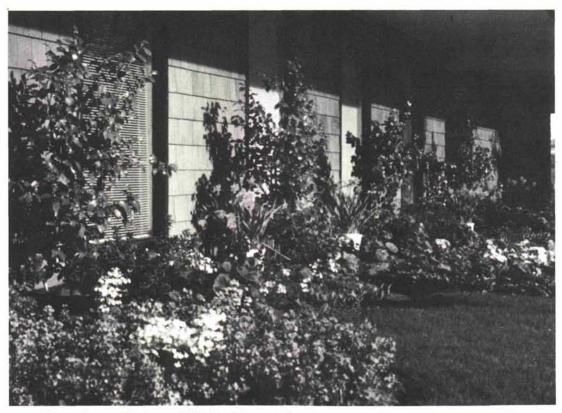
The Power of Flowers-



When Green Chairman M.S. Ludwig and Superintendent Ed Berardy turned on the flower power, there were no brown outs at Lake Merced Country Club, San Francisco.

Maybe They've Got Something There

by CARL SCHWARTZKOPF, Mid-Continent Agronomist, USGA Green Section

t wasn't long ago that "Flower Children" took up their stand on street corners selling flowers, saying that, "They will bring peace, joy and happiness into your life." Maybe they've got something there! Maybe you should give thought to flowers and how they could help brighten your golf course and your career.

As the member drives down the winding lane to the clubhouse and parking lot, he should be entering an environment of recreation and enjoyment, with the problems and pressures of the business world left behind. What better way is there to brighten up the driveway edge, the bare soil around the trees, the parking lot and the area around the clubhouse than with flowers? There are flowers of all types that can

be planted for continual color and effect throughout the year. Here is one example of planning for continual bloom.

Planting Time	Bloom Time	Flower Types
Fall (September - November)	Spring (March - April)	Bulbs: Tulips, Crocuses, Daffo- fils, Hyacinths
Spring (April - June)	Summer (June to First Frost)	Annuals and Tender Perennials: Petunias, Geranium Coleus, Pansies, Snapdragons
Summer (May - July)	Fall	Chrysanthemums

SEPTEMBER 1973

Step plantings before and after at Lake Merced Country Club. BEFORE



To have flowers in the spring, it is necessary to plan and plant this fall. Flowering bulbs, such as tulips, hyacinths, daffodils, grape-hyacinths and crocuses, bring a welcome sign of spring after a long, gloomy winter. These bulbs must be planted in the fall while dormant. They will root immediately, if the soil is cool and moist. They are an explosion waiting to happen and it does when spring arrives. After flowering, leaves continue to grow for awhile, then wither. If not disturbed, the bulbs rest leafless through the summer until the cool temperatures of Autumn initiate new root growth.

After the first season of flowering, future flowering depends upon the care you give the bulbs. Basically, it is a matter of letting the leaves grow and manufacture food for the bulb. The leaves should not be cut off although they may be "bunched" or tied in an attractive manner to improve appearance.

SOME HELPFUL HINTS FOR GROWING BULBS:

- 1. Choose a site that has sunshine in the spring.
- Soil should be moist when the bulbs are planted, or the roots may not initiate growth.
- Fertilize in the spring, when the leaves are growing. Water when dry.
- 4. Yearly lifting and resetting of the bulbs is not essential. Usually, bulbs are left in the ground until they become crowded. They are dug after the foliage has withered in the late spring or early summer, sorted and reset in the fall.

Waiting for the foliage to wither while it is manufacturing food for the bulb often interrupts the planting of other annuals in the bed. Therefore many superintendents dig the bulbs after flowering. Although the leaves have not had sufficient time to manufacture food, they will still produce flowers the following year, although smaller and weaker ones. After the first year of flowering, some superintendents dig them up and give them to the ladies of the club. This is a thoughtful and point-making gesture.

TULIPS:

Of the many bulbs that can be planted in the fall for spring flowering, tulips are the most popular. In warm climates, it is necessary to store bulbs in a refrigerator for a period of four to six weeks prior to planting. Should the bulbs fail to receive adequate cold treatment, they will not flower. Tulips provide the most exciting and vivid colors of springtime. In addition, they vary considerably in shape, height and time of bloom. No wonder they are the most widely used of all the spring-flowering bulbs! For a wonderful long season of tulips, plant some of each of the general tulip types. Following is a list of types and the order of their flowering:

- A) Botanical. As a general rule, these are very early (blooming with crocuses and the first daffodils); they are relatively small and suited for rockeries.
- B) Early Singles and Doubles. These tulips bloom about the same time as the daffodils. They look like regular tulips, but have relatively shorter stems.
- C) Main Season. Many types are within this group; some are fringed Parrots, egg-shaped Darwins, peony-flowered doubles, pointed-petaled lily flowered types, etc.

DAFFODILS:

Daffodils are not only one of the earliest and most delightful spring flowers, but also their bulbs are a remarkable permanent investment.



AFTER

They stay with you and multiply. Year after year they remain in the ground, increasing and producing more and more blooms with little care. Planting time is as early in the fall as you can obtain the bulbs. Their roots like to begin growth early. Soil must be moist at that time or roots won't grow, so water artificially if rainfall is inadequate. Bulbs planted too late in dry soil die during the winter. You can select daffodil varieties that bloom early, mid-season and late. Color choices include solid yellow, pure white and several combinations.

Remaining bulbs, such as crocuses and hyacinths, require the same cold treatment in warm regions as tulips and daffodils. As other bulbs, crocuses and hyacinths do better the following year if the leaves are allowed to die back naturally and require the same maintenance practices as tulips and daffodils.

SUMMER COLOR:

After the bulbs of spring have provided early color, it is time to turn your imagination to landscaping ideas that feature annual flowers. When it comes to brightening the area more beautifully with flowers, your imagination is the key. So, let it run a bit wild!

Just think of the many interesting and unusual ways you can use annuals. They can be planted in wooden containers, metal buckets (a good use for pesticide containers after they have been well cleaned and painted), tires, or even an old bath tub! Or you can be a bit more conventional, but no less imaginative, by planting annuals in flower beds, urns, patio or window boxes and in rock gardens.

Usually it is best to plant many of the same type and color annual flowers in one area, because they tend to look prettier in large groups or masses. Look around at what others are doing, especially the most successful local nurseries and arboretums.

There are literally hundreds of different flowers available for your landscape imagination to implement. They come in a wonderfully wide choice of colors, heights and shapes. Use them wisely—and widely—and let your landscaping with annuals add another dimension of beauty to the golf course.

Reliable and important annuals provide a good display of color over a relatively long season, up to six months in many parts of the country. In the northern regions of the United States, it would be difficult to achieve comparable continuity of color with hardy perennials. Since most annuals don't come into their own until late June or early July, it is helpful to precede them with spring bulbs for earlier color.

CULTURAL TIPS FOR ANNUALS:

Sun versus Shade—Although the list of reliable bedding plants is long, nearly all of them perform best in full sun. Fortunately however, there are some plants that require light to moderate shade. These include the impatiens, fiberous and tuberous begonias, coleus, lobelia and exacum. Certain other annuals can be grown in light shade (although they ordinarily perform better in full sun): petunias, alyssum, annual phlox, salvia, snapdragons, verbena, aster, periwinkles and pinks.

Soil Preparation—Although bedding annuals are easy to grow, as with all ornamentals, you should not take any shortcuts in preparing the soil. Spade or cultivate the area deeply, preferably the previous fall, working in generous amounts of organic matter, such as leafmold, peat moss or compost. Leave it rough during the winter. Then till, level, and rake the bed smooth a week before planting. At the same time, incorporate peat moss, fertilizer and lime

SEPTEMBER 1973

as needed. Also provide adequate drainage. Should it be a problem, remedy with tile, channels or by elevating the beds a few inches above the surrounding area.

The chances of success with flowering annuals are far greater if the soil has good physical structure; that is loose, friable, well aerated, with high humus content. Overpulverizing the soil, either by hand or with a rototiller, can destroy soil structure.

Fertilization—There is a bit of truth in the old saying that, "Any soil capable of growing good weeds will also grow good annuals." However, a plant grown in soil that has been properly and judiciously fertilized will grow better flowers.

While adequate amounts of phosphorus (P) and potassium (K) in the soil are essential, "caution" is the word with nitrogen (N). If in doubt, have soil tests made, then plan a fertilizer program accordingly. Many annuals bloom best with rather low amounts of nitrogen in the soil. When excess nitrogen is applied, lush foliage, tall stems, and few flowers will be produced. The soil pH should be near neutral (6.5 - 7.5); therefore, do not apply lime unless needed, as indicated by soil tests.

When cultivating the beds in the spring, incorporate a complete dry fertilizer, such as 5-10-5 or 6-10-4, into the soil. Use $\frac{1}{2}$ to $2\frac{1}{2}$ pounds per 1,000 square feet, depending upon the soil test results. Should the nitrogen level be extremely low, use the larger amount. Later in the spring or early summer, more fertilizer can be applied if the nature of growth indicates a need for it. Or, it may be more convenient to inject a fertilizer solution into the water line, thus fertilizing as you water.

Allowing fertilizer to be carelessly scattered over portions of the flower beds when adjacent

turf areas are fertilized can lead to difficulties. Also, if nitrogen washes into the beds with drainage water from a lawn area that has been recently fertilized, anticipate some effect on the growth of the flowers.

Watering—If there are any real secrets for success in growing annuals, proper watering is certainly one of them. Water should be applied slowly and for a sufficiently long period so that it can penetrate the soil and soak down through the root zone, perhaps 8 to 12 inches. Once this has been accomplished, don't water again until the soil is on the dry side. However, don't wait until you see wilting; wilting never benefited any plant.

Frequent light waterings result in a shallow root structure. In this situation, plants wilt rather quickly on hot, dry days. If insufficient applications of water continue, you needlessly get yourself in a vicious circle that is difficult to break. Plants should have extensive root systems, so they are able to reach the moisture reserve deep down in the soil during periods of drought.

One hears many arguments among flower fanciers about the proper time of day to water. It is true that water loss from evaporation will be greatest during the heat of the day. However, watering during the evening or night may encourage foliar disease. Therefore, watering early enough in the day so that the foliage has an opportunity to dry before nightfull is advisable.

General Maintenance Practices:—Aside from the previous points, annuals require little other care. The young plants should be pinched back shortly after planting. A second pinch is rarely needed. It is generally not necessary to remove the old flower heads, unless they are taken off

The first tee at Bloomfield Hills Country Club, Michigan literally blooms thanks to the efforts of Superintendent Ken Farrer.





To brighten the entrance to Knollwood Club, Lake Forest, III., Superintendent James Bertoni uses tulips with great effect.

because of unsightliness. Some types of annuals may fail to re-bloom satisfactorily unless the seedheads or spikes are removed; the snapdragon is an example.

The petunia is one plant that may require some extra attention. Some varieties tend to become open-centered, rangy or matted down in the summer. When petunias reach this stage, pruning back will rejuvenate them for an improved appearance in late summer and fall. The stems should be cut back 8 to 12 inches from the base. This can be done all at once, or a few stems at a time, so that there is not a drastic disruption of flowering. Surprisingly, in a short time new shoot growth will occur, along with a fine showing of blooms.

Some annuals need support or staking; these include the taller snapdragons, the tall African marigolds, etc.

The aforementioned cultural practices will have to be adapted and modified according to the climatic and geographical area in which the plants are grown.

CHRYSANTHEMUMS FOR A COLORFUL FALL:

Beautiful fall color around the golf course can be successfully achieved by planting chrysanthemums in late spring. Fall mums must be started in May in Northern areas.

Remember, the mums need plenty of sun. Find just the right spot for them, and have

Another area of the Bloomfield Hills Country Club that has been enhanced by the use of flowers.





An attractive border of petunias sets off shrubbing around the club house.

cuttings 4 inches high, with strong stems and 1-inch roots ready to plant.

First, soak each cutting in water five minutes before planting, or until the foliage is firm. Dig a hole one inch deeper and wider than the roots. After cutting has been set, firm the roots by pushing the soil toward the stem. Then water heavily and immediately after planting; also check for wilt on sunny days.

It is advisable that the cuttings be planted 18 to 24 inches apart because the mums will fill in the empty spaces as they grow. Spacing also helps to cut down the danger of spreading leaf diseases, should they occur.

During the summer, water to a depth of 4 inches, but avoid wetting the plants. Should the stems droop, tie the plants loosely to a stake, forming a figure 8 with the string.

Also, unless the branches are pinched, the mums tend to grow straight and tall, with few flowers. Pinching back the growing tips allows other branches to form and this results in a bushier plant. Pinch the growing tip each time it has added four to six inches to the total plant height, but only pinch off one half inch to one inch of the new growth.

Start cultivating the soil during the week after the plants are set out and continue this every week. Be careful not to damage the roots. Should it be difficult to cultivate, use a mulch. Mulch when the soil is moist and all the growing weeds have been removed. Dried grass clippings applied in a 1- or 2-inch layer have been helpful in discouraging weeds.

In order to make the plants look better and to minimize the disease possibility, clip off the faded and old flowers.

To prepare the plants for winter, cut them back three to four inches when the flowers and foliage start turning brown. After the top several inches of soil freezes, apply a straw mulch three to four inches deep.

In the spring, remove half the mulch and loosen the remainder, but don't take the rest of the mulch off until sometime in early May.

If mums are already planted and you want to divide them, early spring is the time to do it. When the growth is about 1½ inches tall, dig up the plant. Shake off moist soil and cut off the side shoots with roots attached to the main clump. Then, replant the separate plants as you would new plants.

To divide the plant by taking cuttings becomes a bit more complicated. Use a soft downstem cutting, which can be taken until mid-July. Cuttings should be rooted in a clean, shallow flat or box with sand and peat moss that is covered with a plastic bag. It takes three to four weeks for cuttings to root by this method.

These suggested cultural practices for mums are general rules to follow and will have to be adapted and modified for your particular part of the country.

JUST A LITTLE PLANNING:

With a little planning before planting, it is possible to have flowers brighten many areas of the golf course throughout most of the playing season in the Northern regions of the country. In the Southern and warmer sections, continual color can also be achieved year around by selecting appropriate plant materials. Brighten your life a little!