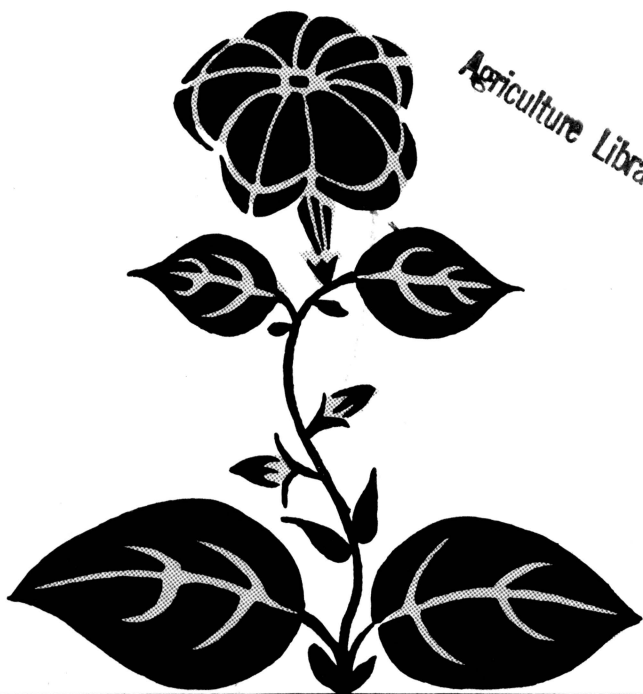


# GROWING ANNUAL FLOWERS

HOME GROUNDS I



UNIVERSITY OF MISSOURI COLLEGE OF AGRICULTURE  
AGRICULTURAL EXTENSION SERVICE

COLUMBIA, MISSOURI

4-H CIRCULAR 99

MARCH, 1950

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# GROWING ANNUAL FLOWERS

(HOME GROUNDS I)

Everyone appreciates and enjoys an attractive yard. It is a source of pride to those who help make it beautiful, and a pleasure to all who see it.

Varieties of flowers, carefully selected, planted and cared for, are one of the best and simplest ways of beautifying the home and the yard.

Annual flowers are those grown from seeds. They bloom and die down in one season. These flowers may be obtained in a wide range of color and are easily grown.

Plant them in a border made up of different annuals or of a single variety; use them for filling in spots in front of shrubbery or other flowers; or put them in rows in a border or in the vegetable garden to supply flowers for cutting.

If wisely selected for color, height and foliage, and grown in suitable, well cultivated soil, annuals will provide a wealth of color during summer and fall, and flowers for cutting until frost.

One of the joys of growing flowers, is sharing them with others. 4-H club members will enjoy cutting flowers for their own homes and for those of neighbors and friends. They will be glad to supply bouquets

for church or school, as well as for special occasions.

## CLASSES OF ANNUALS

**Hardy Annuals.**—There is quite a difference in the time seeds of different annuals may be sown safely. Seeds of many annuals lie dormant outdoors during winter, germinating in the spring. This class usually self-sow, that is, scatter quantities of seed throughout the summer which begin growth with the first warm weather of spring. But with this method of seeding, the plants in time may produce blossoms with less desirable colors, size, or doubleness. This is particularly true of the petunia and larkspur.

Other annuals in this class are those which, for best results, require an early spring start and yet are difficult to transplant. The seeds of these are hardy enough to remain in the ground during winter ready for germination in the spring; or they may be sown in early spring. Sweet peas, larkspur and annual poppies are examples of this class.

**Half-hardy Annuals.**—Seeds of this group require a long time to germinate. In this class are verbenas, China asters and numerous

## LIST OF COMMONLY GROWN ANNUALS

Kind of Flower	Type of Plant	Height	Distance Apart To Plant
Ageratum	Tender	6"	6" - 10"
*Alyssum, Sweet	Hardy	4"-8"	12"
*Balsam	Half-hardy	12"-18"	12"
Balloon	Vine	15"	18"
Calendula	Hardy	8"-12"	8" - 12"
California Poppy	Hardy	12"	6"
Calliopsis	Hardy	18"	6" - 12"
Candytuft	Hardy	6"-12"	4" - 8"
Cardinal Climber	Vine	15'	12"
Castor Bean	Half-hardy	4'-8'	24" - 36"
Chinese Forget- Me-Not	Half-hardy	15"	8" - 10"
Cosmos	Hardy	24"-60"	18" - 24"
Four-o'Clock	Hardy	24"	18" - 24"
Gaillardia	Hardy	12"-18"	12"
Helichrysum (Strawflower)	Half-hardy	24"-36"	12" - 18"
Larkspur	Hardy	24"-36"	12" - 18"
Lupine	Half-hardy	24"-36"	12"
Marigold	Half-hardy	12"-36"	12"
Morning Glory	Hardy Vine	10'-15'	12"
*Nasturtium	Tender	8"-12"	10"
*Petunia	Hardy	12"-18"	10"
Portulaca	Hardy	4"-6"	6"
Scabiosa	Half-hardy	24"-36"	10"
*Sweet Pea (Lathyrus)	Hardy	5"-8"	6" - 10"
Verbena	Half-hardy	8"-12"	12" - 15"
Zinnias	Half-hardy	12"-36"	12"

\*—Fragrant

others. In February or March, sow the seeds in a coldframe or in a box in the house, then transplant to the garden after danger of frost is past. These may need to be transplanted several times; placed outside during the day and brought in at night until

hardy enough to remain outside.

**Tender Annuals.**—Another group of annuals includes those with tender foliage that cannot stand freezing or frost. The seeds of tender annuals may be sown outdoors when the soil is workable.





White ageratum and zinnias in front of blue morning glory on a fence

For an early start of tender annuals, such as zinnias, plant the seeds in boxes, then transplant when the soil is warm and mellow. Or, sow the seed where the plants are to bloom, then thin if the stand is too thick for best growth.

### SOIL

Many annuals will bloom quite well under rather unfavorable con-

ditions, but nearly all grow better in soil that is well prepared and generously provided with plant food. The extent of soil preparation necessary for the best growth of annuals will depend upon the type of soil available.

Well drained, sandy soils warm up early in the spring and can be spaded easily, but they will not hold moisture well and are usually lack-



Castor beans as a screen with four-o'clocks

ing in the required amount of plant food since these elements are held mainly in the silt and clay portions of the soil.

Clayish soils usually contain more plant food than sandy soils, and hold moisture longer, but remain cold later in the spring, and are not easily kept in mellow condition.

The best soil is a rich loam, thoroughly mixed with well rotted manure. A soil good enough for most annuals may be prepared even if sandy or clayish in nature. Clayish soil may be improved greatly by deep spading in the fall, turning in well-rotted manure and leaving the surface rough throughout the winter. Frost action during the winter improves the soil, and the manure adds

available plant food and the humus necessary for the best plant growth. Sandy soils will be more productive and will retain moisture better, if a generous amount of leaf mold or well rotted manure is added and mixed thoroughly with the soil.

For best results, apply the fertilizer to the beds and mix well with the soil when preparing to plant.

### PLANTING

The first step in planting is to secure good seed from a reliable source. Then if the soil is warm enough and sufficiently dry to be spaded and raked until mellow and smooth, annuals can be sown safely.

The seeds may be sown directly in the open ground after it has warmed

up, or in boxes or cold frames and transplanted. If sown where they are to grow, sow the seeds in rows or scatter them over the surface. Cover lightly and then firm the soil enough to insure close contact with the seed. If the seeds are sown in their permanent location and the plants are too thick, thin them before vigorous growth begins.

In sowing very small seeds such as petunia, a mixture of one part seed to five of dry sand, will make sowing more uniform. Most annuals are planted where they are to bloom. But if the seeds are sown in a specially prepared section of the vegetable garden, or in an unused corner, they may be transplanted later to a permanent location. If sown in coldframes, boxes, or flats, transplant the seedlings when growing conditions are right.

After the plants produce from one to three true leaves, they are ready to transplant. Take care to disturb the roots as little as possible, and to get them into the ground before they dry out. It is advisable to water the plants thoroughly several hours before transplanting. This not only gives the stems and roots time to absorb moisture, but helps prevent root breakage and helps keep

the soil on the roots when transplanting.

After the seedlings are in a new location, water them well, and shade them for a few days until the roots become adjusted.

These precautions will prevent much loss and discouragement.

Because most annuals prefer sunshine to shade, plant so they will have sunshine several hours each day.

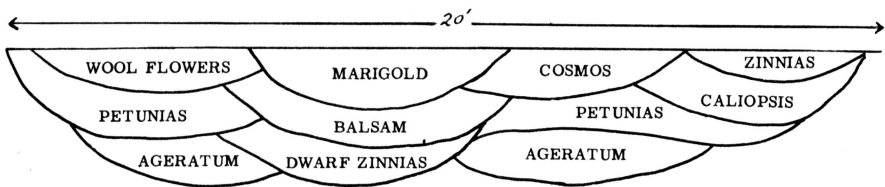
If the plot is rectangular in shape, plant the flowers in rows across the short way of the bed. For a border where curved edges are to be used, arrange the different varieties in irregular groupings.

For ease of cultivation, the bed or border should be not more than 5 feet wide and arranged so it can be worked from both sides.

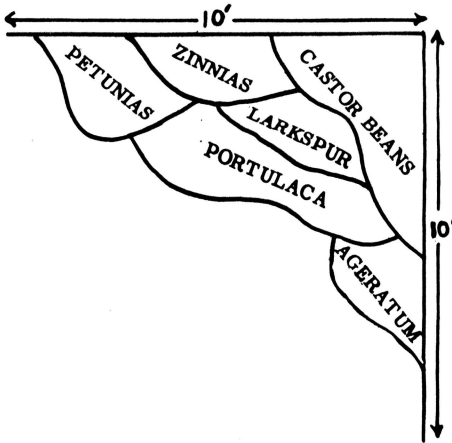
The distance to space the rows will depend on the height and spread of the plants. The list of varieties indicates the distance apart they should be planted. See page 4.

Allow at least 8 to 12 inches at the edges of the border or bed, so the plants will not extend into the lawn or path.

In arranging the border, plant tall varieties for background, medium heights for the next row and



Suggestions for border plantings of annuals



Suggestions for corner plantings of annuals

low growing flowers in front for edging.

Very tall growing flowers and vines may be used for screen plantings to hide an undesirable view.

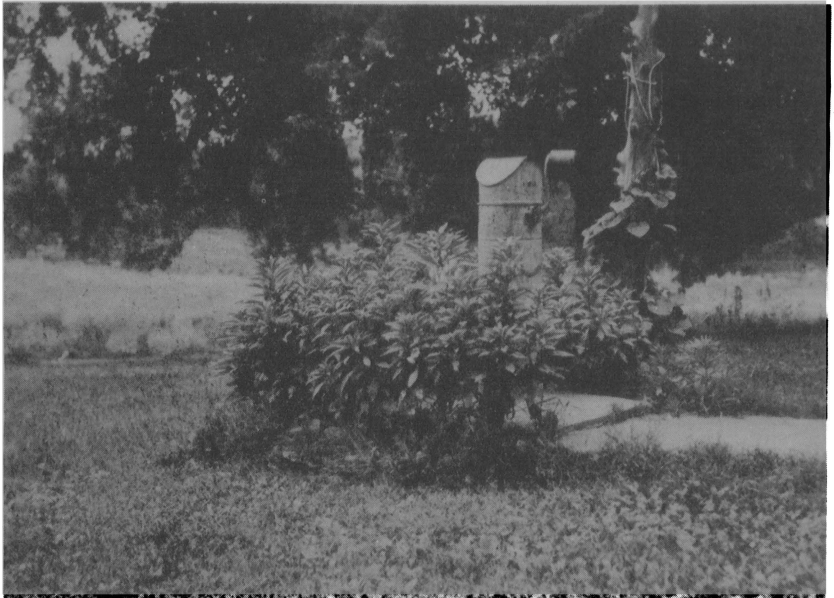
If annuals are planted in a window or porch box, a variety of height and color will be effective, with vining or edging flowers along the outside.

### CARE DURING GROWTH

Annuals need about the same cultivation as vegetables; that is, keep the soil free of weeds and cultivate for a dust mulch to prevent evaporation. Cut off all dead leaves and stems to keep the plant blooming.

In dry weather, annuals will do better with an occasional good soaking, rather than frequent sprinkling. Humus in the soil will retain the moisture.

The soil should be soaked to a depth of 6 to 8 inches, and cultivated as soon as it is tillable after the watering.



Touch-me-not (balsam) in front of cistern

## INSECT AND DISEASE CONTROL

Late fall spading of the soil where the annuals are to be grown the following summer, will help control diseases and insects.

Directions should be carefully followed in mixing and applying all preparations for the control of diseases and insects.

Insecticides are classified into two groups—the stomach poisons and the contact sprays. The “chewing insects” which eat the plant tissue (beetles, caterpillars and leaf rollers) are controlled by stomach poisons; those known as sucking insects (plant lice, leaf hoppers, plant bugs) are controlled by contact sprays.

Insecticides and fungicides may be applied in either dust or spray. A good dusting material for both insects and disease may be inexpensively prepared at home as follows: Mix thoroughly 9 parts dusting sulphur (not flowers of sulphur), 1 part arsenate of lead, and 1 part snuff or 10 per cent nicotine dust.\* Apply with a dusting gun.

Rotenone is effective on both chewing and sucking insects and is available in both dust and liquid forms. Mix according to directions on the package.

DDT acts as both a stomach and contact insecticide. It is chiefly a contact poison although not effective against red spider, bagworm, certain aphids and some other common insects. Its use might cause red

spider actually to increase in number. However, it is especially effective on certain beetles, pine tip moth and leafhoppers. DDT dust mixture and wettable powders are satisfactory for use on shrubs. Avoid letting DDT applications contaminate fish ponds as heavy dosage may kill fish and other animal life.

Dust mixtures containing 3 to 5 per cent DDT are recommended.

## CUTTING FLOWERS

One purpose of growing flowers is to provide a supply for cutting and use in the house throughout the summer.

For best results, cut flowers early in the morning or late in the afternoon, and place them in cool water for a few hours before arranging them in containers.

Long stems are usually desirable, as they make more graceful arrangements, but be sure to cut above a shoot bud (in the axil of every leaf) to insure later blooming.

## SELECTION OF CONTAINERS

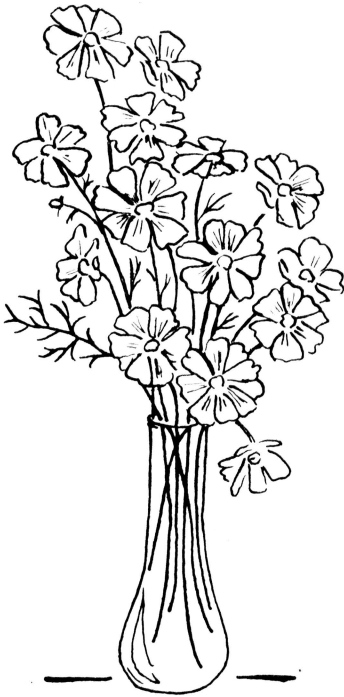
A good container and flower holder makes arranging a bouquet easier. A very inexpensive bowl or vase can be beautiful and useful. These suggestions for selecting containers and holders may be helpful.

1. Containers of soft, neutral colors are most satisfactory—dull green, gray, cream or gray-blue—make good backgrounds for flowers.

2. Avoid highly ornamental containers. Let the flowers be the decoration.

3. Use the size, shape and type

\*Recommended by J. E. Smith, Jr.—Circular 806  
—Flower Gardening



Cosmos or other long stemmed flowers look best in a tall container

suitable for the flowers to be arranged.

*Example:* Coarse flowers like zinnias will look best in a low or medium height vase of pottery or metal; while dainty flowers, sweet peas or cosmos, appear best in glass or smooth light colored containers.

4. Use containers deep enough to hold water to keep the flowers from wilting.

5. Glass, wire, needle-point and cut twigs or branches of cedar are satisfactory holders for flowers.

6. Any type of holder or "frog" should be heavy enough to keep from tipping.

7. Some type of holder will im-

prove the appearance of most bouquets, as the flowers may be more carefully arranged and will hold the position in the bouquet.

### ARRANGEMENT OF FLOWERS

The arrangement chosen will depend upon what is available and upon individual preference. A few suggestions will be a guide in the arrangement of any bouquet of cultivated or wild flowers.

1. Balance is one of the first considerations in arranging flowers. Usually an uneven number of flowers is more pleasing in a bouquet than an even number. One way to get balance in an arrangement is to place the darker colored or leafier flowers near the center and lower part; and the lighter colored and daintier flowers farther out at the edges and toward the top.

2. Colors and kinds of flowers should be combined so they will harmonize. *Example:* Petunias of assorted colors or all one color make a dainty bouquet, while an arrangement of zinnias is very sturdy and strong in color.

3. Short, medium and long stemmed flowers are desirable in most arrangements. This gives an interesting effect, as each individual flower may be seen and the short stemmed ones will hide other stems and blend with the top line of the container. In general, the container should be from one-fourth to one-third the height of the completed arrangement.

4. Space between the flowers is



Well balanced arrangement of petunias

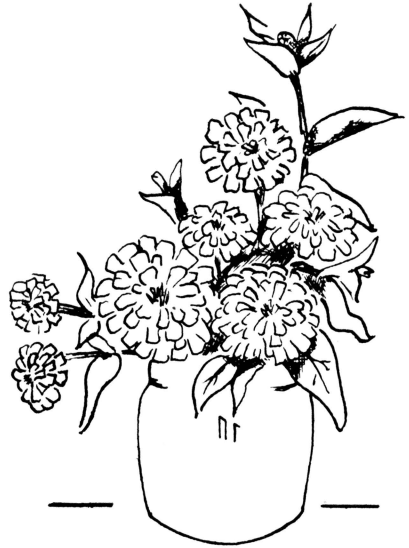
desirable, and prevents overcrowding.

5. The foliage of the flowers being arranged should be used, but if additional greens are necessary they should be as nearly like the flower foliage as possible.

### KEEPING CUT FLOWERS

Cut flowers will last longer and look better if given a little care. The following points will be helpful in caring for bouquets in the home.

1. Cut flowers in the morning or evening.
2. Remove lower leaves—those which would be down in the container.
3. Place the stems in deep water for a few hours before arranging in vases.
4. Be sure the container will hold enough water to extend upon the stems of the flowers.
5. Keep the bouquet in a cool place in the house.
6. Change the water daily.
7. When some of the flowers start



Zinnias in a low pottery bowl

to wilt, discard them and rearrange the rest.

### GOURDS AS DECORATION

Gourds have a decorative value, because of their interesting shapes and colors. These vines may grow over fences or along the ground.

Plant gourds in hills 4 to 6 feet apart, like squash or melons, several seeds in each hill. Gourds grow best in a sunny warm location.

Harvest gourds when ripe and the colors fully developed. Wash the gourds clean. Then set them in a warm, dry place to further harden.

There are various ways to finish the surface of gourds for use in a "charm string" or as table or other decoration. The two methods most commonly used are to rub them well with floor wax, then polish, or to

apply a thin coat of shellac, ( $\frac{2}{3}$  white shellac and  $\frac{1}{3}$  denatured alcohol mixed well), to the entire surface.

### REFERENCES

Farmers Bulletin U. S. D. A. No. 1171—Growing Annual Flowering Plants

University of Missouri Circular No. 306—Flower Gardening—J. E. Smith, Jr.

University of Missouri Extension Circular No. 447—Growing Annuals to Beautify the Home Grounds—Madonna Fitzgerald and Julia M. Rocheford

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 J. W. BURCH, Director, Agricultural Extension Service  
 Distributed in furtherance of the Acts of Congress of May 8, and June 30, 1914