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FLOWER GARDEN RECORD

You will want to keep track of your garden project in this record or on a similar sheet. Keeping a good record this year will help you plan for a better garden next year. Be sure to write down the varieties that you grow so that you will know next year what varieties did best under your conditions.

Year

Kind of Flower	Variety	Date Planted Indoors or Outdoors	Number of Plants/Seeds in Area Covered, or Number of Feet in Row	Annual Perennial Bulb Fern/Herb Wildflower	Color of Flowers	Average Height (inches)	Date of Flowering (months) or when Plants Were Shown
Example: Zinnia	Red Man	0 5/15	8 ft.	A	Red	24 ins.	July-Oct.

How many different flowers did you grow?

Type	Kinds	Varieties
Annuals		
Perennials		
Herbs		
Bulbs		
Wildflowers		
Ferns		

How large was your garden _____ (sq. ft.) If a container garden, how many containers? _____

ANNUALS

An annual is a plant which completes its life cycle in one season, growing from seed in the spring, flowering, and then producing fruit that contains seeds before dying in the fall. Annuals can put on a splendid show from May to September, providing a continuous wealth of color.

Culture of Annuals

The whole purpose of a plant is to produce seed. Once it does so, it generally stops flowering. The flowering period can be extended by removing faded blooms as soon as they finish flowering to promote flowering all summer long. (Most biennials, which are plants that require up to 2 years to complete the life cycle, are treated as annuals.) You may wish to refer to Parts of a Plant (fig. 6) on page 12.

Uses—Annuals can be used alone in a garden, in window boxes, in planting tubs, as temporary hedges and screens, and as vines. They can also be used with other plants, such as bulbs or perennials, or both, in rock gardens, and in planters. Annuals are also used for cut flowers. They can brighten up areas between shrubs or add color to patios when planted in pots or other containers. Annuals are at their best, however, when planted in large expanses or beds.

Depending on their location and design, annual flower beds can fill a variety of roles in the garden. Although providing color is their main function, annual flower beds do provide other benefits. They may be a continuous source of cut flowers for the house. Flower borders can act as a transition zone or division between two areas of the landscape, such as the patio and lawn. Equally important, annuals are an inexpensive way to landscape. Not only does this allow for endless varieties and combinations of colors and shapes, but annuals may also act as fillers before more permanent plants such as shrubs or trees are planted or mature.

Regardless of how the flowers are used, they are best planted in groups of no less than three to five plants. Indeed, annuals are most effective when grown in large clumps or varicolored drifts of the same plant, or a variety of plants of the same color. Rarely is a single plant effective, as it tends to become lost in the overall landscape.

Soil and Location—Most annuals do best in an open, well-drained, loamy soil in a sunny location.

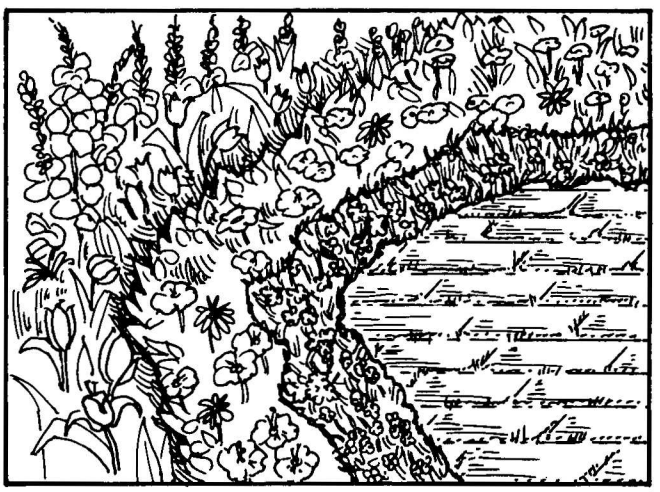
Fertilizing—Apply 2 pounds of a complete fertilizer, such as 5-10-5 per 100 square feet, when the soil is worked in the spring. If plants are growing poorly in midsummer, fertilize at the rate indicated on the container. The numbers on a fertilizer bag refer to the percentage by weight of nitrogen, phosphorus, and potassium present in the fertilizer. Phosphorus is in the form of P_2O_5 and potassium is in the form of K_2O. A soil test in the fall or spring is strongly recommended before application of the fertilizer. Check with your local Cooperative Extension Service office for procedure. High nitrogen fertilizers should not be used because excessive vegetative growth and few or no flowers could result. In other words, the plant may grow vigorously and produce a lot of leaves, but it may not flower.

Watering—Annuals should be watered thoroughly at least once a week during the summer if there is not sufficient rain (less than ½ inch per week). Enough water should be added to thoroughly moisten the soil to at least 6 inches in depth. Young plants should be watered immediately after they are transplanted, preferably with a starter solution containing a high amount of phosphorus, which will promote root development.

Cultivating and Mulching—Weeds can be controlled by cultivating or mulching. Many gardeners find that mulching is an easier, more economical way to suppress weeds than cultivating. Materials used as mulch include corncobs, peat moss, buckwheat hulls, sawdust, wood chips, plastic film, weed-free grass clippings, newspapers, cardboard, and old carpeting.

Planting Seeds and Transplanting—Most annual seeds can be sown outdoors from April 1 to the middle of May in central lower Michigan. Follow the directions on the seed packet.

Plants should be set out in the evening or on a cloudy day, if possible, so that they will have a chance to recover



PARTS OF A PLANT

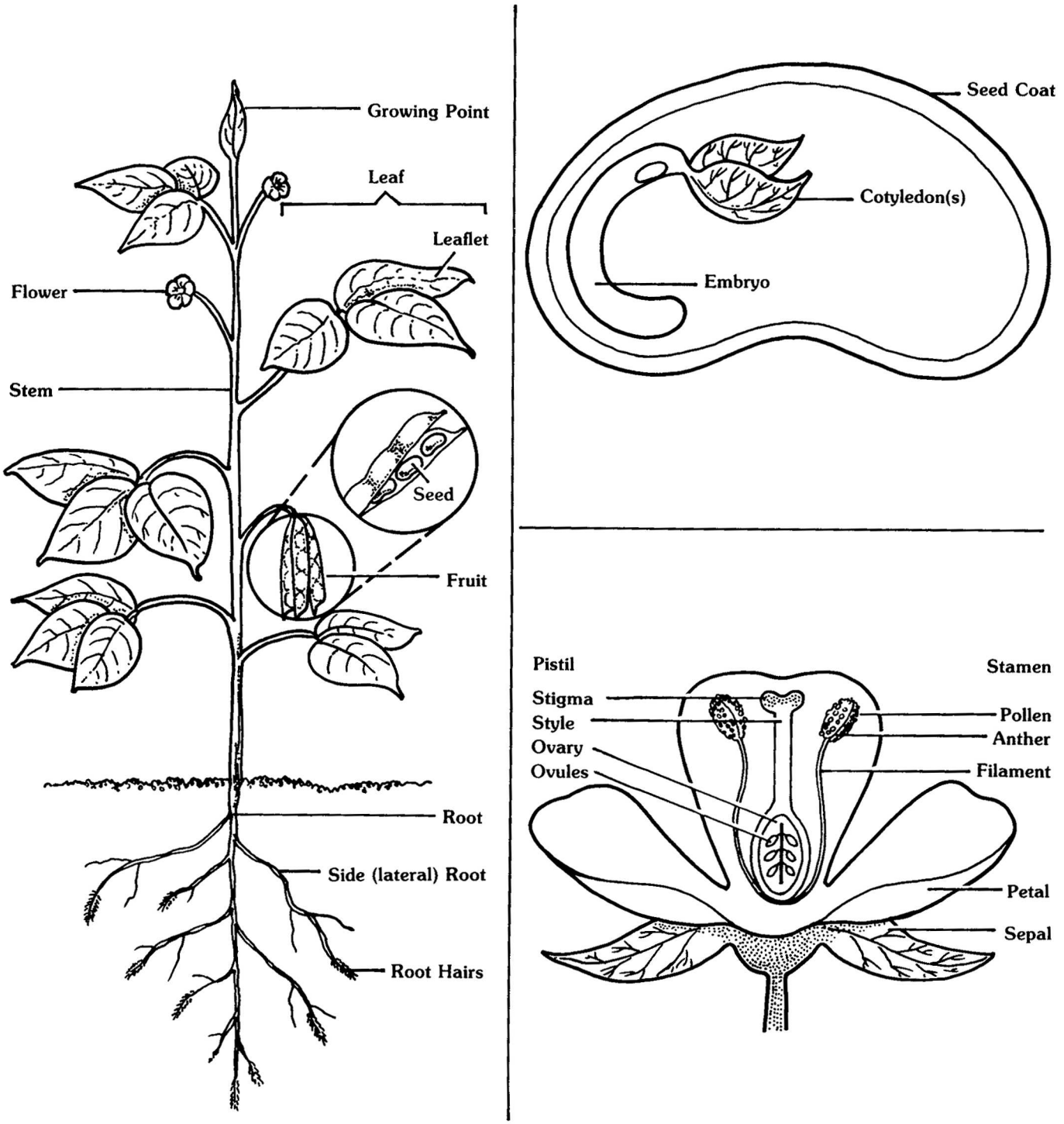


Figure 6 Roots hold the plant in the earth and draw water and nutrients from the soil for the leaves, and the stem carries nutrients throughout the plant. Leaves manufacture food and store energy from the sun. The parts of a flower are the sepals and petals (which protect the flower bud), and the stamen and pistil. The stamen is composed of two parts, the filament (stalk) and the anther, which produces pollen grains. The pistil contains the stigma, style and ovary. The ovary houses the ovules. (After fertilization, these develop into seeds.) The ovary develops into the fruit following fertilization. In the sweet pea, the pod (or fruit) develops from the ovary, and the seeds (peas) from the ovules. Each seed contains a "blueprint" for a new plant. The seed is protected by a covering, the seed coat, and stored nutrients form the cotyledon(s) which will help nourish the embryo.

from transplant shock before being exposed to the hot sun. Plants should be set in the ground ½-inch to 1-inch deeper than they were planted initially (fig. 7).

A starter solution should be used to provide young plants with early nourishment. These water-soluble fertilizers are available in most garden supply stores.

Buying Plants—If you buy plants, select healthy, bushy plants. Some plants, such as dwarf French marigolds, sweet alyssum, petunias, and geraniums, can be purchased already in flower. Other plants, such as snapdragons, salvia, scabiosa, and zinnias, should not be in bloom when purchased.

Starting Annual Seeds Indoors

Your garden can bloom a month to 6 weeks earlier if you start annuals indoors instead of sowing seeds outdoors in late spring. (Be sure to have some blooms left for late-summer fairs, though!) The chart on page 14 indicates the appropriate time for starting various annuals indoors in central lower Michigan. For southern Michigan, start one week earlier; for northern Michigan, one week later.

Empty half-gallon milk cartons make excellent containers for starting seeds. Each carton should be thoroughly rinsed and cut lengthwise to give two shallow boxes of equal size. Punch a few small holes in the bottom of the carton for drainage.

Soil Mixture or Growing Medium—Use one of the commercially prepared mixes containing perlite, vermiculite, and peat moss for best results. If you want to mix your own starter soil, use a soil mixture of one part good garden soil and one part peat moss. Before using the soil, it should be pasteurized to eliminate destructive insects and diseases. This can be done by placing the well-mixed soil in a shallow baking pan, sprinkling it with 1 to 2 cups of water, covering it with aluminum foil, and baking it in an oven set at 300° to 350°F. Put a medium-sized potato into the soil. When the potato is done, the soil is pasteurized. (The soil must be at 180°F for at least 30 minutes. You may use a thermometer to gauge soil temperature. When soil reaches 180°F, turn down the oven heat.) If heated too high or too long, the soil structure is destroyed. When the soil has cooled, place it in the prepared milk cartons. Water the soil before sowing the seeds. The soil mixture can be prepared in the fall and stored in a dry place until needed.

Sowing Seeds—Two methods for sowing seeds are used, depending on the size of the seeds. For large seeds (marigolds and zinnias) make holes in the soil about 1-inch apart with the point of a pencil. Two seeds should be placed in each hole, and depth should be two or three times the greatest dimension of seed. After all the seeds are in place, firm the soil lightly.

Fine seeds such as flowering tobacco may be broadcast over the soil surface, allowing about ¼-inch space between seeds. The soil should not be firmed in this case. A very thin layer of soil mixture should be sifted over the seeds. Some fine seeds are pelleted, that is, covered with a material to make them bigger. Pelleting makes fine seeds easier to sow and reduces the number of seeds used.

The seed boxes should then be properly labeled with the names of the plants so they will be easily identifiable. Be sure to include the variety name—it is essential for exhibiting. Water the containers carefully to avoid washing the seeds out. One way to avoid problems is to stand the container in a shallow pan of water, so that soil is not disturbed.

The seed boxes should be covered with plastic film to retain moisture while the seeds are germinating. The plastic should be folded under the seed box. An airtight seal is unnecessary, but the plastic cover should completely enclose the box.

Germination and Culture—Most flower seeds germinate best at a temperature of about 75°F. Light is not essential for germination of most varieties.

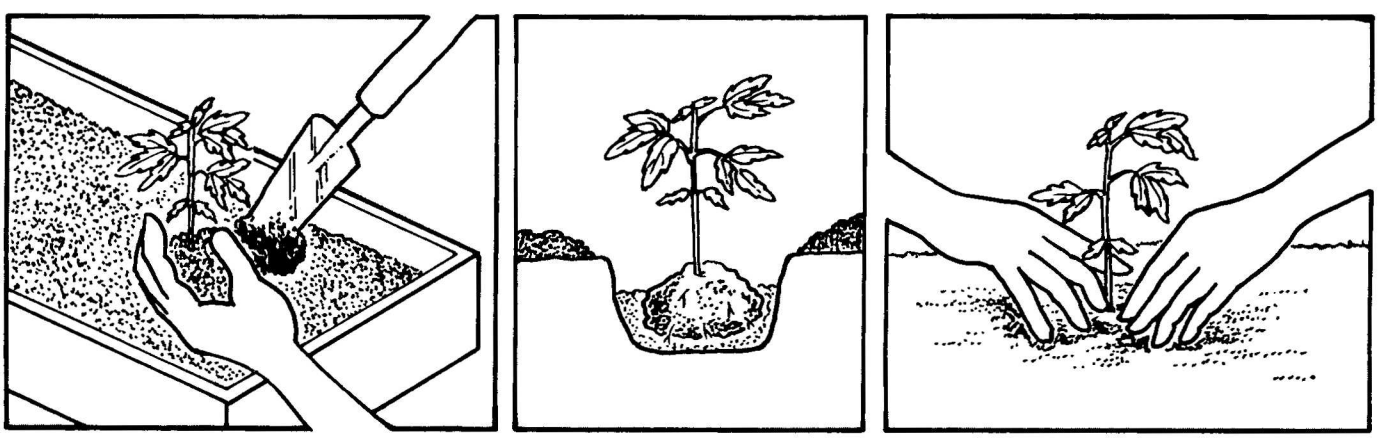


Figure 7 Move as much soil as possible with each plant, and set slightly deeper than each plant was before. Firm the soil around the roots after transplanting. You may want to hill up a ring of soil about three inches from the plant, to act as a reservoir and prevent water from draining off.

The seedlings will begin to appear within 3 to 14 days. The seed boxes should be checked daily for signs of germination. As soon as most seeds have germinated, the plastic cover must be removed and the seedling exposed to full sunlight and cooler temperatures—65° to 70°F. If the cover is left on too long, spindly growth will result and the seedlings will be susceptible to damping-off disease.

Under poor light and stagnant air conditions, damping-off may occur even in pasteurized soil. This disease is evident when seedlings start falling over as a result of the stems being weakened at the soil line by the invasion of a fungus. The disease may spread throughout a seed box in 2 or 3 days if left uncontrolled. There are some chemicals available to control the disease, but prevention is by far the most important and effective method of control.

Fertilizer applied after germination will help produce sturdy plants. Use any soluble complete fertilizer at half the strength recommended on the container. Two weeks later, and every 2 weeks thereafter, the same fertilizer should be applied at the rate recommended on the container.

Watering—Careful attention to watering is essential when starting annuals indoors. They should never be allowed to dry to the point of wilting. This severely slows the growth of the plants for several days following apparent recovery. When the soil feels dry to the touch, apply water. Do not water again until needed. Overwatering, which drives the air out of the soil, can be as fatal as no water at all!

Thinning and Transplanting—After "true" leaves appear above the seedling leaves, the plants are ready for wider spacing. Large-seeded annuals were sown two seeds to a hole. The extra plants should be cut off at the soil line with a pair of shears to leave a space of 1-inch between remaining plants. This method of thinning prevents injury to the roots of the remaining seedling. Fine-seeded plants that were sown broadcast should be carefully lifted and pried out and transplanted into additional boxes, by placing a knife or stiff stake under the roots and then lifting the seedling out while gently pulling on the top. The seedlings should be spaced 1-inch apart from each other, and the soil gently firmed and watered.

Conditioning—On balmy spring days when the wind is calm, young plants may be "hardened" for their final life outdoors by placing them in full sunlight for several hours. They dry rapidly under these conditions, so watch carefully and water them when necessary.

Final Transplanting—When danger of frost is past (around May 20 in central lower Michigan), the young plants are ready for final placement outdoors. A rule of thumb that may be used anywhere in Michigan is that it is safe to plant or set out annual flowers when the first sugar maple leaves are fully expanded. Try to set plants out in the evening or on a cloudy day if at all possible.

SOWING DATES:
HOMEGROWN ANNUALS
IN CENTRAL LOWER MICHIGAN

INDOORS

March 1 - browallia, cynoglossum, petunia, red salvia, verbena

March 15 - anchusa, annual chrysanthemum, annual delphinium, annual flax, arctotis, blue salvia, China-aster, dusty-miller, flowering tobacco, forget-me-not, French marigold, garden balsam, gomphrena, heliotrope, nierembergia, portulaca, salpiglossis, sanvitalia, scabiosa, sweet alyssum, thungergia, tithonia

March 21 - annual phlox, gaillardia, spider flower

April 1 - cockscomb

April 15 - African marigold, bachelor button, calendula, cosmos, zinnia

OUTDOORS

April 1 - (as soon as ground thaws)—anchusa, bachelor button, browallia, calendula, California-poppy, cosmos, flowering tobacco, larkspur, petunia, portulaca, sweet alyssum

May 15 - All others

BEST PURCHASED

Tuberous-rooted begonias, geraniums, snapdragons, ageratum, coleus, dwarf dahlias, lobelia, and torenia require a long growing season and are best purchased.

Common and Scientific Names

Since many plants have more than one common name, the common and scientific names of plants are given here to avoid confusion. Some plants have over 200 common names!

The main advantage to using scientific names is that one, and only one scientific name is given to each kind of plant. This single name is used all over the world. A scientific name is composed of two parts and is usually in Latin. The first word is the genus; the second word is the species.

In the following lists, the common name is given in the left column and its scientific name appears in the right column.

Annuals for the Beginner

ageratum	*Ageratum houstonianum*
annual phlox	*Phlox drummondii*
calliopsis	*Coreopsis tinctoria*
cockscomb	*Celosia* species
cosmos	*Cosmos* species
marigold	*Tagetes* species
nasturium	*Tropaeolum majus*
petunia	*Petunia hybrida*
portulaca	*Portulaca grandiflora*
spider flower	*Cleome spinosa*
sweet alyssum	*Lobularia maritima*
zinnia	*Zinnia* species

Annuals for Poor Soil

balsam	*Impatiens balsamina*
calliopsis	*Coreopsis* species
cockscomb	*Celosia argentea* and *cristata*
cornflower	*Centaurea* species
four-o'clock	*Mirabilis jalapa*
godetia	*Godetia grandiflora*
ice plant	*Mesembryanthemum* species
love-lies-bleeding	*Amaranthus caudatus*
morning-glory	*Ipomoea* species
nasturtuim	*Tropaeolum majus*
perilla	*Perilla frutescens*
poppies	*Papaver* species
portulaca	*Portulaca grandiflora*
spider flower	*Cleome spinosa*
sweet alyssum	*Lobularia maritima*

Annuals for Dry and Hot Conditions

annual phlox	*Phlox drummondii*
babysbreath	*Gypsophila elegans*
California poppy	*Eschscholzia californica*
calliopsis	*Coreopsis* species
cape marigold	*Dimorphotheca sinuata*
cockscomb	*Celosia* species
cornflower	*Centaurea* species
creeping zinnia	*Sanvitalia procumbens*
four-o'clock	*Mirabilis jalapa*
ice plant	*Mesembrythemum* species
poppy	*Papaver* species
portulaca	*Portulaca grandiflora*
scarlet sage	*Salvia splendens*
snow-on-the-mountain	*Euphorbia marginata*
spider flower	*Cleome spinosa*
statice	*Limonium* species
summer-cypress	*Kochia scoparia*
sunflower	*Helianthus annuus*
zinnia	*Zinnia elegans*, and *Zinnia augustifolia*

Annuals for Moist and Cool Conditions

annual pink	*Dianthus chinensis*
baby-blue-eyes	*Nemophila menziesii*
blue laceflower	*Trachymeme coerulea*
bugloss	*Anchusa capensis*
candytuft	*Iberis* species
Canterbury bells (annual)	*Campanula medium*
flowering tobacco	*Nicotiana alata*
forget-me-not	*Myosotis semperflorens*
mask flower	*Alonsoa* species
monkey flower	*Mimulus luteus*
nemesia	*Nemesia* species
polygonum	*Polygonum orientale*
pot marigold	*Calendula officinalis*
summer-cypress	*Kochia scoparia*
sweet pea	*Lathyrus odoratus*
verbena	*Verbena* X *hybrida*
wishbone flower	*Torenia fournieri*

Annuals for Shade or Full Sun

balsam	*Impatiens balsamina*
forget-me-not	*Myosotis scorpioides*
Madagascar periwinkle	*Catharanthus roseus*
pansy	*Viola tricolor hortensis*
sweet alyssum	*Lobularia maritima*
tufted pansies	*Viola cornuta*
wax begonias	*Begonia* X *semperflorens-cultorum*

Annuals for Shade Only

browallia	*Browallia speciosa*
coleus	*Coleus* X *hybridus*
fiberous-rooted begonias	*Begonia cucullata* var. *Hookeri*
fuchsias	*Fuchsia* X *hybridus*
impatiens	*Impatiens wallerana*
lobelia	*Lobelia erinus* 'Compacta'
wishbone flower	*Torenia fournieri* 'Grandiflora' and *Torenia fournieri* 'Compacta'

Annuals for Edging

ageratum	*Ageratum houstonianum*
annual phlox	*Phlox drummondii*
candytuft	*Iberis* species
dianthus	*Dianthus* species
dusty miller	*Cineraria maritima* var. *candicans*
forget-me-not	*Myosotis sylvatica*
lobelia	*Lobelia erinus* 'Compacta'
marigold	*Tagetes* species
ice plant	*Mesembryanthemum* species
pansy	*Viola tricolor hortensis*
pimpernel	*Anagallis* species
portulaca	*Portulaca grandiflora*
sweet alyssum	*Lobularia maritima*
verbena	*Verbena* X *hybrida*

Annuals for Cut Flowers

African daisy	*Arctotis stoechadifolia*
annual chrysanthemum	*Chrysanthemum carinatum*
browallia	*Browallia speciosa*
calendula	*Calendula officinalis*
calliopsis	*Coreopsis tinctoria*
China-aster	*Callistephus chinensis*
clarkia	*Clarkia unguiculata*
cornflower	*Centaurea cyanus*
cosmos	*Cosmos* species
flowering tobacco	*Nicotiana alata*
gaillardia	*Gaillardia hybrida*
love-in-a-mist	*Nigella damascena*
marigold	*Tagetes* species
mignonette	*Reseda odorata*
pansy	*Viola tricolor hortensis*
salpiglossis	*Salpiglossis sinuata*
scabiosa	*Scabiosa atropurpurea*
snapdragon	*Antirrhinum majus*
stock	*Matthiola incana*
verbena	*Verbena X hybrida*
zinnia	*Zinnia* species

ANNUAL FLOWERS — COLORS AND HEIGHTS

Very Short (up to 6 inches)	Short (8-12 inches)	Medium (18-24 inches)	Tall (36 inches or more)
WHITE			
lobelia	garden balsam	arctotis	angel's-trumpet
potulaca	impatiens (shade)	bachelor button	cosmos
sweet alyssum	periwinkle (shade)	flowering tobacco	spider flower
verbena	petunia	larkspur	morning glory (climber)
	wax begonia	marigold (cream)	
	wishbone flower (shade)	snapdragon	
		white laceflower	
		zinnia	
YELLOW			
dahlberg daisy	California poppy	annual chrysanthemum	plume cockscomb
golden ageratum	marigold	blanketflower	
portulaca	nasturtium	calendula	
		Iceland poppy	
		marigold	
		snapdragon	
		zinnia	
ORANGE			
creeping zinnia	California poppy	annual chrysanthemum	gloriosa daisy
gazania	cape marigold	blanketflower	sunflower
	marigold	calendula	tithonia
	nasturtium	coreopsis	
	Zinnia linearis	cosmos	
		marigold	
		zinnia	
RED			
annual phlox	annual pink	bachelor button	annual hollyhock
annual pink	California poppy	blanketflower	cosmos
portulaca	cockscomb	flowering tobacco	plume cockscomb
sweet alyssum	cuphea	larkspur	salvia
	garden balsam	marigold	spider flower
	impatiens (shade)	salvia	
	nasturtium	snapdragon	
	periwinkle (shade)	verbena	
	petunia	zinnia	
	salvia		
	wax begonia		
VIOLET			
cupflower	garden balsam	heliotrope	cosmos
gomphrena	petunia	salvia	spider flower
lobelia	wishbone flower (shade)	snapdragon	
portulaca		verbena	
sweet alyssum		zinnia	
verbena			
BLUE			
ageratum	browallia (shade)	annual delphinium	morning glory (climber)
lobelia	petunia	bachelor button	
verbena		blue laceflower	
		blue salvia	
		Chinese forget-me-not	
		larkspur	
		love-in-a-mist	

PERENNIALS

Culture of Perennials

An herbaceous perennial is a permanent plant that dies to the ground each winter and resumes growth the following spring. Once established, most perennial plants will last for many years.

Uses—Perennials can be used for naturalizing, for cut flowers, as fillers and screens, for extending the flowering season, and for giving a feeling of stability and permanence to the flower garden. Perennials can be used alone or with annuals and bulbs.

Culture—Most perennials will do best in a well-drained, loamy soil which is high in organic matter.

Propagation—Perennials are propagated by seeds, cuttings, and division. Perennials readily started from seed are: Canterbury bells, chrysanthemum, columbine, delphinium, foxglove, gas plant, ice plant, pansy, and sweet william.

A few perennials that can be propagated from cuttings taken in the spring and rooted in a mixture of sand and peat moss are: aster, chrysanthemum, delphinium, dianthus, goldentuft, and phlox.

The most common method of propagating perennials is by division (fig. 8). Spring-flowering perennials should be lifted and divided in the fall. Fall-flowering perennials should be lifted and divided in the spring. Oriental poppies should be divided in August.

Perennials can be divided almost every year to increase the number of plants. Otherwise, they can be left undisturbed for years.

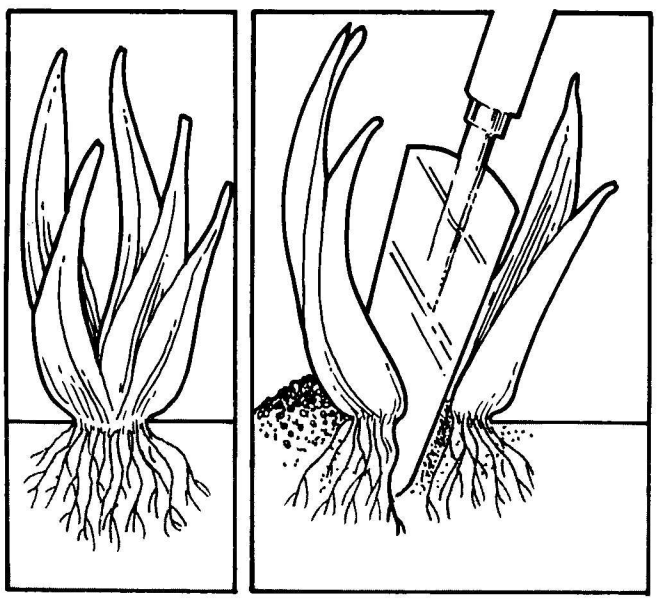


Figure 8 Lifting and dividing is a common method of propagating perennials.

Fertilizing—Apply 2 pounds of 5-10-5 fertilizer per 100 square feet in April. For established plants, a handful of fertilizer at each application should be satisfactory.

Watering—Perennials should be watered thoroughly once a week during the summer if needed. Plants should also be watered thoroughly when they are set out.

Mulching—Perennials should be mulched with straw the first winter to prevent heaving. Heaving is the repeated freezing and thawing of the soil that tends to lift newly established plants right out of the soil, which may kill them. Mulching tends to reduce this freezing and thawing. Apply after the ground has frozen to help reduce the attraction of mice.

Pinching and Disbudding—The size and shape of most ornamental plants can be affected by pruning. Pinching out the top of a coleus, for example, causes side shoots to develop and the plant becomes bushier and more attractive.

Similarly, most garden chrysanthemums will be more attractive and bushier if they are cut back once or twice before the fourth of July. Cut them back the first time when the stems are 6 to 8 inches tall, to about half their original height. Pinch each stem individually or use hedge shears to trim an entire plant with just one or two cuts. The stems will then branch out and form many new shoots. These clippings can be used as cuttings, which will root easily to form new plants. When these new shoots have grown a few inches, cut them back to about half of their height. Do not cut them after the fourth of July, since the plant probably will not have enough time to produce flower buds before fall. By treating chrysanthemums this way, the plants become bushier and have many more flowers.

Disbudding is the removal of side flower buds on a shoot, leaving only the top flower to develop. This results in the production of a much larger flower, such as the large mums sold at football games. Peonies are also often disbudded to produce larger flowers, especially for shows.

Common and Scientific Names

The following is a list of common and scientific names for perennials and some specific conditions for which they might be used.

Perennials for Beginners

aster	*Aster* species
chrysanthemum	*Chrysanthemum X morifolium*
daylily	*Hemerocallis* species
iris	*Iris* species
phlox	*Phlox paniculata*

Perennials That Will Tolerate Poor Soil

bloodred cranesbill	*Geranium sanguineum*
black-eyed-susan	*Rudbeckia hirta*
butterfly weed	*Asclepias tuberosa*
evergreen candytuft	*Iberis sempervirens*
flowering spruge	*Euphorbia corollata*
goldentuft alyssum	*Aurinia saxatilis*
grass pink	*Dianthus plumarius*
poppy mallow	*Callirhoe involucrata*
rock phlox	*Phlox subulata*
snow-in-summer	*Cerastium tomentosum*
tickseed	*Coreopsis grandiflora*
wallcress	*Arabis caucasica*
wild senna	*Cassia marilandica*

Perennials for Dry and Hot Conditions

beach wormwood	*Artemisia stellerana*
blanketflower	*Gaillardia aristata*
bugloss	*Anchusa caespitosa*
butterfly weed	*Asclepias tuberosa*
coneflower	*Rudbeckia speciosa*
cottage pink	*Dianthus plumarius*
cranesbill	*Geranium sanguineum*
evening primrose	*Oenothera fruticosa*
evergreen candytuft	*Iberis sempervirens*
flax	*Linum perenne*
flowering spurge	*Euphorbia corollata*
golden marguerite	*Anthemis tinctoria*
goldentuft alyssum	*Aurinia saxatilis*
iris	*Iris X germanica*
moss pink	*Phlox subulata*
mullein	*Verbascum olympicum*
pearly everlasting	*Anaphalis margaritacea*
poppy mallow	*Callirhoe involucrata*
sage	*Salvia azurea* var. *grandiflora*
snow-in-summer	*Cerastuim tomentosum*
tawny daylily	*Hemerocallis fulva*
tickseed	*Coreopsis grandiflora*
wall rockcress	*Arabis caucasica*
wild indigo	*Baptisia australis*
wild senna	*Cassia marilandica*
wormwood	*Artemisia ludoviciana*
yarrow	*Achillea millefolium*

Perennials for Shaded Locations

astilbe	*Astilbe* species
balloon flower	*Platycodon grandiflorus*
bleedingheart	*Dicentra* species
bluebells	*Mertensia virginica*
bugle	*Ajuga reptans*
cardinal flower	*Lobelia cardinalis*
Christmas rose	*Helleborus niger*
columbine	*Aquilegia X hybrida*
coralbells	*Heuchera sanguinea*
daylily	*Hemerocallis* species
hardy foxglove	*Digitalis grandiflora*
Japanese anemone	*Anemone hupehensis*
meadowrue	*Thalictrum* species
monkshood	*Aconitum* species
plantain lily	*Hosta plantaginea*
peachleaf bellflower	*Campanula persicifolia*
phlox	*Phlox* species
snowdrop anemone	*Anemone sylvestris*
stonecrop	*Sedum spurium*
tussock bellflower	*Campanula carpatica*
wild ginger	*Asarum canadense*
woodruff	*Galium odoratum*

Perennials for Edgings

bugle	*Ajuga reptans*
coralbells	*Heuchera sanguinea*
evergreen candytuft	*Iberis sempervirens*
goldentuft alyssum	*Aurinia saxatilis*
grass pink	*Dianthus plumarius*
purple rockcress	*Aubrieta deltoidea*
rock phlox	*Phlox subulata*
snow-in-summer	*Cerastium tomentosum*
tufted pansy	*Viola cornuta*
tussock bellflower	*Campanula carpatica*
wallcress	*Arabis caucasica*

Perennials for Cut Flowers

bellflower	*Campanula* species
blanketflower	*Gaillardia* species
chrysanthemum	*Chrysanthemum X morifolium*
columbine	*Aquilegia X hybrida*
coneflower	*Rudbeckia* species
coreopsis	*Heuchera sanguinea*
daylily	*Hemerocallis* species
delphinium	*Delphinium hybridum*
gayfeather	*Liatris pycnostachya*
globe thistle	*Echinops ritro*
iris	*Iris* species
lupine	*Lupinus* species
pinks	*Dianthus* species
plantain lily	*Hosta plantaginea*
pyrethrum	*Chrysanthemum coccineum*
red-hot-poker	*Kniphofia foliosa*
Shasta daisy	*Chrysanthemum maximum*
sunflower	*Helianthus annuus*
tufted pansy	*Viola cornuta*

Perennials that Flower First Year from Seed

Chinese larkspur	*Delphinium grandiflorum*
chrysanthemum	*Chrysanthemum X morifolium*
grass pink	*Dianthus plumarius*
Iceland poppy	*Papaver nudicaule*
mealycup sage	*Salvia farinacea* (tender)