

## EYE ON RESEARCH: NMSU studies ancient Chinese fruit for New Mexico alternative crop

By Jane Moorman/For the Sun-News

Posted: 05/02/2010 11:04:18 PM MDT

ALCALDE — Can the fruit of the jujube tree be the next alternative crop for New Mexico? Can this fruit, which has been grown in China for 4,000 years, thrive in the mountains of northern New Mexico?

New Mexico State University Cooperative Extension Service fruit specialists Ron Walser and Sheng-rui Yao believe that it can.

Variety trials are being conducted at NMSU's Sustainable Agriculture Science Center in Alcalde and the Los Lunas Agricultural Science Center to determine which cultivars will grow best in New Mexico's semi-arid, mountain climate.

Walser learned about the red-brown colored fruit, commonly called a Chinese date, at a small-farm conference in North Carolina in 2004, while Yao has a lifetime of experience with the fruit.

Yao grew up 100 miles south of Beijing in China's Hebei Province, which is the largest jujube producing province in the country. "It probably ranks number one in production," she said. "The jujube fruit is a good source of vitamin C, and the seeds are used in oriental medicine."

So when Yao joined the staff at Alcalde and discovered 16 different cultivars of the tree already planted, it was a touch of home. During her 10

years at the Shandong Institute of Pomology, she worked on a project to improve the cultivation of jujube trees.

"Through the years, there has been a natural selection of the cultivars. Growers select trees for the quality of the fruit, such as taste or size. There are no hybrids," she said of the tree, which has thorny branches that grow in a zigzag pattern. "The sweet fruit is a drupe, varying from round to elongate and from cherry-sized to plum-sized, depending on the cultivar. It can be eaten fresh or as a dried fruit."

The migration of the jujube tree from China began centuries ago, and today it is grown to some extent in Russia, northern Africa, southern Europe, the Middle East and in the United States' Southwest. Jujube trees were brought to the U.S. in 1837, but it wasn't until 1908 that improved Chinese selections were introduced to California growers by the U.S. Department of Agriculture.

Walser learned about the fruit from researchers in southern California and from Dave and Becky Thorp of Sunstar Herbs in Madrid, N.M., who began an orchard in 1994.

With the cultivar recommendations from these two sources, Walser planted 16 trees at Alcalde in 2006 and two other varieties — Li and Lang — in Los Lunas in 2007.

Yao said she wasn't thinking about jujube as a potential crop when she arrived at NMSU last summer for her interview for the fruit specialist position. She had been doing research on apples and small fruits at Cornell University and in northern Minnesota.

"I realized that this climate is a really good place for

Advertisement



**Bring the Classroom to Your Home**  
With a Degree Online From Florida Tech

**Florida Tech**  
UNIVERSITY ONLINE

**APPLY TODAY!**  
FloridaTechOnline.com/FD | 1-888-253-5946

Print Powered By  FormatDynamics™

# LAS CRUCES SUN-NEWS.com

jujube fruit to grow, and it is a nice alternative crop for the growers. Late frost is a huge problem for fruit growers in northern New Mexico. The problem is not just with apple trees, which may only set fruit five out of 10 years, but also the stone fruits, such as apricot and peach. They are all early bloomers that might bloom every year but not set because of a late frost," she said.

The jujube tree blooms in midsummer, so there is rarely a frost problem.

Another plus is the New Mexico mountain climate when the fruit is maturing.

"Jujube is a sweet fruit. The large difference between daytime and nighttime temperatures favors sugar accumulation in the fruit," she said. "Also it is better to not have a lot of rain when the fruit is maturing in September because that can cause the skin to crack."

NMSU's research will also determine the economic potential of the alternative crop.

Because the Thorps have been selling the fruit at the Santa Fe Farmers' Market since 2005, consumers are learning about the fruit and its benefits.

As the only commercial jujube tree grower in New Mexico, Becky Thorp says she has had to introduce the fruit to shoppers with sample tasting.

"When people taste the fruit, most get hooked on the flavor. They say, 'Wow. This is great.' Not only do they purchase it then, but many become repeat customers," she said of the produce that is harvested throughout September and into October.

Becky Thorp has seen the demand for the fruit

increase over the years.

"At first we had enough dried fruit to go the entire year. Last year, we ran out in April, and this year we had to turn down orders beginning in March," she said. "We have 75 trees that are mature and producing well. Our orchard increased by 75 trees with plantings in 2006 and 2007. It will take about seven years for those trees to yield quality fruit."

Besides having a sweet taste, the fruit has a high nutritional value because of its vitamin C content.

"It has 200 to 500 milligrams of vitamin C per 100 grams of fresh fruit, compared to apples and peaches, which have less than 10 milligrams. And it has 10 times more than citrus. Two or three fresh jujube fruits are enough for the daily recommended allowance of vitamin C," Yao said.

With a large Asian population in New Mexico, Yao says there is already a good market potential for the fruit, not just in a fresh or dried state, but also for medicinal use.

"The seed crushed up is a traditional Chinese herb," she said. "It is used to calm people down."

The interest in producing this fruit in New Mexico is already growing.

"We have several growers interested in this crop," Walser said. "This could be a crop that has a potential for all parts of New Mexico."

At a recent pruning workshop conducted by Yao at Alcalde, more than a dozen fruit producers attended to learn the difference in caring for jujube trees compared to that of apple trees.

Advertisement



**Florida Tech**  
UNIVERSITY ONLINE

**Bring the Classroom to Your Home  
With a Degree Online From Florida Tech**

**APPLY TODAY!**  
FloridaTechOnline.com/FD | 1-888-253-5946



Print Powered By  FormatDynamics™

# LAS CRUCES SUN-NEWS.com

"It would have been nice to have an expert like Dr. Yao, and the information being gained by NMSU's variety trial, when we were getting started," Thorp said. "We've had to learn from trial and error."

"Eye on Research" is provided by New Mexico State University. This week's feature was written by Jane Moorman of University Communications.

Advertisement



**End-to-End Training as It Should Be: 100% ONLINE!**

**Earn Your Master Certificate in Internet Marketing**

- SEO & Paid Search
- Online Branding
- Web Analytics
- Internet Law
- Media Buying
- Social Media

➔ 1-800-268-9943  
USanFranOnline.com/FD

Print Powered By  FormatDynamics™