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**SOME HARDY FLOWERS FOR SOUTHWESTERN
GARDENS.**

It is the common lot of home-builders in new countries to meet with failure in their earlier attempts to grow the less hardy and less enduring plants, including flowers and similar ornamentals. This has been particularly true in the Southwest where climatic factors are a severe test for any but native species or hardy introduced ones. After no little experience and observation in the growing of such plants, the writer has prepared this article in the hope that it may be of some help to those desiring to beautify their surroundings, if this may be done without too great an outlay of time and money. It is, of course, to be granted that winning bread and providing shelter is always of first importance to a family, but after these and other necessary things are assured, there comes a longing on the part of most of us for more pleasant environments, including the association of flowers, shrubs, and trees. The lack of these very things or the failure to realize them with reasonable effort, is often responsible for discontentment and dissatisfaction among rural dwellers in new communities, and their consequent removal to other untried lands to begin over again. How often has the farmer's wife amidst her solitude and too often desolate surroundings complained of the difficulty of getting a few plants to grow about the home!

In presenting what follows, it is with the assurance that the plants suggested are hardy, and ordinarily can be depended upon, except in

instances noted to grow with moderate care. Many of them are flowers that grew in the gardens of our forefathers and hence are hardy throughout the country, being as valuable for the East and North as for the Southwest. Next to the picture of desolation and indifference portrayed by a home with no attempts at ornamental planting of any kind is one set with a lot of half dead, chlorotic plants keenly depicting failure and disappointment. Such plants speak poorly for a country, and are a source of constant annoyance to the planter. Better a group of homely, rugged native varieties than a collection of sickly sun scorched roses or a bed of old fashioned zinnias to one of lilies, if the roses and lilies cannot be grown to moderate perfection without undue effort.

Climate versus plant varieties. A lack of appreciation of the differences between our winter and spring and our summer growing seasons is responsible for the failure of many plants, particularly flowers, to make any growth whatever when planted. Too often we are sowing sweet peas and poppy seeds when we should be planting petunias and zinnias. Some of us endeavor to grow the same varieties of flowers here in the summer season that we did in the States farther north and east and in this we almost invariably fail. The experienced Southwestern truck gardener, with his acre of rich valley soil, knows too well not to waste time trying to grow such vegetables as onions, peas and spinach during our extreme summer heat, though these conditions are perfect for beans, squashes and sweet potatoes. The current statement of some years ago that the city bred man is as much at home on a ranch in the Southwest as the experienced Eastern farmer contains some truth and is only another way of saying the same thing.

In a previous publication the writer pointed out that species growing remarkably well during our winter and spring months are seldom able to make any headway in the summer season. In fact, such plants usually die at the beginning of the hot, dry fore summer, or at least cease growth and production of flowers and seeds, even with moderate irrigation. Witness for example, the fruitless attempts at our lower altitudes to grow sweet peas, ten weeks stock candytuft, crimson flax or even California poppies in the summer. And the reverse is likewise true for such varieties as flourish during the hot weather. Seldom do they make any growth worthy of note in the winter season and usually they are not at all in evidence, having been cut down by the frosts of late fall.

Winter and spring bloomers. As concerns annual flowers for late winter and spring blossoming it is true in general that varieties listed in seed catalogues as hardy annuals are the ones most certain to

almost wherever planted and thriving in both poor and rich soil and in shade and sunlight

Varieties for summer and fall blooming On account of heat and aridity only the hardiest garden plants will grow through the summer season with any degree of success and even these require frequent or moderate irrigation. Of the annuals the following have been found to be the most successful: zinnias, globe amaranth, prince's feather, cockscomb, hyacinth and scarlet runner beans, golden feather, summer chrysanthemums, cosmos, China asters, four-o'clock, or marvel of Peru, castor beans, garden sunflower, balsam apple (*Lit-mordica*), cypress vine and the various morning glories including scarlet, blue and purple flowered varieties, also Japanese morning glory and the moon flower. The seeds of the above should be sown by the middle of April, and preferably two weeks earlier in order to give the young plants a good start before the beginning of the hot weather.

Of the above China asters and cosmos are the most desirable for cut flowers, while for color and display zinnias, globe amaranths, and four o'clocks rank among the first. China asters, summer chrysanthemums, golden feather, cosmos, castor beans, and the morning glories are least resistant to drought and should be watered twice a week during the drier parts of the summer; the others are robust, deep rooting plants succeeding with ordinary care, i. e., irrigation once a week or thereabouts. Morning glories are very much at home in this country and may be sown any time from April to August. As herbaceous climbers they have few equals. They range from low bloomers with scarlet or sky blue flowers to the tall climbing moonflower. There are at least six native morning glories in Arizona in addition to the introduced ones mentioned. Balsam apple is a rapid growing neat appearing vine of the gourd family with delicate green leaves and orange fruits. The castor bean, like other rapacious growers and heavy feeders, requires deep, rich soil and frequent irrigation.

Among the hardier of the rather few perennial summer and fall bloomers that grow successfully at our lower altitudes, are cannas, chrysanthemums, yellow, white, orange, and rose colored lantanas, madra vine, the native golden columbine, white and rose fairy lilies (*Zephyranthes*), and the so called crown imperial (*Crimum amabile*), besides asparagus and lavender. Cannas are among the plants par excellence for display. Without fail, they should be re set each year in early spring. Together with chrysanthemums and the crown imperial, cannas require good culture and frequent irrigation; otherwise it were best not to try to grow such plants. Columbines succeed

There are a few perennial species blossoming in winter and early spring that should be planted at the same time as the annual flowers just noted. Of these the well-known sweet or English violet is one of the most satisfactory. Besides blossoming freely during the winter, with moderate watering it remains green throughout the year, and even if allowed to go unirrigated two or three months in the summer a fresh growth starts up in the early fall, from the underground stems. Violets should be re-set about every second year to keep the roots from becoming too matted, and also to renew the soil. The usual custom of planting winter growing plants like the sweet violet in the springtime is not good, as such newly-set plants require constant watering throughout the summer to keep them from dying. Far better it is to set them in the fall just as growth begins naturally. This is a safe rule to follow with all plants.

The various kinds of *Narcissus* furnish excellent cut flowers for winter and early spring, though they are often shy bloomers. The more common of these are the Chinese sacred lily, poets' narcissus, trumpet narcissus, paper white narcissus, common daffodils, and jonquils, though several others of the group do equally well. September and October are also good months to set out such other bulbous plants as the star of Bethlehem, Roman hyacinths, the several varieties of oxalis, and the Asiatic ranunculus. The latter furnishes an abundance of bright-colored, daisy-like flowers in the spring, being considerably grown in the Salt River Valley. Irises represent another group of valuable spring bloomers. The German iris is planted more than any other, and always with good results. A clump of these plants is a feature in any spring landscape. Though remarkably tolerant to arid conditions the German iris does best in deep soil with an abundance of moisture. A somewhat similar though less showy plant, is the sweet flag iris (*Iris pseudacorus*), quite common about Phoenix. The little Spanish iris (*Iris xiphium*) also does well here. Bulbous species like the above, and perennials in general need little attention when once established, but continue flowering in season year after year. For this reason they are more economical in the long run than annuals which need re-sowing, though the latter make a quick showing which is always desirable on new grounds.

Carnations, verbenas, and periwinkle or trailing myrtle, likewise are best planted in the early fall. Carnations in particular, should be given a moderately well enriched, sandy loam. These and verbenas are nearly continuous bloomers with us, while the varieties of periwinkle are evergreen trailers, with blue bell-shaped flowers appearing in the spring. Periwinkle is a general purpose plant, growing

thrive during our cooler temperatures. This group is made up largely of such well-known plants as mignonette, candytuft, sweet alvssum, sweet peas, sweet sultan, ten-weeks stock, snap dragon, pot marigold, common parsley, annual or rocket larkspur, and corn and opium poppies. To these may be added also the equally hardy *Arctotis grandis*, crimson flax, perennial flax, blue lupine, annual phlox, Mexican evening primrose, California poppy, and the gaillardias, the last six of which are indigenous to the Southwest. Along with these should be planted for spring and early summer flowering the biennial foxglove, Canterbury bells, and the ever-present and hardy hollyhock.

Seeds of the above plants may be sown any time in September or early October in ordinary, well-prepared garden soil. When sown in September the young plants grow to some size by late fall, and are less subject to injury from birds and grasshoppers. The plants require only moderate irrigation during much of their growing season by virtue of moderate temperatures, and of the winter rainfall which at times is sufficient to supplement a considerable part of the watering. With a few exceptions including the biennial species, the growth of these varieties is at an end by the middle of May when the hot weather sets in, after which most of us have little inclination to look after beds of flowers, while still others seek cooler climates. These winter and spring growing plants are accordingly well suited to our country and with the perennial species to be noted next should come to be widely grown. It is to them that we must look for cut flowers and diversity of color during our festive winter seasons when the landscapes in other countries are bleak and sere. During their season of growth they may be seen in profusion on the University campus at Tucson, and the Capitol grounds at Phoenix, where no little attention has been given to them.

In addition to Canterbury bells, foxgloves, hollyhocks, and gaillardias, certain of the annuals, as phlox and larkspur, will continue, with cultivation and frequent watering, to blossom well into the summer season. No other of our winter growing plants supply so many flowers for cutting, nor so wide a range of color as the sweet pea. They should be given deep, rich soil and moderate irrigation, the latter in particular, after the first flower buds appear. Excellent results follow planting them in trenches a few inches below the level of the ground, and gradually filling these in with soil and rotted material as the plants get some size. This insures deep rooting during the dry spring, with the result that the flowers continue of good quality for a much longer time.

only with partial shade and abundant moisture, while espargus and lavender are among the hardest of the list. When once established, fairy lilies need no further attention, and altogether are very satisfactory plants. Their lily like flowers appear from June to October. Lantanas are unexcelled for southwestern planting, being continuous and profuse bloomers, though they should be cut back and given some protection during the winter season. The above perennials should be set out in the early spring—the earlier the better.

Varieties for growing at higher altitudes. Between altitudes of 3,500 and 5,000 feet, or where the lower winter temperatures approach zero, the hardy annuals are sown to best advantage in early spring, *i. e.*, after severe freezing weather is over, while tenderer varieties should not be sown until danger from frost is past. Perennials of whatever class are set out just previous to the time that they ordinarily begin growth, be that fall or spring. With these slight differences in planting due to the cooler spring time all the varieties noted heretofore can be grown successfully at these altitudes.

At higher mountain elevations, as for example, Flagstaff where there is but one well defined growing season, spring planting is the rule. The conditions of growth are simpler here than elsewhere, approximating in a measure those of the prairie States to the northeast. As would be expected hardy annuals succeed best at these altitudes since the growing seasons are invariably cool, though robust summer growers like zinnias do well. On the other hand, such varieties as cosmos, chrysanthemums, canna, and castor beans are often frozen back in early September a short time after beginning to flower. In a variety flower garden in Flagstaff the writer noted growing very luxuriantly the following plants: hollyhocks, sweet peas, sweet alyssum, candytuft, mignonette, snap dragon, foxglove, pot marigold, French marigold, China asters, Canterbury bells, sweet sultan, bachelor's buttons, coreopsis, gaillardias, corn, opium, and California poppies, petunias, annual phlox, nasturtiums and morning glories, besides a goodly number of perennials. It is interesting to note that such perennial flowers as bouncing Bet, sweet William, grass and bunch pinks, Shasta daisies, phlox, larkspur, golden glow, dahlias, costmary or rosemary, tansy, gladiolus, and day lilies, together with blue grass and white clover appear entirely at home with the cool, moist growing season of the higher elevations, while at the lower altitudes with great heat and aridity the growth of most of these plants is practically impossible without adequate protection.

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