Orchid expert comes to S.A.

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PUBLICATION: San Antonio Express-News
SECTION: Metro / South Texas
DATE: October 27, 2000
EDITION: State
Page: 1B

The orchid, an elegant bloom that conjures images of a fancy parlor or Japanese tearoom, is starting to look at home among the less genteel cash crops of the Lower Rio Grande Valley.

That's primarily due to Yin-Tung Wang, a scientist whose floriculture research at the Texas A&M Agricultural Experiment and Extension Center here has helped transport the potted orchid to the nationwide forefront of the ornamental plant business.

He is set to speak at the San Antonio Botanical Gardens' Alamo Orchid Show, scheduled today through Sunday.

"The industry is always looking for something new, something special," said the Taiwan native, who moved to the Rio Grande Valley in 1984. "Ten years ago, I thought I would try orchids."

With its warm muggy nights, the Valley had the perfect climate. Greenhouses were built and the slightly brackish tap water purified. Suddenly, Wang had a viable cash crop on his hands.

The wholesale market of the floral crop has blossomed during the past four years, more than doubling in size. In 1999, the wholesale value of orchids sold in this country was $80 million - second only to poinsettias.

Two orchid wholesalers have sprung up deep in South Texas, one in Harlingen, the other nearby in Arroyo City. Texas now produces the fourth largest orchid crop in the country, behind Florida, California and Hawaii.

For a region with a shrinking agricultural base, orchids appear to be a winning proposition for the Valley.

"The profitability of orchids is much, much, much higher than any of the other nursery crops we grow," said Wang, who travels to the country's orchid shows and spends time trying to recruit nurseries to the Valley. "And I don't know of any other industry that's growing at this rate."

Rod Santa Ana III, communications specialist with the agricultural extension service, underscores the significance of Wang's work.

"Based on Wang's research, two large commercial operations have been established in the Harlingen area which annually produce and ship millions of the plants for retail sale nationwide," Santa Ana said.

He added that sales of the moth orchid have "gone through the roof" because of a growing technique Wang has developed for use by wholesalers.

This country has had a long love affair with the orchid. Perhaps, some speculate, admiration of the flower is a penchant passed down from British and German ancestors who discovered the hardy plants being used as packing material on ships returning from the New World in the 17th century.

Captivated by the blooms, British botanical enthusiasts sent lackeys overseas to bring back prime specimens of the plant family.

There are few orchids native to Europe, but they grow wild in most other places in the world, including Texas, which has at least 50 native orchid species.

Popularized by the sensuous paintings of New Mexico artist Georgia O'Keeffe, orchids have been in short supply in the 20th century. A reproductive cycle of two to eight years long has made them difficult to raise commercially.

"Because of the length of time involved in raising an orchid from scratch, the cost was very high," Wang said.

Retail prices for orchids were out reach for some, but Wang's research at Texas A&M is changing that. After years of study, he has been able to shorten the production time of orchids and, by controlling temperature, regulate when they flower.

"If you let me know what you want five to six months ahead of time, I can deliver the orchid to you in full bloom on the requested day," Wang said.

That precision also helps orchid wholesalers stagger the flowering of the plants.

"If you didn't do that, they would all bloom in the early spring," Wang said. "If you had 30,000 blooming at once, you had to do a heck of a job selling them."

Now, an orchid wholesaler might charge $5,000 for 500 orchids. A flower enthusiast can purchase a common orchid plant for anywhere from $16 to $100. But some plants, such as a Catelyah orchid with an array of buds, might go for well over $500.

Wang's research has included investigation into why orchid flowers are so sensitive to a common household gas called ethylene, which causes the buds to wither and fall off.

The sensitivity to ethylene gas - which is found in cigarette smoke, ripening fruits, gas stoves and car exhaust - is actually due to a stage in the plant's reproduction when it emits ethylene gas to close up buds after fertilization.

While that may not be a problem for gardeners, it has been a problem for ornamental plant enthusiasts, who have seen their investment shrivel up in a matter of days.

Wang's second experiment aims to develop a simple technique that could immunize orchids against ethylene's effects and prolong their blooming quality.

Wang grew up in a country where orchids were revered. Taiwan is one of three leading world markets for orchids, along with Japan, and now, the United States. At 6, Wang had a garden and decided he wanted to study flowers.

Wang's particular interest is fragrant orchids. Among the 30,000 known orchid species, plants give off floral perfumes - sometimes citrus scents, sometimes spicy ones - and can even smell like rotten meat.

Wang offers free tours of his greenhouse from 4-5 p.m. Thursdays from the end of November through May. For more information, call (956) 968-5585.

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Caption: Phalaenopsis, or moth orchid, is one variety of orchid being studied in the Rio Grande Valley. Yin-Tung Wang of the Texas A&M Agricultural Experiment and Extension Center in Weslaco, will be sending some cattleya orchids to an orchid show in San Antonio this weekend.