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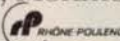


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PLANT SELECTION:

COORDINATING ANNUALS

Nothing says summer more than picnics, baseball games and beds of colorful annual flowers. There are many considerations to be made when designing an annual flower bed—location, color and color harmony, plant height, contour of the bed, style, shape of the plant, flower and leaf texture, and ac-

cents. In addition to all of these, plant selection is critical. If you don't choose annuals suitable to your growing conditions, all of your design efforts will be for naught.

Dry as a desert

Even if Mother Nature doesn't cooperate with much rain and

there is no irrigation system to work with, annuals can still color up the landscape provided you choose the right types. For a touch of blue in a low growing plant suitable for massed beds, rock gardens or as an edging to larger plants, select the tiny and fluffy-flowered ageratum. One of the best annuals for ease of



Celosia (pictured above) adds a burst of color to this bed at Mt. Airy in the Pennsylvania Poconos. **Ageratum** (right) is known for ease of maintenance and will bloom non-stop without having its faded flowers removed.

WITH FLOWER BED DESIGN

maintenance, ageratium will bloom non-stop in sun or light shade without having to have its faded flowers removed. It is an excellent complement to another drought tolerant annual, the zinnia, which is available in almost any color of the rainbow except true blue.

Zinnias are a world unto them-

selves. There are single, double, cactus and pom-pom flowers available in solid, multi or zoned colors that bloom in full sun from early summer through frost. Faded flowers will need to be removed, however, to keep bloom at its maximum; clip stems as blooms open and zinnias make perfect and long

lasting cut flowers. Different varieties of zinnias grow anywhere from six inches to 3½-feet tall, so are useful as edgings, in massed beds, or as screens, hedges and backgrounds.

One precaution must be taken when thinking of zinnias: make sure the location being considered has good circulation as zinnias are very susceptible to powdery mildew. A spritz of Tersan 9991 onto the zinnias when the turf is being treated will assist in alleviating this problem.

Think of dry, sandy soil and one annual immediately springs to mind—the petunia. Select the large flowered grandiflora or the smaller (but more of them) flowered floribunda petunia for an easy to grow massed or edging effect. Where conditions of poor and alkaline soil also exist, choose single rather than double flowered varieties, and if your weather conditions are extremely adverse, take the multifloras over the grandifloras.

About the only maintenance a petunia will need is a cutting back after the first flush of flowers fade to induce a heavy second flowering and forestall leggy plants.

An excellent companion to petunias is the heat-resistant verbena. Its colors cover the rainbow, so it is easy to choose a variety to complement one of the many solids, stripes or picotees of the petunia. A relatively new variety of verbena called "Sangria" is a deep wine red and a good choice for dry spots with red, white or blue petunias. Verbena can also be effectively used alone in beds, borders or rock gardens, especially where soil is poor.

For a touch of the bizarre and a bolt of strong color in a dry location, the celosia is the answer. Available in either plumed or crested varieties, celosia withstands poor soil and has a variety of uses in annual beds. Use celosia with care and discretion due to its bright colors and don't plant it outside until spring weather is reliably stable or it will bolt to seed and not bloom.

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The long, hot summer

Heat resistance in annuals is a particular problem in the South and the Midwest and is something plant breeders are trying hard to build into new varieties. You would not want to select geraniums or marigolds, for examples, where summers are especially hot. Where these conditions exist, two annuals are perfect if you need a tall (4 to 6 feet) plant for sunny hedges, screening or backgrounds, and both also do well in dry and poor soils.

These are the cosmos and the spider flower (*Cleome*). In their foreground, plant the daisy-flowered gazania, especially the attractive golden variety "Marguerite" with its contrasting black eye, or the multi-colored portulaca, which can also double as a ground cover, border or massing plant. Both of these annuals have something else in common—their flowers close up at night or on cloudy days.

Kochia is another annual that is useful as a hedge and background that tolerates extreme heat and dry soil, but it is rather nondescript until fall when its lacy foliage turns brilliant red. Flowers are all but invisible.

Although most plants that tolerate heat are also drought resistant, salvia is not, requiring a rich, moist soil. Used as an edging, massing or background plant, salvia has spikes of red, white or purple that do equally well in full sun or part shade. Use red salvia with caution as too much of it will be distracting to the overall design.

Situation normal

Where flower beds are "normal", regularly watered and fertile, one of the favorite annual choices is the marigold. Shades of cream, yellow, orange, bronze and red cover plants anywhere from six inches to three feet high from early summer to frost, especially if faded flowers are picked off. Don't be surprised if the tall "African" marigolds don't bloom until late summer, for they are photoperiodic and need short nights. It would be best to pick another annual than African marigold as a background to a marigold planting for season-

long bloom.

The fragrant white, pink and purple blooms of the sweet alyssum are a good selection for edging marigold beds and have the same soil, light and water requirements. They're better than marigolds in one respect—faded flowers fall off cleanly and don't need to be removed manually.

The flowering tobacco (*nicotiana*), especially the recently introduced "Nicki" series that comes in a variety of colors, fits well in massed beds or borders in sun or light shade where watering is a regular activity as it prefers moist soil. *Nicotiana* grows easily from seed that drops from the flower; if you're lucky some of these plants will live through the winter and give you a head start on next year's flowers.

If you can provide frequent watering and fertilizing, deadheading of faded flowers and enjoy full sun, warm days and cool nights, geraniums can be used effectively. They're often best left for container accents, although some of the new hybrid types grown from seed make effective bedding plants.

In the shade

Shade is a problem in many landscape situations with dense and mature trees and large buildings, but is one successfully overcome with the right choice of annuals.

Wax begonias in tones of white, pink or red are about the best of the shade annuals because they are more drought tolerant than the others. Their neat, mounded appearance is desirable in formal borders and beds.

The impatiens is one of the favorite shade annuals for its ease of care. Where soil is dry or sun hits the beds for long periods of time, impatiens will need watering to prevent wilt. Be cautious when choosing impatiens varieties as there are some with strong orange, coral or fuchsia hues that do not blend well with other colors. Not well known but nevertheless useful is vinca (*periwinkle*), not to be confused with the perennial ground cover of the same name. Flowers of pink, white or violet are often highlighted with a contrasting red eye.

The three favorite flowering shade annuals share common characteristics: all will tolerate some sun; all prefer a rich soil kept moist; and all have flowers that do not have to be removed as they fade, therefore lowering maintenance.

For something different in the darker shaded areas, try the bright foliage markings and variegations of coleus. As flower spikes form in late summer, they should be pinched off to keep the plant from going to seed and dying.

Where summers are cool

Dwellers of the Pacific Northwest and mountain tops across the country have to look to a different series of plants for their annual beds. By the same token, those plants that prefer cool temperatures will not grow in the rest of the country with the exception of using them in the south as winter, spring and fall plants.

Some of the best known and easy to grow of the cool-temperature annuals are:

annual chrysanthemum, with many colored daisy-like flowers, often with contrasting eyes or bands.

members of the *Dianthus* family (Sweet William, pinks and carnations), although breeders are developing heat resistant types.

nierembergia or cup flower, a ground cover of startling blue or violet with a yellow center. "Purple Robe" is an outstanding variety.

the petunia-like, heavily veined and brightly colored *salpiglossis*. *linaria*, Rocky Mountain garland, African daisy, *calendula*, stock and monkey flower.

Select carefully

No flower bed design, no matter how carefully plants are selected for height, shape, texture, contrast and color, will be worth the paper it's drawn on if the annuals will not perform under your specific conditions. For more information about plants for your area, contact your seed supplier, bedding plant grower or Cooperative Extension agent.

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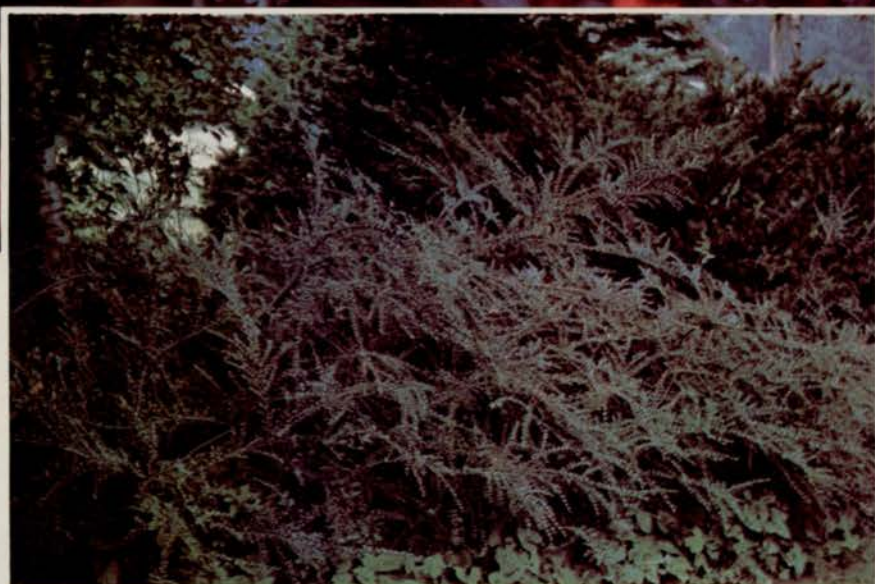
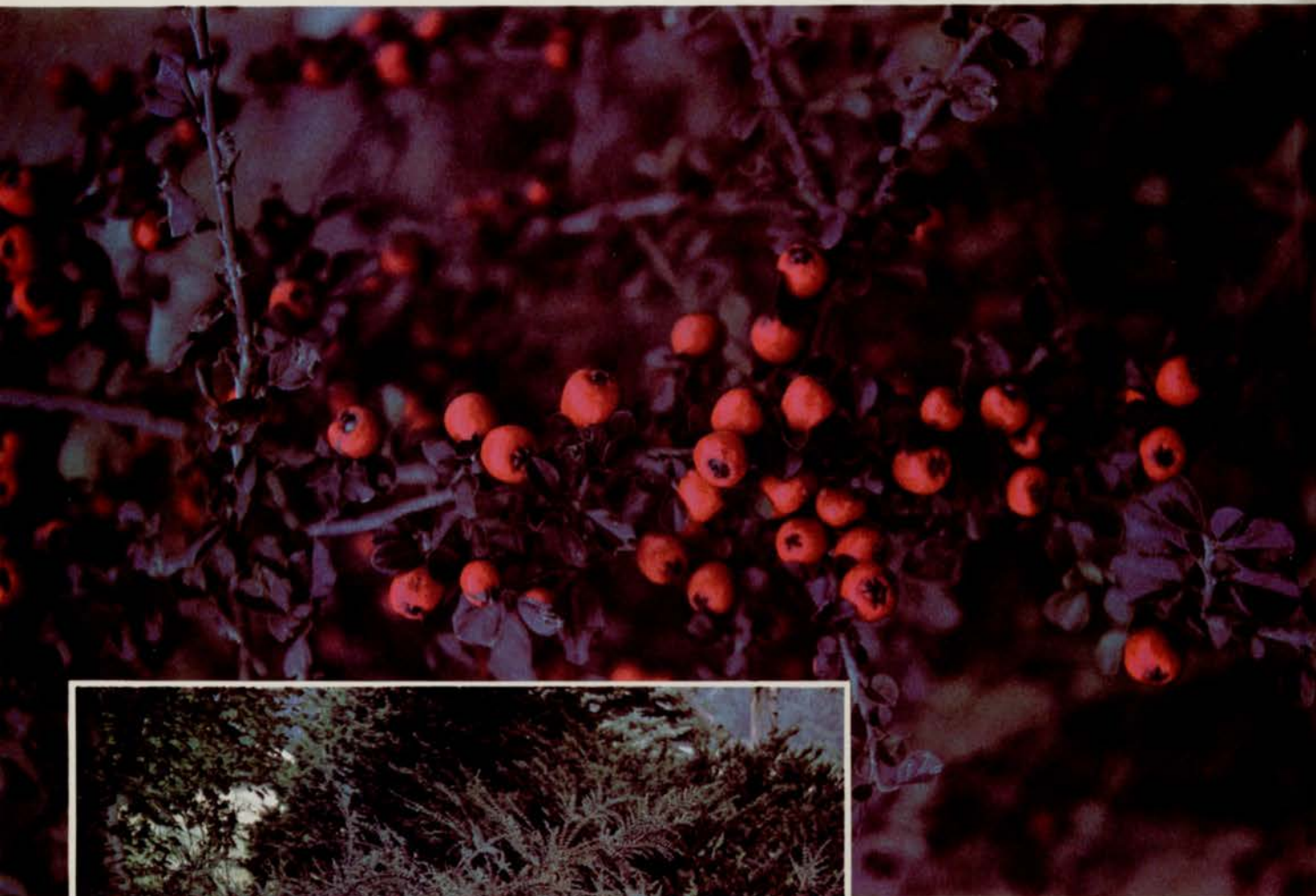
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DENSE AND SHOWY, COTONEASTERS MAKE A GOOD CHOICE

BY DOUGLAS CHAPMAN



Cotoneaster apiculata (top photo) is an outstanding ground cover with dark glossy green summer foliage becoming a reddish maroon in the fall. **Rockspray Cotoneaster** (bottom photo) spreads in a fishbone pattern and is well-suited for rock gardens and home landscape.

Cotoneaster is THE shrub of the Rosaceae family with exciting leaf color, yet obscure blossoms. Cotoneasters are native to Asia, specifically China and the Himalayas (Nepal). It should be noted that none are native to North America. Cotoneaster's outstanding qualities

Continues on page 40

Douglas Chapman is a horticulturist at Dow Gardens, Midland, MI.



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Answer: D-z-n Diazinon controls all twenty-three insects seen here.

include rich green foliage, outstanding fall leaf color, showy fruit, and unique habits of growth. When considering hardiness for the Midwest or Northeast, four cotoneaster species are outstanding. They include *Cotoneaster apiculata*, *C. horizontalis*, *C. divaricata*, and *C. zabelii*.

Cranberry Cotoneaster (*C. apiculata*) has an irregular mounding habit; becoming dense, almost impenetrable to foot traffic. It is an outstanding ground cover, being low and wide spreading with an ultimate width of three feet and spread of 6 to 8 feet. This mounding on itself is unique to this species. Cranberry Cotoneaster has a rather rapid rate of growth if adequate fertilizer and water are provided. It thrives in well-drained soils and establishes very rapidly. It is unique in that it continues to grow throughout the summer months as long as it receives adequate water and fertilizer (a useful fact in the container production of *C. apiculata*). The summer foliage is a dark glossy green, becoming a reddish maroon in the fall. The round leaf is about 1/2- to 3/4-in. across, a truly beautiful detail. The pink flowers that appear in late May through early June are extremely small and

The profusely produced brilliant fruit is relatively large and . . . extremely showy. Cranberry Cotoneaster has an irregular mounding habit; becoming dense, almost impenetrable to foot traffic.

not too effective. The profusely produced brilliant red fruit is relatively large and, in fact, considerably larger than *C. horizontalis* and extremely showy. The main insect problem of *C. apiculata* is aphids during mid-summer with mites also building up during periods of hot dry weather. Of the ground covers, *C. apiculata* seems most resistant to Fireblight.

Rockspray Cotoneaster (*C. horizontalis*) is a slow growing,

spreading ground cover, reaching two feet in height with a spread of five feet. The branches off the main stem are in a fishbone pattern, being perpendicular to the main stem and usually in one plane. Rockspray Cotoneaster is considerably slower growing, has a smaller leaf, and smaller pink flowers than Cranberry Cotoneaster. Further, it establishes more slowly, yet is more suited to rock gardens and individual home landscapes whereas Cranberry Cotoneaster is exciting in mass plantings, whether foundation or large commercial landscapes. Rockspray Cotoneaster can be planted in mass and eventually will become a barrier to foot traffic. There are many cultivars available. Dirr suggests that 'Little Gem' and 'Tom Thumb' (which may, in fact, be the same plant) are outstanding, dwarf, broadly-mounded, fine-textured, and extremely slow-growing. Hillier, on the other hand, suggests that *C. horizontalis*' 'Variegata,' a plant with the edges of the leaves being creamy white contrasted against the vivid green, is especially exciting and pleasing during the fall months with the white variegation contrasting with a dull red fall leaf color. These two cultivars are worth looking for in the trade and for landscape use.

Spreading Cotoneaster (*C. divaricata*) is one of the largest, most open forms, ranging 5 to 6 feet in height with an equal spread. It establishes quite rapidly after transplanting. Its texture is relatively fine. The leaves are a good, dark glossy green in summer with outstanding fall color, ranging from yellow to a deep glossy maroon. It holds its leaves so late in the fall that it can almost be considered a semi-evergreen. The rose-pink colored flowers are small and not effective. They are usually borne singularly or in units of three during late May through mid-June. The fruit are a medium to dark red which usually develop color in September that is effective through November. The individual rounded pome fruits are 1/4-in. wide. In the landscape *C. divaricata* can form an exciting mass planting, border planting for home or commercial landscapes, and an outstanding formal hedge. Of all

the cotoneasters, *C. divaricata* seems to be most insect and disease resistant with *C. apiculata*, *C. zabelii*, and, lastly, *C. horizontalis* in descending order.

Cherryberry Cotoneaster (*C. zabelii*) has been reported by Chadwick to be one of the truly outstanding cotoneaster types. It is native to Central China. It has a rather upright habit, reaching six

Spreading Cotoneaster is one of the largest, most open forms, ranging 5 to 6 feet in height with an equal spread. It establishes quite rapidly after transplanting.

feet in height. The pinkish flowers are borne in clusters of 3 to 9. The summer foliage, again, is a dark green with fall color being generally yellow. The bright red fruit are borne in multiple clusters and contrast well with the fall foliage color. Cherryberry Cotoneaster does have some problems with mites and aphids. It is good when used in large area or commercial landscapes in mass plantings or as single specimens.

The cotoneasters are good as specimens or in mass plantings. Rockspray and Cranberry Cotoneasters, the ground cover types, are both small, providing almost impenetrable barriers to foot traffic. Certainly *C. apiculata* has to be considered the outstanding species, due to its rapid rate of establishment and growth, abundant fruit, habit of growth, and (except for aphids) is relatively pest free. Cotoneaster, like most plants in the Rosaceae family prefers full sun and well-drained soils. Of the upright types, *C. divaricata* is the most maintenance-free and shows reasonable resistance to Fireblight while not affected catastrophically by aphids or mites. These Asian imports fill an important niche for many plantings due to their dense habit, outstanding summer leaves, fruit, and generally good fall color.

WTT