

## Growing Annuals

Annuals quickly provide more color in the landscape for longer periods of time than any other garden plants. They are versatile, sturdy and inexpensive.

### GROWTH RATE

True annuals sprout from seed, flower, set seed and die within one season. Many flowers that are not hardy such as begonias, impatiens and geraniums are also grown as annuals. Biennials complete their life cycle in two growing seasons. In South Carolina many can be planted as seed in summer or fall to bloom the following spring or summer. A practical definition of annuals could be plants that must be replaced every year in the garden.

Annuals are commonly grouped as hardy, half-hardy or tender. Hardy annuals — such as pansies and ornamental kale — are grown for color in cool and cold seasons. They are usually planted in the fall. Most decline or die with the onset of summer heat.

Half-hardy annuals — such as allysum and dianthus — can tolerate light frost and are usually planted in early spring for spring and early summer color. They usually decline in summer heat but may bloom again in the fall.

Tender annuals — such as vinca, zinnia and impatiens — cannot tolerate freezing temperatures. They should be planted in the spring after all danger of frost is past.

### LANDSCAPE USE

Most annuals need full sun for at least 4 to 6 hours a day to flower well. Choose shade-tolerant species such as impatiens, coleus or begonias for locations that receive less sun.

Avoid planting in areas where water stands after a heavy rain. Also avoid areas near large trees and shrubs that may have many thirsty feeder roots.

Good bed preparation is essential for good performance of annuals. Deeply spade the beds to a depth of 6 to 10 inches. Amend clay soils by mixing in at least 2 inches of pine bark humus, compost, leaf mold or small pea gravel to improve drainage and aeration. Improve water retention in sandy soils by mixing in 2 to 3 inches of

pine bark humus, composted leaf mold or peat moss. Raised beds can be used to ensure adequate drainage.

Base fertilizer and lime applications on the results of a soil test for best results. In the absence of a soil test, add a complete fertilizer such as 10-10-10 at the rate of 1 pound per 100 square feet of bed area or a complete slow-release fertilizer following label directions.

A pH of 5.8 to 6.5 is satisfactory for most annuals. Most South Carolina soils are acidic and require the addition of lime to correct pH. Incorporate lime and fertilizer into the top 4 to 6 inches of soil after mixing in the soil amendments. Rake the soil surface smooth.

Avoid working soil while it is wet since this can cause lumping and shallow “pans,” which resist air, water and root penetration. Soil that is ready for cultivation holds its shape when squeezed, but crumbles easily.

Most annuals are grown from seed. They can be direct-seeded in prepared beds, started indoors for transplanting outside later or purchased as ready-to-plant transplants.

The recommended seeding date, depth and spacing are usually listed with other information on the seed packet. Some annuals that are listed for late winter or early spring sowing can be planted in late fall in the warmest parts of the Coast. Most outdoor-sown annuals should be thinned to a recommended spacing when they develop the first pair of true leaves.

If seed is sown indoors for later transplant, seedlings must be located close to a light source for at least 16 hours daily. Insufficient light will result in weak, spindly seedlings.

Most summer annuals can be seeded indoors 6 to 8 weeks before the last frost. Seeds should be sown according to label directions in a sterile soilless mix. Seedling flats should provide good drainage.

Wait to plant tender annuals until the danger of frost has passed. Many annuals, even if not injured by low temperatures, will not grow well until the soil warms.

Plant winter annuals at least 6 weeks before expected first fall frost date to allow time for root development. Plant annuals with the top of the roots just under the surface of the soil. Be sure to remove paper, fiber and plastic pots before planting. Remove the upper edges of peat pots so that the pot will not act as a wick, pulling water away from the roots.

Pinch off any buds and flowers when planting to promote better branching and a stronger plant.

Once transplanting is complete, water the plants thoroughly. Pay especially close attention to watering the first few weeks while plants develop their root systems. Adequate moisture is essential for the growth of flowering annuals. Most annuals need at least 1 to 1½ inches of water per week from rain or irrigation. More may be needed during very hot weather.

To promote deep root growth, water thoroughly and deeply. Allow the soil surface to dry before watering again. Soaker hoses and drip irrigation are ideal watering methods since they save water and avoid wetting leaves and flowers.

Mulch flower beds with 2 to 3 inches of pine bark or pine straw to help conserve soil moisture and reduce weed growth. Mulches shade weed seeds and prevent their germination, eliminating or reducing the need for hand or chemical weed control.

Annual plants may require additional fertilizer during the growing season. Water-soluble fertilizers give fast, but temporary, effects. Slow-release fertilizers are expensive but convenient and easy to apply without waste. If plant growth and appearance looks normal, fertilization will be unnecessary.

As flowers fade, remove them before seeds are formed to keep plants looking attractive and encourage continuing flowering. Heavy pruning can invigorate some species. For instance, petunias can be cut back in midsummer to within a few inches of the ground, fertilized and heavily watered, and they will be full and attractive again in just a few weeks.

## PROBLEMS

Annuals vary in their insect and disease susceptibility. Some are virtually trouble-free in the landscape while others require considerable care to look their best.

Choose insect-and disease-resistant species and cultivars when possible. Keep the garden clean and weed-free, and be alert for early signs of trouble to reduce the need for pesticides. To prevent the spread of leaf diseases, avoid overhead watering if possible and water early in

the morning to allow the plants to dry quickly. Overwatering can lead to root decay.

A variety of insect pests attack annuals. The most common are aphids, spider mites, white flies and caterpillars. Infestations are more easily controlled early, before the population has a chance to expand.

There are a number of pesticides available for controlling insects and diseases of annuals. Accurate identification of the insect or disease is the first step. Misuse of pesticides may cause injury to desirable plants. Always read the label carefully.

## ANNUALS FOR VARIOUS USES

### Annuals for Hot, Dry Locations

All annuals will need watering attention while becoming established. These are the most likely to survive some neglect once well rooted.

African Daisy (*Dimorphotheca*)  
Annual Vinca (*Cataranthus roseus*)  
Calliopsis (*Coreopsis tinctoria*)  
Cosmos (*Cosmos* species)  
Creeping Zinnia (*Sanvitalia procumbens*)  
Dusty Miller (*Senecio cineraria*)  
Gaillardia (*Gaillardia pulchella*)  
Globe Amaranth (*Gomphrena globosa*)  
Gloriosa Daisy (*Rudbeckia hirta*)  
Gold Medallion (*Melampodium paludosum*)  
Moss Rose (*Portulaca grandiflora*)  
Snow-on-the-Mountain (*Euphorbia marginata*)  
Spider Flower (*Cleome hasslerana*)  
Verbena (*Verbena* species)  
Zinnia (*Zinnia* species)

### Annuals That Thrive in Heat

These annuals will also tolerate very hot weather, but do best with additional soil moisture.

Blue Daze (*Evolvulus glomerata*)  
Castor Bean (*Ricinus communis*)  
Cockscomb (*Celosia argentea*)  
Cypress Vine (*Ipomoea quamoclit*)  
Dahlia (*Dahlia* species and hybrids)  
Fan Flower (*Scaevola aemula*)  
Flowering Tobacco (*Nicotiana* species)  
Four o'clock (*Mirabilis jalapa*)  
Hyacinth Bean Vine (*Dolichos lablab*)  
Joseph's Coat (*Amaranthustricolor*)  
Mexican Bush Sage (*Salvia leucantha*)  
Mexican Heather (*Cuphea hyssopifolia*)  
Mexican Sunflower (*Tithonia rotundifolia*)  
Moon Vine (*Ipomoea alba*)  
Morning Glory (*Ipomoea* species)  
Salvia (*Salvia* species)  
Silk Flower (*Abelmoschus manihot*)  
Starflower (*Pentas lanceolata*)  
Sunflower (*Helianthus annuus*)

### **Annuals for Shade or Part Shade**

Most annuals need at least 6 hours of sun to flower well, although many will tolerate shade in the afternoon, if they have had a full morning of sun. These annuals will bloom with less sun, although all will need some sun for flowering. Those marked with a \* will tolerate the most shade.

Ageratum  
Begonia (*Begonia* species)  
Caladium (*Caladium* species)\*  
Coleus (*Solenostemon scutteleriodes*)  
Forget-me-not (*Myosotis sylvatica*)  
Impatiens (*Impatiens* species)\*  
Edging Lobelia (*Lobelia erinus*)  
Monkey Flower (*Mimulus hybridus*)\*  
Woodland Tobacco (*Nicotiana sylvestris*)  
Pansy (*Viola x wittrockiana*)  
Wishbone Flower (*Torenia fournieri*)\*

### **Annuals for Moist Soil**

No annuals will grow in water-logged soil, but the following will tolerate damper conditions than others.

Forget-me-not (*Myosotis sylvatica*)  
Monkey Flower (*Mimulus hybridus*)  
Blue Woodruff (*Asperula orientalis*)  
Caladium (*Caladium* species)

### **Annuals for Poor Soil**

Annual Vinca (*Cataranthus roseus*)  
Calliopsis (*Coreopsis tinctoria*)  
Cockscomb (*Celosia argentea*)  
Cornflower (*Centaurea cyanus*)  
Cosmos (*Cosmos* species)  
Four o'clock (*Mirabilis jalapa*)  
Gaillardia (*Gaillardia pulchella*)  
Gold Medallion (*Melampodium paludosum*)  
Joseph's Coat (*Amaranthus tricolor*)  
Mexican Sunflower (*Tithonia rotundifolia*)  
Moss Rose (*Portulaca grandiflora*)  
Nasturtium (*Tropaeolum majus*)  
Purple Fountain Grass (*Pennisetum setaceum*)  
Spider Flower (*Cleome hasslerana*)  
Verbena (*Verbena* species)

### **Hardy and Half-Hardy Annuals**

Those marked with a \* can be sown as seed in the fall. The others are planted as transplants either in the fall, late winter or early spring.

Allysum (*Lobularia maritima*)\*  
Annual Lobelia (*Lobelia erinus*)  
Annual Phlox (*Phlox drummondii*)\*  
Cornflower (*Centaurea cyanus*)\*  
Delphinium (*Delphinium* species)  
Dianthus (*Dianthus* species)  
English Daisy (*Bellis perennis*)  
Flowering Cabbage and Kale (*Brassica oleracea*)

Foxglove (*Digitalis purpurea* 'Foxy')\*  
Johnny-jump-up (*Viola tricolor*)  
Larkspur (*Consolida ambigua*)\*  
Monkey Flower (*Mimulus hybridus*)  
Nasturtium (*Tropaeolum majus*) – seed in early spring.  
Pansy (*Viola x wittrockiana*)  
Poppy (*Papaver* species)\*  
Pot Marigold (*Calendula officinalis*)\*  
Snapdragon (*Antirrhinum majus*)  
Stocks (*Matthiola incana*)\*  
Sweet Peas (*Lathyrus odoratus*)\*

### **Biennials**

Plant seed in late summer or early fall for spring bloom.  
Foxglove (*Digitalis purpurea*)\*  
Hollyhock (*Alcea rosea*)  
Sweet William (*Dianthus barbatus*)  
Wallflower (*Erysimum* species)

### **Annuals That May Reseed Year After Year**

Alyssum (*Lobularia maritima*)  
Calliopsis (*Coreopsis tinctoria*)  
Cornflower (*Centaurea cyanus*)  
Cosmos (*Cosmos* species)  
Flowering Tobacco (*Nicotiana* species)  
Forget-me-not (*Myosotis sylvatica*)  
Four o'clock (*Mirabilis jalapa*)  
Hollyhock (*Alcea rosea*)  
Impatiens (*Impatiens* species)  
Johnny-jump-up (*Viola tricolor*)  
Larkspur (*Consolida ambigua*)  
Morning Glory (*Ipomoea tricolor*)  
Moss Rose (*Portulaca grandiflora*)  
Petunia (*Petunia* species and hybrids)  
Poppies (*Papaver* species)  
Silk Flower (*Abelmoschus manihot*)  
Snow-on-the-Mountain (*Euphorbia marginata*)  
Spider Flower (*Cleome hasslerana*)  
Zinnia (*Zinnia* species)

### **Annuals for Use as Cut Flowers**

Annual Carnation (*Dianthus caryophyllus*)  
Annual Phlox (*Phlox drummondii*)  
Pot Marigold (*Calendula officinalis*)  
Cockscomb (*Celosia argentea*)  
Cornflower (*Centaurea cyanus*)  
Cosmos (*Cosmos* species)  
Dahlia (*Dahlia* species and hybrids)  
Dianthus (*Dianthus* species)  
Larkspur (*Consolida ambigua*)  
Marigold (*Tagetes* species and hybrids)  
Snapdragon (*Antirrhinum majus*)  
Statice (*Limonium sinuatum*)  
Stocks (*Matthiola incana*)  
Sweet Peas (*Lathyrus odoratus*)  
Zinnia (*Zinnia* species)

### **Fragrant Annuals**

Alyssum (*Lobularia maritima*)  
Dianthus (*Dianthus* species)  
Four o'clock (*Mirabilis jalapa*)  
Heliotrope (*Heliotropum arborescens*)  
Moonflower (*Ipomoea alba*)  
Flowering Tobacco (*Nicotiana* species)  
Nasturtium (*Tropaeolum majus*)  
Petunia (*Petunia* species)  
Stocks (*Matthiola incana*)  
Sweet Peas (*Lathyrus odoratus*)  
Sweet William (*Dianthus barbatus*)  
Wallflower (*Erysimum* species)  
Sweet Sultan (*Centaurea moschata*)

### **Large Bold Annuals**

Joseph's Coat (*Amaranthus tricolor*)  
Castor Bean (*Ricinus communis*)  
Cosmos (*Cosmos* species)  
Hollyhock (*Alcea rosea*)  
Woodland Tobacco (*Nicotiana sylvestris*)  
Purple Fountain Grass (*Pennisetum setaceum*)  
Sunflower (*Helianthus annua*)  
Mexican Sunflower (*Tithonia rotundifolia*)  
Spider Flower (*Cleome hasslerana*)

### **Trailing Annuals**

Licorice Plant (*Helichrysum petiolatum*)  
Trailing Verbenas (*Verbena* species)  
Geranium, Ivy-leafed (*Pelargonium* species)  
Fan Flower (*Scaevola aemula*)  
Nasturtium (*Tropaeolum majus*)  
Trailing Lantana (*Lantana montevidensis*)  
Petunias, Cascade and Wave series

### **Annual Vines**

Black-eyed Susan Vine (*Thunbergia alata*)  
Cardinal Vine (*Ipomoea x multifida*)  
Cup and Saucer Vine (*Cobaea scandens*)  
Cypress Vine (*Ipomoea quamoclit*)  
Hyacinth Bean Vine (*Lablab purpureus*)  
Love-in-a-Puff (*Cardiospermum halicacabum*)  
Moonflower (*Ipomoea alba*)  
Morning Glory (*Ipomoea tricolor*)  
Nasturtiums (*Tropaeolum majus*)  
Purple Bell Vine (*Rhodochiton atrosanguineum*)  
Scarlet Runner Bean (*Phaseolus coccineus*)  
Spanish Flag (*Mina lobata*)  
Sweet Pea (*Lathyrus odoratus*)

### **Annuals That Attract Hummingbirds and Butterflies**

Calliopsis (*Coreopsis tinctoria*)  
Cosmos (*Cosmos* species)  
Cypress Vine (*Ipomoea quamoclit*)  
Four o'clock (*Mirabilis jalapa*)  
Gaillardia (*Gaillardia pulchella*)  
Globe Amaranth (*Gomphrena globosa*)  
Heliotrope (*Heliotropum arborescens*)  
Lantana (*Lantana* species)  
Nasturtium (*Tropaeolum majus*)  
Phlox (*Phlox drummondii*)  
Salvia (*Salvia* species)  
Starflower (*Pentas lanceolata*)  
Verbena (*Verbena* species)  
Zinnia (*Zinnia* species)

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