pesticide control — Consult with your county Extension educator for the most biorational pesticide to use for your particular problem.

Spot treat if possible. Use nonchemical, nonbiological pesticides such as horticultural oils and insecticidal soaps. Use biological pesticides such as Bt for caterpillars or pesticides derived from natural sources such as pyrethrum, rotenone, ryania, or sabadilla. When using any pesticide, follow the label instructions. Always apply at the labeled rate. Buy small quantities of the pesticide to avoid disposal problems.

A Selection of Perennials for Idaho

Idaho growing conditions are difficult on plants. During the summer, temperatures and light intensity are high and humidity is low. This combination causes some plants listed for the eastern United States and lower coastal elevations to perform poorly in Idaho. On the following pages, Table 1 lists perennials available through the Idaho nursery trade or by mail order that have performed well or are deemed worthwhile for trial in Idaho.

COMMON NAME

Lists several names that the perennial might be called. Cross-referencing is done through the text

for convenience. For example, hollyhock is listed under *Alcea*. Hollyhock is also found under the common name, which refers back to *Alcea* for more information.

SCIENTIFIC NAME

Since the common name creates a lot of guesswork, the scientific name is included for clarity. Under the scientific name is a listing of cultivars (cultivated varieties) that may be available in your local nursery. The cultivar name (e.g., ‘Pink Star’) often indicates flower color.

HEIGHT

Varies with fertilizer practices, placement with respect to light, soil conditions, and plant vigor. A range of heights is given for most plants. Determining exact heights will be the part of the joy of gardening. Keep records of your discoveries so that plants can be moved into more correct locations in the future. A perennial garden can be arranged and rearranged like furniture in your home.

BLOOM TIME

Gives you the chance to “orchestrate” and synchronize the blooming sequence. Use a sheet of paper to list and orchestrate your flower display.

FLOWER COLOR

Refers to flower colors available in the nursery trade. It does not necessarily refer back to the specific cultivars in the scientific name column.

LIGHT NEEDED

Categorizes the plant into one or more light regimes: full sun is uninterrupted sunlight through the full day; partial shade is filtered sunlight through tree leaves or a minimum of 6–8 hours of sunlight per day; full shade indicates filtered sunlight through a dense foliage canopy or less than 6 hours of sunlight each day.

LANDSCAPE USE

Suggests planting locations as well as indoor uses such as cut flowers or dried flower arrangements.

Table 1. Perennials for Idaho.

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Achillea, dwarf (Woolly Yarrow)	<i>A. tomentosa</i> German hybrids, e.g., paprika	8"–10"	June–Aug	Yellow	Full sun	Borders, ground cover
Achillea, tall (Fernleaf Yarrow)	<i>Achillea</i> spp.	2½'–3'	June–Aug	Yellow	Full sun Partial shade Full shade	Borders, cut flowers dry flowers
Aegopodium (Bishop's Goutweed)	<i>A. podagraria</i> <i>variegatum</i>	8"–14"	June–Aug	White	Full sun Partial shade Full shade	Ground cover, will grow in poor soil
Ajuga	<i>Ajuga</i> spp. 'Alba' 'Bronze Beauty' 'Gaiety'	6"–9"	April–May	Blue White	Full sun Partial shade Full shade	Ground cover, edging rock gardens, beneath trees
Alcea (Hollyhock)	<i>Alcea rosea</i> (also <i>Althaea rosea</i>) 'Majorette' 'Silver Puffs' 'Summer Carnival' 'Chater's Double Mixture'	2'–9'	June–Aug	White Yellow Pink Lavender Red	Full sun	Background borders, against fence or wall
Allium (Stars of Persia or Persian Onion)	<i>A. christophii</i>	15"–24"	Early summer	Silvery violet	Full sun	Herb gardens, edging vegetable plots, containers, edible foliage, rockeries
Allium (Giant Onion)	<i>A. giganteum</i>	3'–4'	Early summer	Pink purple	Full sun	Herb gardens, edging vegetable plots
Allium (Turkestan Onion)	<i>A. karataviense</i>	8"–10"	Late spring	Lilac pink	Full sun	Herb gardens, edging vegetable plots
Allium (Golden Garlic or Lily Leek)	<i>A. moly</i>	10"–14"	Late spring	Bright yellow	Full sun– partial shade	Herb gardens, edging vegetable plots
Allium (Chinese Chive or Garlic Chive)	<i>A. tuberosum</i>	20"	Late summer	White	Full sun– partial shade	Herb gardens, edging vegetable plots
Alyssum (Basket of Gold or Gold Dust)	<i>A. saxatile</i> 'Compacta'	9"–10"	April–June	Golden yellow	Full sun	Rock gardens, dry walls, banks, fronts of borders
Anchusa (Forget-Me-Not)	<i>A. myosotis</i>	6"–8"	May–June	Blue	Full sun Partial shade	Borders, groupings
Anemone (Greek Anemone or Greek Windflower)	<i>A. blanda</i> 'Blue Star' 'Bridesmaid' 'White Splendor' 'Pink Star'	3"–6"	April–May	Blue Pink Purple White	Full sun Partial shade	Rock gardens, perennial borders, naturalized

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Anthemis (Golden Chamomile or Golden Marguerite)	<i>A. tinctoria</i> 'E.C. Buston' 'Kelwayi' 'Moonlight'	2'–3'	June–Sept	Yellow	Full sun	Perennial borders, cut flowers
Aquilegia (Columbine)	<i>A. hybrida</i> 'McKana Giant' 'Mrs. Scott Elliot' 'Rose Queen' 'Spring Song'	2'–3'	May–June	Blue Pink Purple Red Yellow White	Full sun Partial shade	Borders, naturalized settings
Arabis (Rock Cress)	<i>A. caucasica</i> 'Snow Cap' 'Spring Charm'	12"	Late March May	White Rose-tinted	Full sun	Rock gardens, dry stone walls, border, small area ground cover
Arenaria (Irish Moss) (Sandwort)	<i>Arenaria</i> spp.	2"–6"	May–June	White	Full sun Partial shade Full shade	Evergreen, ground cover, rock gardens, around stepping stones
Armeria (Sea Pink) (Sea Thrift)	<i>A. maritima</i> 'Brilliant' 'Lauchiana' 'Royal Rose'	6"–15"	May–June	Pink White	Full sun	Edging, rock gardens, cut flowers
Artemisia (Wormwood) (Angel's Hair)	<i>A. schmidtiana</i> 'Silver Mound' 'Powis Castle' 'Silver Brocade'	8"–12"	Foliage plant	—	Full sun Partial shade	Perennial borders
Asclepias (Butterfly Weed) (Pleurisy Root)	<i>A. tuberosa</i>	2'–3'	June–Aug	Orange	Full sun	Borders, dry flowers
Asperula (Sweet Woodruff)	<i>A. odorata</i>	8"	May–July	Pink Blue White	Partial shade	Ground cover, rock gardens
Aster, short/dwarf (China Aster) (Annual Aster)	<i>Callistephus chinensis</i> 'Pinocchio' 'Dwarf Queen' 'Color Carpet'	4"–10"	Spring Summer or fall	Many	Full sun	Cut flowers, bedding plants
Aster, tall (New England Aster) (Stokes Aster)	<i>Aster</i> spp. <i>Callistephus</i> spp. <i>Stokesia</i> spp.	1½'–3'	Spring Summer or fall	Many	Full sun	Cut flowers, borders
Astilbe (False Spirea)	<i>Astilbe x arendsii</i> 'Deutschland' 'Fanal' 'Red Sentinel'	2'–3'	June–July	Red Pink White	Full sun Partial shade	Border plant
Aubretia (False Rock Cress)	<i>A. deltoidea</i> 'Bengale' 'Purple Cascade' 'Red Cascade'	6'	April–May	Rose lilac Purple Red	Full sun Partial shade	Rock gardens, dry stone walls, edge of perennial borders
Baby's Breath (see <i>Gypsophila</i>)						

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Basket of Gold (see <i>Alyssum</i>)						
Bellflower, Chinese or Japanese (see <i>Platycodon</i>)						
Bellis (English Daisy)	<i>Bellis perennis</i>	4"–6"	April–June	White Pink	Full sun Partial shade	Edging, borders
Bergenia (Heartleaf Bergenia) (Pig Squeak)	<i>B. cordifolia</i>	12"–15"	April–May	Pink White	Full sun Partial shade	Evergreen, rock gardens, stream banks, pools, perennial borders
Betonica (Lamb's Ear) (Woolly Betony)	<i>Stachys byzantina</i>	6"–12"	July–Oct	—	Full sun Partial shade	Front of borders, ground cover, rock gardens
Bleeding Heart (see <i>Dicentra</i>)						
Campanula (Carpathian Harebell)	<i>C. carpatica</i> 'Blue Carpet' 'China Doll'	6"–12"	June–Aug	Blue lilac White Purple	Full sun Partial shade	Borders or rock gardens
Campanula (Danesblood) (Clustered Bellflower)	<i>C. glomerata</i>	1'–1½'	June–Aug	White Blue Purple	Full sun Partial shade	Borders, bedding between shrubs, cut flowers
Campanula (Canterbury Bells)	<i>C. medium</i> 'Cup and Saucer'	2'–4'	June–Aug	White Pink Blue Maue	Full sun Partial shade	Borders, isolated clumps, balconies
Campanula (Peach Bells)	<i>C. persicifolia</i>	2'–3'	June–Aug	White Blue	Full sun Partial shade	Borders
Canterbury Bells (see <i>Campanula medium</i>)						
Carnation (see <i>Dianthus caryophyllus</i>)						
Cerastium (Snow-in-Summer)	<i>C. tomentosum</i> 'Columnae' 'Yo Yo'	6"	May–June	White	Full sun	Evergreen, ground cover, dry stone walls, edging
Ceratostigma (Plumbago)	<i>C. plumbaginoides</i>	8"–10"	July–Sept	Dark blue	Full sun Partial shade	Rock gardens, ground cover
Cheiranthus (Wallflower)	<i>C. cheiri</i>	9"–30"	March–May	White Yellow Brown Red Pink Purple	Full sun	Balconies, terraces, mixed borders, flower beds, banks, rockeries, slopes
Chive (see <i>Allium</i>)						
Chrysanthemum (Shasta Daisy)	<i>Chrysanthemum x superbum</i> 'Alaska' 'Esther Read' 'Little Miss Muffet' 'Marconi' 'Snowcap'	2'–4'	June–Oct	White	Full sun Partial shade	Cut flowers, borders
Columbine (see <i>Aquilegia</i>)						

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Convallaria (Lily of the Valley)	<i>C. maialis</i>	6"–12"	May	White	Full sun Partial shade	Ground cover, cut flowers
Coral Bells (see Heuchera)						
Coreopsis (Tickseed)	<i>C. lanceolata</i> 'Baby Sun' 'Brown Eyes' 'Goldfink' 'Mayfield Giant' 'Sunburst' <i>C. rosea</i> <i>C. verticillata</i> 'Moonbeam' 'Zagreb'	2'–3'	June–July	Yellow Yellow chestnut	Full sun	Borders, cut flowers
Creeping Jennie (see Lysimachia)						
Crocus and Hybrids	<i>Crocus</i> spp.	2"–6"	Early spring	Golden yellow Blue Lavender Purple White Purple striped	Full sun to partial shade	Excellent for early color; large-flowered "Dutch hybrids" bloom later than most spring- flowering types
Crocus (Autumn)	<i>Colchicum autumnale</i>	4"–6"	Early spring	Lavender pink Rose White	Full sun to partial shade	Foliage grows in spring, then dies, flowers appear in fall without foliage
Daffodil (see Narcissus)						
Daisy, English (see Bellis)						
Daisy, Gloriosa (see Rudbeckia)						
Daisy, Painted (see Pyrethrum)						
Daisy, Shasta (see Chrysanthemum)						
Daylily (see Hemerocallis)						
Delphinium (Larkspur)	<i>D. elatum</i>	3'–6'	June–July	Many	Full sun	Background accent, cut flowers
Dianthus	<i>D. barbatus</i>	4"–6"	May–Aug	White Pink Scarlet	Full sun	Cut flowers, balconies, terraces, borders, rockeries, flower beds
Dianthus (Carnation) (Clove Pink) (Divine Flower)	<i>D. caryophyllus</i> 'Chabaud's Giant Improved' 'Dwarf Fragrance Mixed' 'Enfant de Nice Mixed' 'Juliet' 'Oriental Hybrid Mixed' 'Spotti' 'Tiny Rubies'	1'–2'	June–Aug	White Pink Red Purple Yellow Apricot Orange	Full sun	Cut flowers, flower beds, pot plants, borders
Dianthus (Pinks)	<i>D. chinensis</i>	6"–12"	Summer–Fall	Red White Pink	Full sun Partial shade	Edging, cut flowers bedding

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Dianthus (Maiden Pink) (Meadow Pink) (Spink)	<i>D. deltoides</i> 'Brilliant'	4"–12"	May–Aug	White Pink Red	Full sun	Rock gardens, border plants
Dicentra (Bleeding Heart)	<i>Dicentra</i> spp.	2'–3'	May–June	Red and white	Partial shade	Cut flowers, shaded borders
Digitalis (Common Foxglove) (Fairy Glove) (Finger Flower) (Purple Foxglove)	<i>D. purpurea</i> 'Leopard Foxglove'	2'–5'	May–July	Purple and White	Full sun Partial shade	Borders, cut flowers
Doronicum	<i>D. cordatum</i> 'Finesse' 'Madame Mason'	2'	April–May	Yellow	Full sun Partial shade	Front or middle perennial borders, cut flowers
Echinops (Glove Thistle)	<i>E. exaltatus</i> 'Tapglow Blue'	3'–5'	July–Sept	Blue	Full sun	Cut and dried flowers, back of borders
Erigeron (Fleabane)	<i>E. speciosus</i>	1'–2'	June–July	Blue	Full sun	Cut flowers, rock gardens, borders
Euphorbia	<i>E. myrsinites</i>	8"–10"	March–May	Yellow	Full sun	Border plants, cut flower, rock gardens
Euphorbia (Cushion Spurge)	<i>E. polychroma</i> (epithymoides)	1½'	March–May	Yellow	Full sun	Border plants, cut flowers
Festuca (Blue Fescue)	<i>F. ovina glauca</i>	6"–10"	—	—	Full sun Partial shade	Edging, banks, ground cover
Flax (Golden Flax)	<i>Linum flavum</i>	1'–2'	June–Aug	Golden yellow	Full sun	Rock gardens
Forget-Me-Not (see <i>Anchusa</i>)						
Foxglove, Common (see <i>Digitalis</i>)						
Fritillaria (Crown Imperial)	<i>F. imperialis</i>	2'–3'	Spring	Red Yellow Orange	Sun or light shade	A very showy old- fashioned plant, but odor may be offensive
Fritillaria (Checkered Lily or Guinea-Hen Flower)	<i>F. meleagris</i>	8"–12"	Spring	Checkered purple	Sun or light shade White	Fragile appearance; makes an interesting rock garden plant
Fritillaria (Persian Fritillary)	<i>F. persica</i>	10"–30"	Spring	Maroon Purple White	Full sun	Flowers have a slight skunk odor
Gaillardia (Indian Blanket)	<i>G. pulchella</i> 'Baby Cole'	1'–2'	Summer Fall	Yellow Orange Scarlet	Full sun	Cut flowers, window boxes, planters
Geranium (Cranesbill)	<i>Geranium</i> spp. 'Biokova' 'Johnson's Blue'	1'–2'	May–Sept	Blue Purple	Full sun Partial shade	Rock gardens, perennial gardens
Geum	<i>Geum</i> spp.	2'–2½'	May–Aug	Scarlet Orange	Full sun	Groupings in perennial borders, cut flowers

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Glory-of-the-Snow	<i>Chionodoxa luciliae</i>	3"–6"	Early spring	Blue Pale pink White Yellow	Full sun	Rock gardens, borders and edgings
Gypsophila (Baby's Breath)	<i>Gypsophila</i> spp.	1'–3'	June–July	Rose Purple White Pink	Full sun	Borders, dry flowers, rock gardens
Helianthemum (Rock Rose) (Sun Rose)	<i>H. nummularium</i>	1'	June–July	Yellow Rose Red and crimson White	Full sun	Rock gardens, slopes and pockets, crazy paving
Hemerocallis (Daylily)	<i>Hemerocallis</i> spp.	2'–4'	Spring Summer Fall	Many	Full sun Partial shade	Foundation plants, borders
Hen-and-Chickens (see <i>Sempervivum</i>)						
Heuchera (Coral Bells) (Alum Root)	<i>H. sanguinea</i> 'Bressingham Hybrids' 'Chartreuse' 'Chatterbox' 'June Bride' 'Matin Bells' 'Pluie de Feu' (Rain of Fire) 'White Cloud'	1'–2½'	May–July	Red Pink White	Full sun Partial shade	Rockerries, borders
Hollyhock (see <i>Alcea</i>)						
Hosta (Plantain Lily)	<i>Hosta</i> spp.	1'–2'	July–Sept	White Lavender Lilac	Full sun Partial shade Full shade	Borders, rock gardens, masses
Hyacinth (Armenian Grape)	<i>Muscari armeniacum</i>	6"–8"	Early spring	Blue	Full sun or partial shade	Multiplies rapidly, excellent for edging or indoor forcing, fragrant
Hyacinth (Grape Hyacinth)	<i>Muscari botryoides</i>	6"–8"	Early spring	Blue White	Full sun or partial shade	Produces clusters of tiny flowers, double flowers hold color longer
Hypericum (Aaron's Beard) (Rose of Sharon) (Saint-John's-wort)	<i>H. calycinum</i>	1'–1½'	June–Sept	Yellow	Full sun Partial shade	Shady slopes, banks, flower beds, borders, ground cover
Iberis (Evergreen Candytuft) (Edging Candytuft)	<i>I. sempervirens</i> 'Autumn Snow' 'Little Gem' 'Purity' 'Snowflake' 'Snowmantle'	6"–1'	April–May	White	Full sun	Rock gardens, edging
Incarvillea (Hardy Gloxinia)	<i>Incarvillea</i> spp.	1'	June–July	Red Pink	Full sun	Perennial gardens, rock gardens

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Iris (True-Bearded) (Siberian) (Japanese)	200+ species and many cultivars	4”–48”	Spring to fall, Most May–June, some rebloom	Wide range	Full sun	Beyond flowers, leaves provide texture, contrast of colors and combinations
Kniphofia (Red Hot Poker) (Torch Lily) (Tritoma) (Poker Plant)	<i>K. uvaria</i>	2’–4’	May–Sept	Red Yellow	Full sun	Borders, cut flowers
Lamb’s ear (see <i>Betonica</i>)						
Lamium (Spotted Dead Nettle)	<i>L. maculatum</i> ‘White Nancy’	1’	April–Sept	Purple-red White	Partial shade Full shade	Shaded perennial borders, rock gardens, summer filler
Lavandula (Sweet Lavender)	<i>Lavandula</i> spp. ‘Hidcote’ ‘Mustead’	1’–3’	June–Sept	Purple	Full sun	Borders, rockeries, cut flowers, evergreen
Liatris (Gayfeather) (Blazing Star)	<i>Liatris</i> spp. ‘Kobold’	1 ½’–5’	July–Oct	White Purple Pink	Full sun Partial sun	Cutting, drying, borders
Lily (Asiatic Hybrids)	Genus <i>Lilium</i> has 100+ species and many cultivars	2’–7’	June–July	Wide range	Full sun to partial shade	Accent plants
Lily (Oriental Hybrids)	Genus <i>Lilium</i> has 100+ species and many cultivars	2’–7’	July–Aug	Wide range	Full sun to partial shade	Accent plants
Lily (Surelians)	Genus <i>Lilium</i> has 100+ species and many cultivars	2’–7’	July	Wide range	Full sun to partial shade	Accent plants
Lily (Trumpets)	Genus <i>Lilium</i> has 100+ species and many cultivars	2’–7’	July	Wide range	Full sun to partial shade	Accent plants
Lily of the Valley (see <i>Convallaria</i>)						
Limonium (Sea Lavender) (Statice)	<i>L. sinatum</i>	1 ½’–2’	June–Aug	White Yellow Blue Red	Full sun	Flower beds, borders, small clumps, rockeries, cut and dried flowers
Liriope	<i>Liriope</i> spp.	10”–15”	Aug–Sept	Purple	Full sun Partial shade Full shade	Evergreen, borders, perennial gardens, rock gardens
Lupine (Lupin)	<i>L. polyphyllus</i> George Russell hybrids	2 ½’–5’	May–July	Blue Purple Reddish purple Yellow	Full sun Partial shade	Cut flowers, borders
Lychnis (Maltese Cross) (Jerusalem Cross)	<i>L. chalcedonica</i>	2’–3’	June–July	Scarlet	Full sun	Small groupings in borders
Lysimachia (Creeping Jennie) (Moneywort) (Creeping Charlie)	<i>L. nummularia</i>	6”–8”	June–Nov	Yellow	Full sun Partial shade Full shade	Shaded slopes and banks, walls, hanging baskets, bag gardens, submerged aquarium plant

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Maltese Cross (see <i>Lychnis</i>)						
Monarda (Wild Bergamot)	<i>M. fistulosa</i> 'Gardenview Scarlet'	to 3'	June–Aug	Lilac Purple White	Full sun Partial shade	Borders
Narcissus (Daffodil) (Jonquil)	spp. and hybrids	3"–14"	Early to midspring	Yellow White Pink (Cups: yellow, white, pink, orange, or nearly red)	Full sun or light shade	Borders, shrub beds, or naturalized, good for cut flowers
Ostrich Fern (see <i>Pteretis</i>)						
Pachysandra (Japanese Pachysandra)	<i>P. terminalis</i> 'Variegata' (Silver edge)	6"–8"	May	White	Partial shade Full shade	Ground cover, slopes, level ground, beneath trees
Paeonia (Peony)	<i>P. lactiflora</i>	3'	May–June	Many	Full sun Partial shade	Accent, cut flowers
Papaver (Iceland Poppy)	<i>P. nudicaule</i>	2'–4'	May–June	Many	Full sun Partial shade	Borders, cut flowers
Papaver (Oriental Poppy)	<i>P. orientale</i>	2'–4'	May–June	Many	Full sun	Borders, cut flowers
Peony (see <i>Paeonia</i>)						
Phlox, Creeping	<i>P. subulata</i>	6"–10"	April–June	White Pink Salmon Purple	Full sun Partial shade	Edging, bedding, rock gardens
Phlox, Tall (Summer Phlox) (Garden Phlox)	<i>P. paniculata</i> 'Symons-Jeune'	2'–3'	July–Sept	White Pink Red Blue Purple	Full sun Partial shade	Borders
Physostegia	<i>P. virginiana</i> 'Bouquet Rose' 'Vivid' 'Summer Snow'	2'–3'	July–Sept	Rose-purple White	Full sun Partial shade	Cut flowers, back of wildflower gardens borders, informal wildflower gardens
Platycodon (Chinese Bellflower) (Balloon Flower) (Japanese Bellflower)	<i>P. grandiflorum</i> 'Apoyama' 'Shell Pink'	2'	July–Sept	Blue Pink White	Full sun Partial shade	Cutting, rock gardens, borders
Plumbago (see <i>Ceratostigma</i>)						
Polemonium (Jacob's Ladder)	<i>P. caeruleum</i> 'Blue Pearl'	1½'	May–June	Blue	Full sun Partial shade	Rock gardens, foreground of perennial borders
Poppy, Iceland (see <i>Papaver nudicaule</i>)						
Poppy, Oriental (see <i>Papaver orientale</i>)						

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Potentilla	<i>P. verna</i>	4"–6"	May–Oct	Yellow	Full sun Partial shade	Ground cover
Primrose, Polyanthus	<i>Primula x polyantha</i> 'Colossea Hybrids' 'Pacific Giants'	6"–12"	April–June	Many	Partial shade	Shaded areas in perennial borders, shaded streams
Pteretis (Ostrich Fern)	<i>P. modulosa</i>	3'–4'	Foliage	—	Partial shade Full shade	Northern exposures, under trees or any place where light is not abundant
Pyrethrum (Painted Daisy)	<i>Pyrethrum</i> spp.	1½'–2'	June–July	Pink Red White	Full sun Partial shade	Rock gardens, borders, naturalizing, cut flowers
Red Hot Poker (see <i>Kniphofia</i>)						
Rudbeckia (Gloriosa Daisy)	<i>R. hirta pulcherima</i> 'Gloriosa Daisy' (<i>Rudbeckia x hybrida</i>) 'Gloriosa Double Daisy' 'Gloriosa Irish Eyes' 'Goldstrum' 'Marmalade' 'Rustic Colors'	2"–3"	July–Sept	Golden yellow Brown	Full sun Partial shade	Cutting, background
Santolina (Lavender Cotton)	<i>S. chamaecyparissus</i>	1'	June	Yellow	Full sun	Evergreen, rock gardens, low hedge, carpet bedding
Saponaria (Bouncing Bet) (Soapwort)	<i>S. officinalis</i>	1'	July–Sept	Pink White	Full sun Partial shade	Wild gardens, rough corners
Saxifraga	<i>Saxifraga</i> spp.	3"–18"	June–Aug	Yellow White Red Pink Purple	Partial shade	Rock gardens, borders, edging, potted plants
Scabiosa (Caucasian Scabious) (Pincushion Flower)	<i>S. caucasian</i> 'Butterfly Blue' 'Pink Mist'	2'	June–Sept	Blue White Mauve	Full sun	Borders, flower beds, cut flowers
Sea Lavender (see <i>Limonium</i>)						
Sedum	<i>Sedum</i> spp. 'Dragon's Blood'	6"	Aug–Oct	Red	Full sun Partial shade	Rock gardens, borders
Sedum (Showy Stonecrop) (Live Forever)	<i>S. spectabile</i> 'Autumn Joy' 'Brilliant' 'Indian Chief' 'Meteor' 'Star Dust' 'Variegatum'	1½'–2'	Aug–Oct	Pink Red White	Full shade Partial shade	Rock gardens, borders
Sempervivum (Hen-and-Chickens) (Old Man and Woman) (Houseleeks) (St. Patrick's Cabbage)	<i>S. tectorum</i>	6"–30"	July	Purple-red	Full sun	Rock gardens, dry walls, edging, front of perennial borders, carpet bedding, containers

Table 1. Perennials for Idaho (cont.)

Common name	Scientific name	Height	Bloom time	Flower color	Light needed	Landscape use
Snowdrop (Common Snowdrop)	<i>Galanthus nivalis</i>	4"–6"	Early spring	White	Partial shade	One of the earliest spring bulbs for rock gardens, borders, naturalizing, easy to grow, increases rapidly
Snowdrop (Giant Snowdrop)	<i>Galanthus nivalis</i>	6"–9"	Spring	White	Full sun	Good for borders and rock gardens
Snow-in-Summer (see <i>Cerastium</i>)						
Stachys (see <i>Betonica</i>)						
Statice (see <i>Armeria</i> or <i>Limonium</i>)						
Sweet Lavender (see <i>Lavandula</i>)						
Sweet William (see <i>Dianthus barbatus</i>)						
Teucrium (American Germander)	<i>T. canadense</i>	6"	June–July	Rose	Full sun	Edging, rock gardens
Teucrium (Germander)	<i>T. chamaedrys</i>	4"–12"	June–July	Purple	Full sun	Edging, rock gardens, hedges
Thymus (Thyme)	<i>T. serpyllum</i>	3"–6"	June–July	Purple White Red	Full sun	Rock gardens, herb gardens, stone walls
Tradescantia (Virginia Spiderwort) (Widow's Tears)	<i>T. virginiana</i> 'Purple Dome'	1½'–2'	June–Sept	White	Full sun Pink Red	Borders, foundations Partial shade
Tritoma (see <i>Kniphofia</i>)						
Trollius (Globe Flower)	<i>T. europaeus</i>	1'–2'	May–July	Lemon Orange	Shade	Borders
Tulip	<i>Tulipa</i> spp. and hybrids	3"–30"	Spring	All colors except true blue	Full sun	Variety of colors, shapes, blooming times for all uses, may use annuals to cover ground above bulbs in summer
Valeriana	<i>V. officinalis</i> 'Rubra'	3'–5'	June–July	Pink White Red Purple	Full sun Partial shade	Perennial gardens, background
Veronica	<i>Veronica</i> spp. 'Red Fox' 'Sunny Border Blue'	1½'	June–Aug	Blue Pink Red White	Full sun	Borders, cut flowers, rock gardens
Vinca (Lesser Periwinkle) (Myrtle)	<i>Vinca minor</i>	6"–8"	March–May	Blue Purple	Partial shade Full shade	Ground cover in flower beds or rockeries, shrubberies
Wallflower (see <i>Cheiranthus</i>)						
Yarrow (see <i>Achillea</i>)						

Further Reading

BOOKS

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FOR MORE INFORMATION

- Hardy Plant Society of Oregon, PO Box 5090, Oregon City, OR 97045
- Northwest Perennial Alliance, PO Box 45574, University Station, Seattle, WA 98145-0574
- Perennial Plant Association, Attn: Dr. Steven M. Still, 3383 Schirtzinger Road, Hilliard, OH 43026
- Perennial Study Group, Arboretum Foundation, Washington Park Arboretum, University of Washington, Box 358010, Seattle, WA 98195-8010

BOOKLETS AND PAMPHLETS

University of Idaho Extension

- CIS 1062 *Starting a Home Lawn*
- CIS 1063 *Thatch Prevention and Control in Home Lawns*
- CIS 1225 *Weed Control in Idaho Lawns*
- PNW 151 *Propagating Herbaceous Plants from Cuttings*
- PNW 299 *Turfgrass Seedings: Recommendations for the Pacific Northwest*
- PNW 550 *Encouraging Beneficial Insects in Your Garden*

