

# Growing Annual Flowers



## MontGuide

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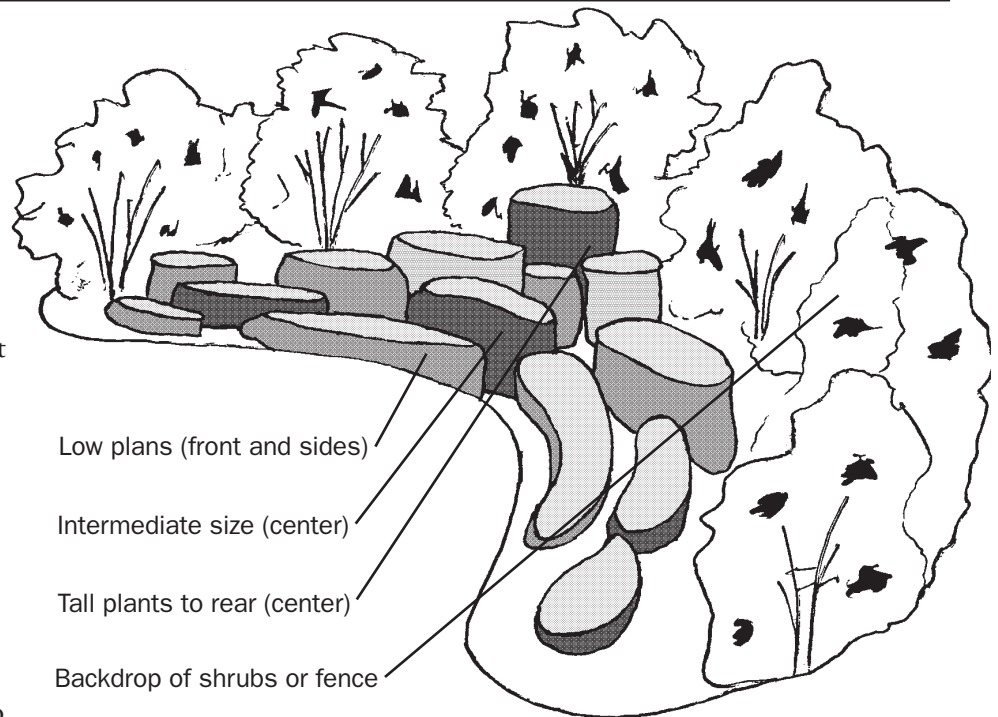
by Cheryl Moore-Gough, Extension Horticulture Specialist, and Robert E. Gough, Professor of Horticulture, MSU

**Planning flower gardens, starting plants indoors and caring for a garden. Includes diagrams and table of ornamental and cultural characteristics of 73 common flowers.**

**ANNUAL FLOWERS MAY SOLVE** many landscape problems. No other plants provide such continuous bloom. They fill voids in permanent plantings while young woody plants grow, and provide inexpensive color and cut flowers in almost any soil.

Annuals are used in perennial plant beds to continue interest following early blooming bulbs and perennials. They can be transplanted or direct-seeded into the spot where tulip and daffodil blooms have faded, or planted in front of woody flowering shrubs to provide further interest through the season.

If you want plenty of cut flowers, devote a separate area of the garden to annuals, but be sure to coordinate it with the overall landscape plan.



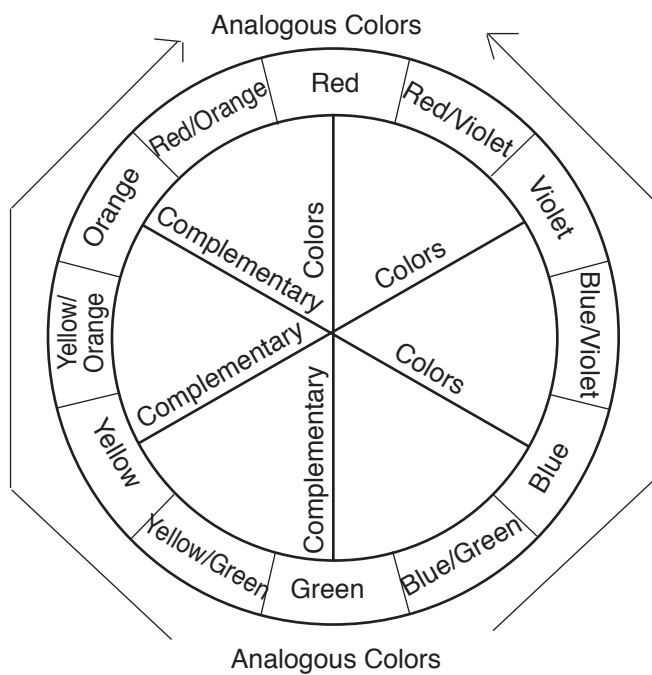
**Figure 1. Color and size transition. Blocks of each annual planted in “drifts.”**

### Planning the Flower Border

The annual flower border can be an attractive element in the overall landscape if you follow a few simple guidelines. Curve the bed lines of an informal planting and plant masses of individual flowers in “drifts” which gradually melt into each other (Figure 1). Formal plantings have angular bed lines. When annual beds include perennials, mass the annuals together to simplify management. Graduate plant heights from front to back, and use low perennials in front.

Make the bed at least 3 feet but no more than 5 feet deep to allow for working the bed from its border. If it must be deeper than 5 feet, plan stepping stones or a small path to allow access to the interior of the bed.

To be effective, each flower mass should be large enough to be clearly seen from a distance. Use the “warm” or advancing colors (red, orange, yellow) in smaller masses to subordinate them; use “cool” or receding colors (blue, violet, green) in larger masses to contrast with the warm ones. The color wheel (Figure 2) will help you understand color use. Each cool color opposes a warm color. Colors across the wheel from each other are complementary and provide strong contrast. Adjacent colors are analogous and provide subtle color transitions. If you don’t want strong accent, don’t arrange flowers with warm colors next to those with cool colors.



**Figure 2. Color Wheel**

Color creates moods. Warm colors exhilarate and stimulate while cool colors relax the viewer. Let cool colors predominate in areas devoted to rest and relaxation. Warm colors command and direct attention to specific areas in the landscape.

You'll find an example of an annual flower border with proper size and choice of plants in Figure 3. All flower borders, whether annual or perennial, are most attractive against a fence of neutral color or against a shrub background (Figure 1).

## Starting Plants Indoors

Many annuals perform better if started indoors and transplanted into the garden. You can determine indoor planting time by finding the number of days from seed to flower on the seed packet. Table 1 includes some general information about planting dates for inside or outside sowing.

Many people plant seeds too early. This results in an oversized, leggy transplant that is susceptible to damping-off disease. Legginess is often caused by low indoor light levels and/or by too high a temperature. Let an electric fan blow air across your plants—the plant movement will help form stocky plants. You must coordinate the date of sowing with the average date of last frost in your location. For much of western Montana, seed about April 1 since the date of last frost is often close to June 1. March 15 may be a better date in much of eastern Montana. The right time to start seedlings also depends upon the species. Trial and error is the only way to determine a more precise time for your specific location and flower species.

Use a soilless potting mix containing peat moss and perlite. Or, you can use a mix containing 50 percent loam

soil, 25 percent peat moss, and 25 percent washed sand to start your seeds indoors. If you use the soil mix be sure to sterilize it to reduce the chances of seedling damping-off. Place moist soil into shallow trays and put these into a household oven at 180°F for 30 minutes. Use a probe-type thermometer to determine when all soil has reached the desired temperature. You can also use microwave ovens to sterilize soil. Determine the amount of time required by monitoring soil temperatures as described above for the regular oven. Soilless mixes usually need no sterilization.

Screen the soil or mix to a fine texture, fill pots or trays, and firm and moisten it before planting. Scatter small seeds over the surface and cover them with mix to a depth equivalent to twice their largest diameter. Label the seeded flats to maintain plant identity. Cover seeded containers with a plastic sheet to maintain relatively high humidity, and with newspaper to shade the media surface unless the seed trays are kept out of direct sun. Most seeds germinate well at temperatures between 50° and 80°F. Spider flower (*Cleome*) and petunia (*Petunia*) germinate better at warm temperatures (70°-80°F). Seeds of species that prefer cooler temperatures include African daisy (*Arctotis*), candy tuft (*Iberis*), bachelor button (*Centaurea*), clarkia (*Clarkia*), godetia (*Clarkia* sp.), and larkspur (*Delphinium*). Remove the newspaper after the seeds germinate.

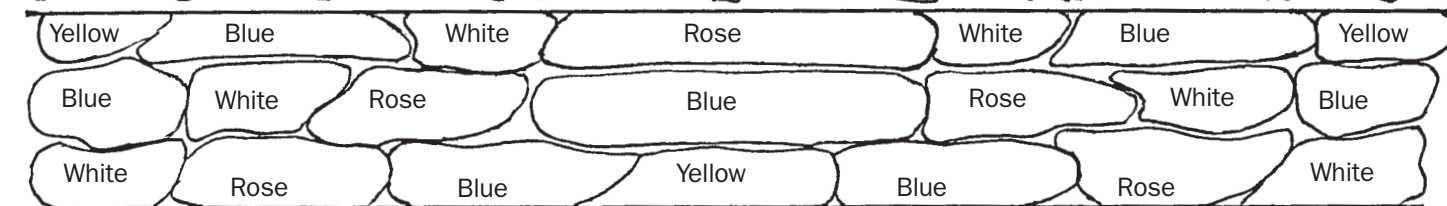
Bottom-water the seeded flats or pots by placing the containers in shallow trays of water and allowing water to move up through the mix. Watering from above can disturb or damage the fine seeds or small seedlings.

Transplant the seedlings to flats or individual containers when they have reached the 2-3 leaf stage. Peat pots are popular but styrofoam cups with holes punched in the bottom work well also. Place the transplants in a greenhouse or a hot bed if you can. A south-facing window with added "grow" lights will do if other facilities are not available. Be sure to harden-off the plants before you transplant them to the garden by gradually exposing them to cooler nights over a 1 to 2 week period.

## Setting out the Plants

Most annuals don't require very rich soil but they do need an adequate supply of nutrients. Work into your bed area a complete fertilizer at the rate 1/4 pound of actual nitrogen per 100 square feet. Using 5-10-10 fertilizer, 5 pounds of fertilizer per 100 square feet is the right amount. Also work in organic matter such as peat moss, compost or well-decayed manure to improve soil structure. Most annuals grow best at a soil pH of between 6.5 and 7.5. Attention to fertility now will help produce vigorous, healthy plants and blooms later on.

## Shrubs



### SUGGESTED ANNUALS FOR THE ABOVE DESIGN

| Row/Height | Color  | Suggested plants in...<br>Sun        | Shade*                               |
|------------|--------|--------------------------------------|--------------------------------------|
| A (18")    | Yellow | Marigold, Zinnia                     | Monkey Flower, *China Aster, *Cosmos |
|            | Blue   | Larkspur, Verbena, Scabiosa          | Forget-me-not, *Lupine, *Verbena     |
|            | White  | Nicotiana, Zinnia, Lavender          | Balsam, Sweet Sultan                 |
|            | Red    | Celosia, Zinnia                      | *Celosia, *Painted Daisy, *Verbena   |
| B (12")    | Blue   | Ageratum, Centaurea, Petunia, Salvia | *Bellflower, *Petunia                |
|            | White  | Stocks, Phlox, Dimorphotheca         | *Wax Begonia                         |
|            | Rose   | Phlox, Petunia, Zinnia               | *Wax Begonia                         |
| C (8")     | White  | Alyssum, Petunia                     | Lobelia, *Dianthus, *Alyssum         |
|            | Rose   | Verbena, Moss rose, pansy            | *Dianthus, Impatiens                 |
|            | Blue   | Ageratum, Lobelia, Pansy             | Pansy, *Lobelia, *Moss rose          |
|            | Yellow | Marigold, Pansy                      | Pansy                                |

\*Adapted to light shade only

**Figure 3. Color sequences and size considerations in an annual flower border.**

Plant outdoors late in the afternoon on a cloudy day when soil is moist to help reduce transplant shock. Spacing depends upon the species. Plant giant zinnias 18 inches apart, but alyssum only 6 inches apart.

Annuals that are direct-seeded will need thinning before they become crowded. Failure to do this will result in overcrowding and spindly plants with few flowers.

### Pinching

Some annuals require pinching during the thinning or transplanting process. Pinching increases the number of blooms and forms a more stocky plant. *Ageratum*, *Browallia*, *Calendula*, *Chrysanthemum*, *Petunia*, *Phlox*, *Dianthus*, *Salpiglossis*, *Schizanthus*, *Antirrhinum*, *Verbena* and *Zinnia* all benefit from having their tips pinched. DO NOT pinch impatiens, cockscomb, everlastings, poppies or stocks.

### Aftercare

Hoe weeds to keep them from competing with your flowers for water and nutrients. A mulch of fine bark will decrease weed competition, conserve soil moisture, and lower high summer soil temperatures for better plant growth.

Water your plants during warm dry periods to assure continuous plant development. *Infrequent, deep*

*waterings are better than light, frequent ones.* At least the top 6 inches of soil should feel moist and cool. Use drip irrigation during flowering to prevent browning of the blooms by water puddling on them.

Remove spent blossoms ("deadhead") to force a longer continuous bloom period and fertilize your plants weekly with a liquid fertilizer.

### Fall Clean-up

Remove all annual plants after fall freeze to reduce the chances that disease organisms will be carried over into the next season. Till or turn the soil to remove weeds and leave it in good condition for spring planting. If it needs more organic matter, add it during fall tilling.

### Annuals that reseed

Some annual species reseed themselves. If you want this to happen, leave the plants in place until the seeds have shed, then clean up the spent leaves and stems. *Browallia*, California poppy, calliopsis, cornflower, *Cosmos*, four-o'clock, *Gypsophila*, rocket larkspur, morning-glory, *Petunia*, pot marigold, rose moss, mealycup sage, snapdragon, snow-on-the-mountain, spider flower, summer cypress and sweet alyssum are some species that will reseed in your garden.

**TABLE 1. ORNAMENTAL AND CULTURAL CHARACTERISTICS OF COMMON ANNUAL FLOWERS.**

| <b>Plant Name</b>   | <b>Uses</b>                | <b>Color</b>  | <b>Height</b>           | <b>Bloom Period</b>       | <b>Exposure</b>        | <b>Planting Time</b>  | <b>How Propagated</b>                    | <b>Limitations</b>                               | <b>Remarks</b>                                |
|---|----------------------------|---|-------------------------|---------------------------|------------------------|-----------------------|--|--|---|
| African Daisy<br><i>Arctotis</i> spp.                             | General                    | White, orange & steel blue                          | 12"-30"                 | July, August              | Full sun               | After frost           | Seed or transplants                      | Will not flower well during hot nights           | Has woolly leaves                             |
| Ageratum<br><i>Ageratum</i> spp                                   | General, edging, planters  | Lavender blue, white, pinkish                       | 3"-10"                  | July to September         | Partial shade          | After frost           | Transplants                              | Prefers warm climate                             | Deer resistant                                |
| Alyssum (Sweet)<br><i>Lobularia maritima</i>                      | Borders, edgings,          | White, purple, pinkish                              | 9"                      | June to September         | Partial shade          | After frost           | Seed or transplants, cuttings            | Widely adapted                                   | Will re-seed itself                           |
| Baby Blue Eyes<br><i>Nemophila menziesii</i>                      | Borders, pot plants        | Sky blue with white centers                         | 6"-8"                   | May to September          | Sunny to partial shade | Sow in flats in March | Seed indoors, plant outdoors after frost | Cut flowers do not last long                     |   |
| Bachelor Button<br>(Corn Flower)<br><i>Centaurea cyanus</i>       | Cut flowers                | Blue, rose, white, mauve, purple                    | 12"-18"                 | Late spring, early summer | Full sun               | Early spring          | Seed                                     | Cool nights needed for flowering                 | Often re-seeds itself                         |
| Balsam (See Impatiens)  |                            |   |                         |                           |                        |                       |  |  |   |
| Basket Flower<br><i>Centaurea americana</i>                       | Cut flowers and borders    | Pink, purplish to white                             | 24"-60"                 | Late spring, early summer | Sunny                  | Early spring          | Seed                                     | Cool nights needed for flowering                 |   |
| Wax Begonia<br><i>Begonia semperflorens</i>                       | Bedding plants, planters   | White, Pink, Red                                    | 12-18"                  | Continuous                | Partial shade          | After frost           | Transplants                              |  | Indoor plant, also                            |
| Black-eyed Susan<br>(Annual Coneflower)<br><i>Rudbeckia hirta</i> | General                    | Golden-yellow petals with dark brown centers        | 24"-36"                 | Summer and fall           | Full sun               | Early spring          | Seed                                     | Prefers warm climate                             | Gloriosa daisies are tetraploid forms of this |
| Browallia<br><i>Browallia</i> spp.                                | General                    | Blue  | 9"-30"                  | Late summer and fall      | Full sun               | After frost           | Cuttings or seeds                        | Prefers warm climate                             | Several forms available                       |
| Calendula (Pot Marigold)<br><i>Calendula officinalis</i>          | General                    | Yellow, yellowish to orange                         | 18"-36"                 | July to autumn            | Full sun               | Early spring          | Seed                                     | Rather dry soil. Does not like hot humid weather | Deer-resistant                                |
| California Poppy<br><i>Eschscholzia californica</i>               | General                    | Yellow, orange orange-red, red                      | 12"-18"                 | Summer                    | Full sun               | Early spring          | Seed                                     | Light, sandy soil                                | Perpetuates itself by self-sown seeds         |
| Calliopsis (Tickseed)<br><i>Coreopsis tinctoria</i>               | General                    | Yellow, maroon, crimson                             | 12"-18"                 | July and August           | Full sun               | Late April or May     | Seed                                     | Lodges in high wind or heavy rain                | Drought tolerant                              |
| Candytuft<br><i>Iberis umbellata</i>                              | Flower borders             | White, pink, mauve, purple, crimson, 10"            | 10"                     | Summer to fall            | Sunny                  | Spring                | Seed                                     | Needs well-drained soil                          | Good in cool climates                         |
| China Aster<br><i>Callistephus chinensis</i>                      | General, indoor decoration | Lavender, yellow center; rose, pink, crimson, white | 18"-30"<br>Dwarf 6"-12" | August & September        | Partial shade          | After frost           | Seed or transplants                      | Prefers cool nights                              | Thrives in fairly alkaline soils              |
| Clarkia<br><i>Clarkia</i> spp.                                    | General                    | Crimson, white to purple                            | 12"-36"                 | June & July               | Sunny                  | Early May             | Seed                                     | Prefers cool nights                              | One species native in western Montana         |

| <b>Name</b>   | <b>Uses</b>                | <b>Color</b>                            | <b>Height</b> | <b>Bloom Period</b>       | <b>Exposure</b>                     | <b>Planting Time</b>                 | <b>How Propagated</b>         | <b>Limitations</b>                                | <b>Remarks</b>                                   |
|---|----------------------------|---|---------------|---------------------------|-------------------------------------|--------------------------------------|-------------------------------|---|--|
| Cleome (Spider Flower)<br><i>Cleome hassleriana</i>               | General                    | Pink, white, rosy purple, golden yellow | 36"-72"       | July and August           | Sunny                               | Immediately after frost              | Seeds or transplants          | Subject to flea beetles                           | Moist soil tolerant                              |
| Cockscomb<br><i>Celosia cristata</i>                              | General winter bouquets    | Crimson, red, rose                      | 12"-36"       | Summer and autumn         | Sunny                               | Spring                               | Seed or transplants           | Cockscomb requires warm climate                   | Plumosa forms best in mountain valleys           |
| Corn Flower (See Bachelor Button)                                 |                            |   |               |                           |                                     |                                      |                               |   |  |
| Cosmos<br><i>Cosmos bipinnatus</i> &<br><i>Cosmos sulphureus</i>  | General, table decorations | White, pink, yellow, crimson, magenta   | 30"-48"       | Summer and early fall     | Sunny                               | After frost                          | Transplants                   | Protect from high winds Do not over-fertilize     | Drought-tolerant                                 |
| Dahlia<br><i>Dahlia</i> hybrids                                   | General                    | All except blue                         | Variable      | Summer and fall           | Sunny; but will tolerate semi-shade | Start inside, transplant after frost | Tubers, cuttings, transplants | Needs well-drained soil                           | Annual forms may be grown from seed              |
| Delphinium (Annual Larkspur)<br><i>Cronsolida ambigua</i>         | General                    | Blue, rose, pink, mauve, white          | 12"-36"       | July & August             | Sunny                               | April                                | Seeds                         | Adequate moisture, fertile soil                   | Tolerates alkaline conditions                    |
| Forget-me-not<br><i>Myosotis sylvatica</i>                        | Edgings, ground cover      | Blue                                    | 8"-18"        | Late spring, early summer | Partial shade                       | After frost                          | Transplants                   | Not drought resistant                             | Will self-sow                                    |
| Four O'Clock<br><i>Marabalis jalapa</i>                           | Borders                    | White, red, yellow                      | 3 feet        | Mid-summer to frost       | Shade tolerant                      | After frost                          | Tubers and seed               | Very tender                                       |  |
| Foxglove<br><i>Digitalis purpurea</i>                             | General (Medicine)         | Purple, white                           | 5 feet        | June & July               | Partial shade                       |                                      | Seed or transplants           |   | Biennial or perennial                            |
| Gaillardia (Blanket flower)<br><i>Gaillardia</i> spp. and hybrids | Cut flowers, borders       | Yellow, reddish grays, purple centers   | 24"           | July to frost             | Full sun                            | Spring transplants                   | Seed or transplants           | Well-drained soil                                 | Self-seeds, perennial types                      |
| Geranium<br><i>Pelargonium hortorum</i>                           | Bedding plants, planters   | Red, pink, salmon, white                | 12-18"        | Mid to late summer        | Full sun                            | After frost                          | Cuttings, transplants         |   | Ivy types for hanging baskets                    |
| Gilia<br><i>Gilia micrantha</i> and <i>Gilia tricolor</i>         | Borders                    | White, light blue, purple, mauve        | 15"-24"       | Mid-summer                | Sunny                               | April                                | Seed                          |   | Many species in western N. America, some annual. |
| Gladiola<br><i>Gladiolus hybridus</i>                             | Cutting                    | Numerous                                | 15"-45"       | Late summer, fall         | Sunny                               | Early spring                         | Corms                         | Best as a specialty flower                        | Store corms in cool, moist place                 |
| Globe-Amaranthus<br><i>Gomphrena globosa</i>                      | General, drying            | Reddish, purple, crimson, white         | 12"-24"       | Summer, fall              | Sunny                               | Early spring or summer               | Transplants & direct seeding  | Easy to grow                                      | Drought tolerant                                 |
| Godetia<br><i>Clarkia amoena</i>                                  | Borders, Cut flowers       | Red-white, lilac, purple                | 12"           | Late spring & summer      | Sunny                               | April                                | Seed or transplants.          | Difficult to transplant. Cool nights, dry climate | Sandy soil                                       |
| Impatiens<br><i>Impatiens balsamina</i>                           | General (house plant)      | White, yellow, red, pink                | 18"           | Spring to late fall       | Partial shade                       | May                                  | Cuttings, transplants         | Not drought resistant                             | Sandy, moist, rich soil                          |

| Plant Name   | Uses   | Color  | Height        | Bloom Period              | Exposure                 | Planting Time                             | How Propagated        | Limitations   | Remarks  |
|--|--|--|---------------|---------------------------|--------------------------|---|-----------------------|---|--|
| Joseph's Coat<br><i>Amaranthus tricolor</i>                                    | Novelty  | Mixed-carmine red, yellow, dark green (maroon, scarlet leaves) | 12" -48"      | Mid-summer                | Sunny                    | May or early June                         | Transplants           | Some types are weeds. Needs warm weather.                       | Grown for foliage color                                    |
| Larkspur (See Delphinium)  |  |  |               |                           |                          |   |                       |   |  |
| Lobelia<br><i>Lobelia erinus</i>   | Edging, ground cover                             | Blue, white, pink  | 6-8"          | Continuous                | Sun, partial shade       | Late May                                  | Transplants           | Not heat resistant  | Cut back after first bloom to increase blooming            |
| Lotus (Parrot's Beak)<br><i>Lotus bertheloti</i>                               | Hanging baskets cascade over walls, ground cover | Silver-grey foliage, scarlet bloom, ground cover               | 3' (trailing) | June, July, August        | Full sun or slight shade |   | Seed or transplants   | Avoid over-watering   | Flowers sweet-pea-shaped. Don't confuse with water plants. |
| Lupine<br><i>Lupinus</i> spp. & hybrids  | General  | Blue, rose, yellow, white                                      | 6" -48"       | Early summer              | Full sun or slight shade | April                                     | Seeds                 | Susceptible to chlorosis  | Perennial forms more common than annual.                   |
| Tree Mallow<br><i>Lavatera</i> sp.   | Cut flowers, general                             | White, pink, red   | 36"           | Mid-summer to frost       | Sun                      | Start inside, set out in late May         | Seed or transplants   |   | An annual related to hollyhock. Tolerant of frosts.        |
| Marigold (French)<br><i>Tagetes patula</i>                                     | General  | Yellow, orange, deep red, brownish                             | 6" -36"       | Mid-summer to frost       | Sunny                    | After frost                               | Seed                  | Some large flowered types too tall at medium to high altitudes. |  |
| Marigold (African)<br><i>Tagetes erecta</i>                                    | General, edging                                  | Various shades of yellow and brown                             | 24" -48"      | Mid-summer to late fall   | Full sun                 | After frost                               | Seed or transplants   |   | Some varieties are late in flowering                       |
| Mignonette<br><i>Reseda odorata</i>  | Grown for its fragrance                          | Greenish, grayish or yellowish white                           | 1' -1 1/2'    | June to October           | Sunny, well drained      | After frost                               | Transplants           | Place in coolest part of yard                                   | Best in pots   |
| Mirabilis (See Four O'Clock)   |  |  |               |                           |                          |   |                       |   |  |
| Monkey Flower<br><i>Mimulus guttatus</i>                                       | Shady rock gardens, streamside                   | Yellow with red spotted throat                                 | 12-18"        | June to August            | Shade                    | After frost                               | Seeds started indoors | Not heat resistant  | Needs plenty of moisture                                   |
| Moss rose (See Portulaca)  |  |  |               |                           |                          |   |                       |   |  |
| Common Nasturtium<br><i>Tropaeolum majus</i> & <i>Tropaeolum minor</i> (dwarf) | General  | orange, yellow deep reds                                       | 12" -15"      | Mid-summer                | Partial shade            | Spring                                    | Seed or transplants   | Too much nitrogen will inhibit flower formation                 | Edible - Drought tolerant                                  |
| Pansy<br><i>Viola wittrockiana</i>   | Bedding  | Wide range   | 5" -12"       | Early spring, late fall   | Partial shade, cool      | Early spring                              | Seed                  | Best in cool weather  | Will reseed itself; tender perennial                       |
| Penstemon<br><i>Penstemon</i> spp.   | General, rockeries                               | Reds, pinks, blue, lavender, purple                            | 6" -24"       | Summer & fall             | Full sun                 | Early spring                              | Seed, cuttings        | Well-drained soil   | Most species are biennial or perennial                     |
| Periwinkle<br><i>Catharanthus roseus</i>                                       | General  | Rose, blue   | 1'            |                           | Shade                    | Seed early spring, transplant in May      | Cuttings, layering    | Not too hardy   |  |
| Petunia<br><i>Petunia</i> (hybrids)  | General  | Numerous   | 8" -24"       | Early summer to late fall | Sunny                    | Seed early spring, transplant after frost | Seed or transplants   | Very adaptable  | Types: Multiflora, Grandiflora, Double                     |

| <b>Plant Name</b>   | <b>Uses</b>                              | <b>Color</b>   | <b>Height</b>     | <b>Bloom Period</b>    | <b>Exposure</b>   | <b>Planting Time</b> | <b>How Propagated</b>     | <b>Limitations</b>                          | <b>Remarks</b>                        |
|---|--|--|-------------------|------------------------|-------------------|----------------------|---------------------------|---|---------------------------------------|
| Phlox, annual<br><i>Phlox</i> spp.  | General, ground cover                    | Rose, crimson, pink,scarlet, violet, white,pale yellow | 12"-15"<br>August | July &                 | Sunny             | After frost          | Seed                      |   | Showy                                 |
| Pincushion flower (See Scabiosa)  |  |  |                   |                        |                   |                      |                           |   |                                       |
| LaPinks<br><i>Dianthus</i> spp.   | Borders, edgings, general                | Pink, rose, red & white combinations                   | 12"               | Late spring and summer | Sunny             | Early spring         | Seed                      | Needs moisture                              | Showy                                 |
| Poppies—Shirley<br><i>Papaver rhoea</i> & Iceland<br><i>Papaver nudicaule</i> | General rose, scarlet                    | Red (black), pink,                                     | 12"               | Late spring            | Sunny             | Early spring         | Seed                      | Needs moisture                              | Reseeds itself                        |
| Portulaca (moss rose or rose moss)<br><i>Portulaca grandiflora</i>            | Borders, rock gardens, edges, bare banks | Yellow, red, white, (pink stems)                       | 4" -8"            | Late spring to frost   | Sunny             | Early spring         | Seed                      | Drought tolerant                            | Reseeds itself                        |
| Rudbeckia (See Black-eyed Susan)  |  |  |                   |                        |                   |                      |                           |   |                                       |
| Salpiglossis (Painted Tongue) <i>S. sinuata</i>                               | General                                  | Many (rich velvety)                                    | 12" -24"          | Summer                 | Partial shade     | After frost          | Seed (plant very shallow) | Do not over fertilize                       | Should be grown more                  |
| Scabiosa (Pincushion) <i>S. atropurpurea</i>                                  | General                                  | Blue, maroon, white, yellow pink,rose, red,            | 24"               | Mid-late summer        | Sunny             | May                  | Seed or transplants       |   | Good for cutting(Deer Resistant)      |
| Scarlet Sage<br><i>Salvia splendens</i>                                       | General                                  | Scarlet red  | Variable          | Late summer            | Sunny             | Early spring         | Seed or transplants       | Warm  | Shrubby                               |
| Snadragon<br><i>Anthrinum</i> sp.   | General, cutting                         | White, yellow pink, red                                | 12" -24"          | July to frost          | Sunny transplants | After frost          | Seed or transplants       | Plants may be half hardy. May break in wind | Best Varieties F <sub>1</sub> Hybrids |
| Spider Plants (See Cleome)  |  |  |                   |                        |                   |                      |                           |   |                                       |
| Statice (Sea Lavender) <i>Limonium</i> spp.                                   | Drying                                   | Rose, purple, pink, lavender                           | 12" -20"          | Mid-summer, autumn     | Sunny             | Early spring         | Seed or transplants       |   | Good in winter bouquets               |
| Stock<br><i>Matthiola incana</i>  | General, cutting                         | Numerous   | 10" -15"          | Early summer           | Sunny             | Early spring         | Seed or transplants       | Coarse texture                              | Very fragrant                         |
| Strawflower<br><i>Helicrysum bracteatum</i>                                   | Drying, general                          | Yellow, red, pink, orange, white                       | 24" -36"          | Mid-summer, fall       | Sunny             | After frost          | Seed or transplants       | Best grown in cutting garden                | Good for dried bouquets               |

| Plant Name                                       | Uses                                     | Color   | Height      | Bloom Period              | Exposure    | Planting Time        | How Propagated      | Limitations                                 | Remarks                            |
|--|--|---|-------------|---------------------------|-------------|----------------------|---------------------|---|------------------------------------|
| Sunflower<br><i>Helianthus</i> spp.<br>& hybrids | Background                               | Yellow rays, brown centers; orange chestnut-red | 16" - 15'   | Mid-summer until frost    | Sunny       | Early spring         | Seed                | Grow dwarf forms where wind is a problem    | Great diversity of form            |
| Sweet Alyssum (See Alyssum)                      |  |   |             |                           |             |                      |                     |   |                                    |
| Sweet Pea<br><i>Lathyrus odoratus</i>            | Bouquets, arbors, fences                 | White, red, pink blue, purple, yellow dwarf 24" | 48"         | Early summer and fall     | Sunny       | Early spring         | Seed                | Subject to root-rot disease in many gardens | Cool, moist climate needed         |
| Sweet Sultan<br><i>Centaurea moschata</i>        | Cut flowers                              | Purple, white, yellow                           | 1 1/2' - 2' | July to September         | Sunny       | After frost          | Seed indoors        | Not frost tolerant                          | Very fragrant                      |
| Tidy Tips<br><i>Layia platyglossa</i>            | Cut flowers, beds, borders, rock gardens | Yellow with white tips                          | 1' - 1 1/2' | June to October           | Open, sunny | After frost danger   | Seed or transplants |   |                                    |
| Verbena<br><i>Verbena</i> (hybrids)              | Beds, borders, boxes, cutting, rockeries | White, pink, scarlet, blue                      | Creeping    | June to late fall         | Sunny       | Seed or Early spring | transplants         | Requires warm climate                       | Deer resistant                     |
| Winged everlasting<br><i>Ammobium alatum</i>     | Drying                                   | White   | 18" - 24"   | Fall                      | Sunny       | Spring               | Seed or transplants | Grow in cutting garden                      |                                    |
| Zinnia<br><i>Zinnia elegans</i>                  | General                                  | Many mixed                                      | 18" - 48"   | Early summer to late fall | Full sun    | Early spring         | Seed or transplants | Breaks in wind                              | Hybrids are best<br>Deer-resistant |

<http://www.montana.edu/wwwpb/pubs/mt199501AG.pdf>



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**A-8 (Ornamentals)**

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