

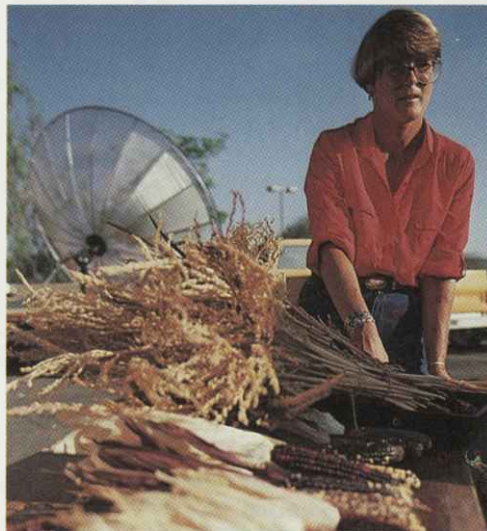
TAMING DESERT

Wildflowers

Chere Crandall trained as a plant geneticist, but today she's growing desert wildflowers for seeds and all kinds of plants for dried arrangements. Most of the time she's out selling what she grows—too much of the time, as far as she's concerned.

For the past two years Chere has had her own company, Prima Seed Research, Inc., Phoenix. Although genetic research is her ultimate goal, right now she restricts herself to carefully observing the cultural requirements of her ten-acre crop of wildflowers. To get her business established, Chere has to concentrate on financial matters. She comments wryly that she has to spend so much time selling that she doesn't have enough time for research. Eventually, however, she wants to produce wildflowers with easily-harvested seeds so they will be more acceptable to other commercial growers.

People who don't pay much attention to desert plants mistakenly believe that desert wildflowers only bloom those occasional years when the growing conditions have been ideal (years with sufficient autumn rainfall and perfect temperatures for germinating an abundant number of seeds). Chere knows they're out there other years too—you just have to look harder. She says that people who haven't seen Arizona's wildflowers during an especially colorful spring display have no idea of their full beauty. To make native desert wildflowers more readily available, Chere



has put together an Arizona wildflower seed mixture that may contain desert marigold, sand verbena, Mexican gold poppy, California poppy, desert lupine, arroyo lupine, Indian blanket flower, desert bluebells, owl's clover, desert senna, and bladderpod—all annuals.

Chere sells most of her seed mix—especially formulated for the Sonoran Desert—to larger seed companies, which often resell them to agencies such as the Highway Division of the Arizona Department of Transportation. Most of the seeds are sowed along roadsides and used for desert revegetation. She also sells to individuals—those who are lucky enough to find her at the occasional swap meet or crafts show she attends. But if you call and leave a request on her telephone answering machine (893-9359), you may be able to buy them directly from her—if she still has a supply.

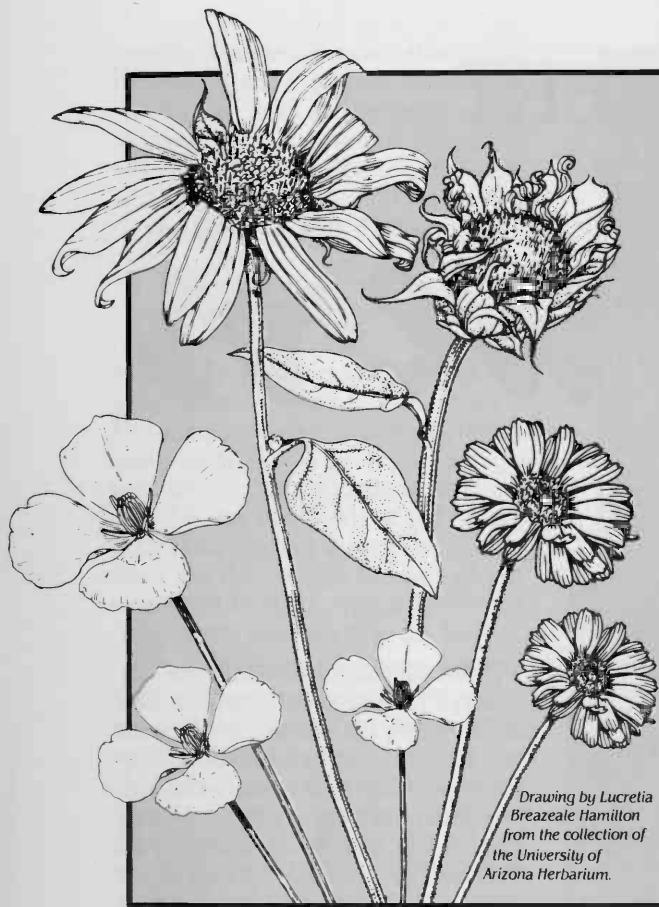
To be successful at wildflower gardening, Chere suggests that gardeners should follow her planting instructions (see insert) and learn to recognize wildflower seedlings so they can weed their wildflower gardens as they would any other flower bed. Their efforts will be rewarded by stunning displays of yellow, orange, purple, blue, and hot-pink blooms.

Right now Chere is Arizona's only commercial grower of wildflowers for seed. Clean desert wildflower seed—uncontaminated by other wildflower or weed seeds—brings a high price in Arizona because the supply is limited and because growing desert wildflowers is far from simple. Before other growers will be interested, a mechanical harvester will have to be available. Before a mechanical harvester will work, plants with seeds that are less-susceptible to scattering will have to be developed.

Growing clean seed is no easy task. "The labor will kill you," Chere warns. All her work is done by hand—the planting, weeding, harvesting, and seed threshing.

Since Chere rents her land year by year, she doesn't want to risk losing her entire crop should she lose her lease. She gathers all the seeds each year as they ripen—something homeowners and the highway department wouldn't have to do. But by replanting the annuals every year, she also assures herself of a dense and abundant crop.

Knowing the right cultural practices for each wildflower is essential—and



Drawing by Lucretia Breazeale Hamilton from the collection of the University of Arizona Herbarium.

Chere Crandall's Tips for Growing Desert Wildflowers

- Prepare the soil by removing existing weeds and grasses. Perennial weeds should be killed with glyphosate herbicide prior to seeding.
- Till the soil six- to eight-inches deep prior to planting to enhance root development, produce larger and healthier plants, and decrease the amount of water needed to maintain plants during the growing season.
- After tilling, break up the remaining clods and rake the area to produce a smooth seedbed.
- Mix the seed with sand or dry soil to aid in dispersing it evenly over a large area. Broadcast the seed and sand mixture thinly and evenly over the bare soil. Rake the area lightly until the seed is lightly covered and press it into the soil by foot or with a heavy roller. Firming the soil helps retain the moisture

for longer periods of time prior to germination and may be done after the soil has been lightly moistened with a sprinkler.

- Keep the soil moist but not overly wet until seedlings are one-half inch tall, then water as needed to prevent wilting. Watering plants after the wildflower stand is established is not necessary, but may extend the bloom and produce larger plants during drought conditions. Never water the plants until they show signs of wilt. Over-watering may cause root rot.
- Once the stand of flowers is established, the plants will naturally reseed the area for many years of beauty and enjoyment. If planted into a totally undisturbed desert area, the wildflowers should not have too much competition from weeds. Otherwise, frequent weeding may be necessary.

sometimes frustrating. For example, nowhere in the literature did it say that owl's clover was a parasite. Chere kept weeding her carefully planted owl's clover—and it kept dying, until she realized that the clover needed weeds to grow on. Owl's clover feeds from below; it doesn't choke out or wind around the host weed, which made recognizing it as a parasite difficult.

All other commercial sellers of desert wildflower seeds gather them from plants growing wild, which is difficult because wildflowers are often scarce. Chere doesn't think that picking seed will endanger the species because, as she points out, "desert wildflower seeds scatter very easily, so no one will succeed in gathering them all; some will reseed in the desert." However, she warns the casual seed gatherers that the wildflowers they see growing along the side of the highway were probably planted by the Highway Division. It's illegal to pick those flowers without a permit.

Coneflowers, yarrow, bachelor's-buttons, strawflowers, statice, baby's-

breath, globe amaranth, and lavender, grown for use in dried-flower bouquets and potpourris, brighten row after row of her ten-acre plot. Last year Chere added baby blue Indian corn and black-bearded wheat to her collection. The corn provides three salable crops for dry flower arrangements in one plant: tiny ears, corn tassels, and corn stalks.

Statice is another versatile crop; Chere believes in getting the maximum use out of it. She sells the statice fresh and as a dried flower. Once she has harvested the seed for next year's planting, she packages the rest of the blossoms in potpourris. And strawflowers, once harvested just for seed, now also go into potpourris.

Chere sells dried flowers wherever she can. At least one wholesale florist has expressed an interest in buying them but Chere wasn't sure she had a stable enough supply to get into that market. Right now she has to concentrate so much on marketing that she doesn't have enough time for the field-work. "Last year I spent so much time selling, I lost some of my fall seed crop.

Screwed up my whole year," she says sadly.

Of all the people interested in growing wildflowers, dried flowers, and herbs, Chere has come closest to making a living at it, says Fred Harper, UA Extension agricultural agent in Maricopa County. She did graduate studies at the University of Arizona with plant breeder Tom Ramage, with whom she did her doctoral research on plantago (Indian wheatgrass). The newly formed Arizona Herb Association, which Fred helped form, is working to develop a network of markets that may provide Chere with the assistance she is seeking. *(For more information about the association, contact Fred at 255-4456.)*

"One person, trying to make a go of it alone, flounders," Fred says. But, he quotes from a United States Department of Agriculture task force report emphasizing the importance of the various forms of alternative agriculture: "Significant opportunities exist for new farm and forest products to meet real market needs—particularly in industrial, non-food application areas." 