

TEXAS HIGHWAYS--TYLER ROSE INDUSTRY--MALLORY

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TYLER BEAUTIES

Roses for a sweetheart, fresh-cut from a Texas garden...or from a garden anywhere in the country. Chances are good, those colorful objects of affection came from bushes grown or processed around Tyler, the self-proclaimed "Rose Capital of America."

From Smith County's sandy fields spring roses of all kinds: Hybrid tea roses grow large, single-stemmed blooms, like the award-winning red and white "Double Delight," or the yellow and pink classic, "Peace." Floribunda roses, with their clustered blossoms, sprinkle unusual hues across the rolling landscape--deep lilac from the fragrant "Angel Face," glowing orange from "Amber Queen," and subtle beige from "French Lace." Climbing roses cascade in a riot of colors. Miniature roses tell our senses, "Think small." And antique roses fill the air with their ageless perfume.

Come mid-October, Tyler promotes its proud petals during the annual Texas Rose Festival. And, year-round, the elaborate new Rose Museum and the rambling Rose Garden (among the nation's finest) salute one of the area's oldest agribusinesses.

Local rose growers, while glad for the recognition, nevertheless take all the fuss in stride. For generations they've known, as sure as autumn brings a change in the weather, the hometown hoopla of October signals the coming of the rose harvest and the start of another cycle of hard work...work which long-time rose growers consider not only a livelihood, but a labor of love.

Explains Sam Goldwater of Lone Star Rose Nursery: "Enough thorns stick you that it becomes part of your blood."

Thorny circumstances at the turn of the century prodded local farmers into the rose business in the first place.

Before the Civil War many settlers brought with them prized rose bushes to transplant in their new East Texas wilderness homes. Family records suggest Tyler-area nurseryman Matthew Shamburger grew and sold rose bushes as early as the 1840s. Most early nurseries, however, depended on fruit trees, particularly peaches. When an insect called San Jose Scale devastated peach crops after 1900, farmers had to scramble. Many turned to roses.

They already knew roses thrived in their slightly acidic deep sandy fields. Growing conditions, in fact, proved ideal--ample rain and sunshine, plus winters mild enough to promote growth but cold enough to insure proper dormancy.

Independently, veteran nurserymen G.A. McKee and Sam B. Ford adapted peach budding, or grafting, techniques to roses. By budding different varieties of roses onto the root system of a reliable, hardy understock, early growers created a specialized industry that could produce blooms in a rainbow of colors.

By the Twenties, increasing numbers of growers produced millions of rose bushes. Eager to improve quality, they supported research, first at the Texas Agricultural Extension Station in Tyler and, later, by forming the Texas Rose Research Foundation, led by plant pathologist Dr. Eldon W. Lyle. At 85, Dr. Lyle, affectionately known as "Tyler's Rose Doctor," still pursues rose research from his backyard garden.

During the Thirties and Forties, Dr. Lyle led the development of fungicides to combat lethal rose diseases (especially black spot fungus) and introduced the budding, testing, and refrigerated storage techniques that form the basis of today's industry.

As U.S. suburbs sprawled during the Fifties, Sixties, and Seventies (resulting in a massive demand for landscaping plants), the Tyler rose business boomed. During that

heyday, Smith County produced more field-grown rose bushes than any other place on earth.

Today, some 30 area nurseries still use time-tested techniques on about 800 acres, producing almost nine million commercial bushes a year (approximately one-fifth of the U.S. market), according to figures from the Texas Department of Agriculture and TU Electric's Agricultural Survey. Tyler rose bushes sell at nurseries and garden centers throughout North America and abroad.

"Roses grown here are better quality," boasts Dr. Lyle, "because we spray for blackspot and our weather makes the bushes more winter hardy, an important factor for gardens in cold climates."

Favorable climate and soil conditions also mean Tyler growers need only two years (rather than three in some areas) to grow a bush for sale, says Larry Burks of Co-Operative Rose Growers (CR), a processing and marketing facility just north of Tyler.

"The hard part for people to understand about commercial rose growing is that several parallel activities go on at once," he adds. "You have three crops in the ground at the same time--one just planted, one budded, and one being harvested and then held in cold storage until shipped to market."

From late fall to early winter, these tandem operations keep rose growers hopping. To propagate hundreds of varieties of roses, growers use cuttings from maturing rose crops to start each new crop.

The two-year cycle begins after first frost, usually in mid-November, and lasts into December. During that time, field workers trim eight-inch-long stems, or cuttings, from one-year-old understock bushes. For several weeks they then plant cuttings by hand five to eight inches apart in long rows of raised beds. Each acre can support 10-20,000 understock cuttings.

(Tyler growers commonly use a *Rosa multiflora* understock called Brooks-56, named for local grower M.L. Brooks who developed the strain from one hardy bush he found in his field in 1956.)

During the winter the understock cuttings root easily in Tyler's sandy fields, a major advantage for local growers, explains Dr. Lyle. During late April and May, skilled field workers, often working in pairs, graft the young understock plants with the desired rose varieties.

Varietal budwood saved from last fall's harvest supplies small buds, or eyes, which a "budder" deftly inserts it into slits near the base of understock bushes. A "tie-er" then quickly secures each bud with an elastic rubber strip. Veteran rose workers can bud two to three thousand bushes a day. Many are second or third generation rose budders.

Once budded, young rose bushes spend the rest of their first year simply maturing. Most growth comes from the understock, from which cuttings are taken in the fall for the next cycle's crop. Early in their second spring, the budded bushes get "topped" or pruned just above the graft to allow the desired variety to fully develop .

Workers fertilize the maturing rose bushes until summer, when they come into first bloom, and spray them weekly with fungicides to control diseases. Growers want bushes in top condition so they'll make it through harvest and cold storage with flying colors.

All along, Tyler rose nurseries have been in the business of selling bushes, not flowers. But in the six-months waiting period between first bloom and harvest, some growers cut their best field blooms and sell them by the dozen at area roadside stands, gas stations, and supermarkets. Tyler roses also appear on street corners in Texas cities like Dallas, Houston, and Austin where vendors hawk them to passing motorists.

Before harvest swings into full throttle in November and December, Larry Burks samples the carbohydrate concentration in bushes scheduled for processing at the CR

facility, the largest in the state. Cool October nights and a frost or two cause rose bushes to begin "hardening off" by storing carbohydrates in order to survive the coming winter...or in Burks' case, the coming months spent in cold storage (an industry innovation popularized in Tyler).

Burks' "starch test" helps growers know when to harvest. "If the plants haven't hardened off, an early freeze could damage them," he explains. "To protect the plants, growers harvest the less cold-tolerant bushes first, once the starch test checks out."

Beginning in late October and into November, tractors uproot, or "dig," mature rose bushes, which are then tied in bundles of ten and trucked to a half dozen or so local processing plants. There, the bushes are graded by size and other factors and tagged by the variety and grade. For the next two to four months, the dormant bushes remain in suspended animation.

"We keep them in the dark at a constant 34 degrees Fahrenheit, misting them in the day and fogging them at night, so they'll get as close to 100 percent humidity as possible," Larry Burks surveys the vast bins of bare-root bushes in CR's one-million-cubic-foot refrigerated storehouse. "Dormant rose bushes kept like this can be shipped anywhere in the world when the time's right."

The right time to awaken sleeping roses and dress them for market depends on where they're headed. Tyler rose bushes ship in December, for example, to warmer southern climates like the Rio Grande Valley, in February to the Texas Panhandle, and even later for colder northern states and Canada.

Changes in labor supply and market conditions over the last 20 years evolved the Tyler rose industry into a national center for rose bush processing, as well as rose bush growing. Millions of local bushes and many millions more of bushes grown in California and Arizona spend the winter in Tyler.

Some processors ship truckloads of boxed bare-root bushes straight from cold storage to wholesalers who package them and sell to retail outlets.

Since the Fifties, Tyler rose processors also have packaged roses for market. Traditional wrapper packs--with roots packed in sawdust and wrapped in plastic--provide low-cost bushes which buyers must transplant to garden soil and then prune. Eager for more "instant products," gardeners increasingly are turning to pre-potted bushes, says Burks. Pruned and placed in wood fiber pots, these bushes can be planted directly in flower beds. Bud and bloom bushes (pre-potted and forced into bloom by processors or nurseries) comprise another blossoming new market.

At least one Tyler rose nursery has even changed its marketing future by looking into the past.

While maintaining its traditional grafted rose business, Chamblee's Rose Nursery embarked in 1990 on a nostalgic journey (along with an increasing number of customers) into antique roses, the so-called "old roses" grown in home gardens and cemeteries in the last century and before.

Old roses propagate the old-fashioned way, says Mark Chamblee: New bushes grow from cuttings that came from old bushes--no understock, no grafting--and grow to marketable size in only one year, he adds.

While antique roses also retain much of their ancestral fragrance, most only bloom once or twice per year, Chamblee points out, instead of almost continuously for months like the showier grafted roses.

Chamblee's Nursery, started in the Fifties by Mark's father Roland, also specializes in miniature roses which "will do everything the larger roses will do, just on a smaller scale."

Understanding the importance of tourism, the Chamblees offer nursery tours and periodically host how-to-grow-roses seminars. Years ago they opened a rose-related gift shop at the nursery called "Chamblee's Rose-Arama" and even have turned their nearby family home into a bed-and-breakfast. The B&B's landscaping? Roses, naturally!

No rose-related venture in Tyler understands the importance of tourism more than the Texas Rose Festival, set for October 19-22.

With the theme, "A Magical Wonderland," this year's four-day extravaganza (the 62nd annual) features the traditional grand parade and glamorous presentation of the Rose Queen and her entourage--plus rose field tours, square dancing, and symphony in the park.

The annual rose show this year fills Tyler's new Rose Museum with the color and fragrance of thousands of roses.

Year-round, the elaborate museum preserves the many facets of the Tyler rose industry. One exhibit room recaptures the excitement of rose parade floats and marching bands. Recorded reminiscences of past rose queens filter down halls filled with festival memorabilia and hand-sewn jeweled gowns. Short videos elsewhere recount the history of the rose festival and that of the industry it celebrates.

On one wall near an exhibit of rose field implements, a display charts the morphology of the rose. Another display highlights big-name football games held in the early years of the festival, which began in 1933. The interactive "Attic of Memories" features a nostalgic collection of items donated by notable Tylerites, like the scale that Dr. Eldon Lyle used to test minute amounts of chemicals for his groundbreaking rose research.

Researchers and curious gardeners alike browse through the museum's unique computerized catalog of 250 of the 400 rose varieties found in the Tyler Rose Garden, located just steps away.

Each year approximately 100,000 nature-lovers view the 30,000 rose bushes which decorate the 14-acre garden. Opened in 1952, it's still the nation's largest municipal rose garden. The garden also features a one-acre sensory garden with 50 types of antique roses, a camellia garden, a day lily collection, and a meditation garden.

During the festival, the garden's wide greens host the Rose Queen's Tea, a free garden party for the city and visitors. Year-round, the Tyler Rose Garden also serves as one of only 24 U.S. test sites that determine which new hybrid rose varieties will qualify for the coveted All-American Rose Selection designation.

In 1986 the U.S. Congress designated the rose as the national floral emblem, in large part because of the persistent support the idea received from rose growers and city officials of Tyler. The adoration of roses that's been in the blood of Smith County rose-growing families for almost a century, now officially graces the national landscape.

But adoration of roses also means hard work, reminds second-generation grower Otis Tate, who grows 95 percent of what he sells at his Tyler nursery. "You can't just plant them and leave them alone. You have to take good care of them. Still, people who love roses, well, they just love roses."

And who wouldn't?

Adds fellow nurseryman Mark Chamblee: "It's a great business when you can watch all this beauty as you work."