

Gulf Coast Fruit Study Newsletter

Volume 20, Issue 4

Edited By: Ethan Natelson

September 12, 2006 Meeting

Are Genetically Engineered Fruit Trees Finally on the Way?

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Next Gulf Coast Fruit Study Meeting

Our next meeting will be held on **Tuesday, Sept 12th, at 7 PM** and will be our annual pear tasting (and any other fruit you may have) and will include a summary and powerpoint presentation highlighting the program and tours from the August NAFEX/SFF annual meeting.

Contact Us!

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The July issue of Good Fruit Growers Magazine contains several articles concerning genetic traits of peach trees, and one report suggests that the first genetically modified fruit tree may soon be approved for distribution in the United States. If this occurs, it may finally allow this industry to showcase some interesting plants that have been patiently waiting in the wings to help, among many benefits, to free us from the necessary application of potentially toxic pesticides. Floyd Zaiger has studied genetic traits in stone fruits for many years, learning by trial and error which characteristics are dominant (such as color and firmness) and which are recessive (such as size control). By such observation and hundreds of thousands of crosses, he has been successful at hybridizing apricot genes into plum, for example (unfortunately, we have yet to find one of his delicious plumcots that works in Houston, but we have four promising new low chill ones under trial now, and hope springs eternal). Now the entire genome for peach is under study, much like the human genome sequence which was fully elucidated 5 years ago (with the help of a Houstonian, Dr. Tom Caskey). Dating back to the time of former Vice President Dan Quayle (can you spell potatoe), who was a strong advocate for the science of genetically modified plants, many interesting trees have been developed but because of fears about public acceptance and of unwanted gene transfer to create super-weeds, have rarely made it to the marketplace. Apparently, the only fruit tree so modified, and currently approved, and commercially planted, is the papaya tree.

The impetus for this release is the control of the Plum Pox virus which, accidentally, found its way into stone fruit trees in Pennsylvania several years ago. This caused the government to mandate destruction of 1,600 acres of peach, nectarine and apricot, as well as plum orchards in that state. There is no good control for this pathogen, which spreads rapidly through insect vectors, and certain plum pox strains may also be found in the seeds of an infected plant, which usually does not occur (as in citrus). Dr. Ralph Scorza, of the USDA facility at Kearneysville, WVA has introduced a genetic sequence into a yellow plum called **Honeysweet**, which makes the plant immune to the viral infection. Dr. Scorza and Dr. Richard Bell (who will be speaking at our upcoming NAFEX/SFF meeting in Lexington, KY) have previously collaborated to introduce genes into known pear cultivars to control size and fireblight infections, but these trees have never been released to the public.

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Are Genetically Engineered Fruit Trees Finally on the Way? (continued)

Another article in this same issue of Good Fruit Growers concerns columnar trees, which have been sold as novelties for both apple and peach, and not generally used commercially although occasionally they are found in nursery catalogues. Apparently, one columnar gene (heterozygote) gives you just an upright tree but two genes (a homozygote), provides the full columnar or rocket shape to the tree. The common peach does not contain a copy of this gene. The notion is that with an upright tree, you can plant them very close together in a row, and then develop the V-trellis typically used for commercial peach orchards. One can get more trees to the acre and, hence, more total fruit yield. I think this sounds good in theory, but from what I have seen on tours of well-managed orchards, generally unnecessary.

Despite all of this laboratory horticulture, there still is room for the classical plant breeder and the casual hobbyist who has the patience to spot a bud mutation in their yard that carries a useful trait. The pear tree that Tom Leroy and Bill Adams planted at the Extension Service Demonstration Orchard, and George McAfee spotted and named **Tennousi**, is a classic local example of this, as are Dr. Leon Atlas' **Honey Mandarin** and other citrus sports.

FRESH PEACH PIE

(untried recipe; source: Southern Fruit Fellowship newsletter #72, April-June 2006)

Ingredients:

1 9-inch baked pie crust
1 cup sugar
1 cup water
3 tablespoons cornstarch
3 tablespoons orange Jello
3 cups ripe peaches
8 ounces Cool Whip
½ cup chopped pecans

Directions:

Bake pie shell and allow to cool. Cook sugar, water and cornstarch until thick and clear. Add dry orange Jello. Stir and set aside to cool. Cut up peaches and place in cooled pie crust. Pour cooled cornstarch mixture over peaches. Cover pie with Cool Whip and top with chopped pecans. Will keep several days in refrigerator.

FRUIT STUDY GROUP FIELD TRIP

Rick Matt has graciously offered to have us visit his massive Oriental Persimmon planting on October 7th. He will have some samples to taste and fruit to sell. We will be leaving from the Bear Creek Facility about 7:45 AM for the 40 minute ride. We have the free services of an air-conditioned bus which holds 39 people (others may wish to carpool). As before, we ask that you fill out the form below, which is a requirement for reserving a space on the bus. **Reservations are first come, first serve**, so please do not hold the form until the September 12 meeting. If you are interested in attending, please fill out the form (including the date) and either fax it to Yvonne Gibbs at 281-855-5638 or mail it to Yvonne at 9015 Autauga, Houston, Texas 77080-1708. **Please bring a sack lunch**-we will supply the cold drinks. The bus will return to the Bear Creek facility by 3-4 PM. Rick has picnic tables and a covered area to sit in.

DATE: _____

NAME: _____

ADDRESS: _____

PHONE: _____

NAME AND PHONE OF EMERGENCY CONTACT PERSON:

HARRIS COUNTY
MASTER GARDENER ASSOCIATION
3033 BEAR CREEK DR.
HOUSTON, TX 77084-4233

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