

Researchers focus on biotechnology at symposium

By Fred G. Gmitter Jr.

Eleven years after the first citrus biotechnology symposium was held in Israel, the citrus research community came together again for the Second International Citrus Biotechnology Symposium in Catania, Italy, in the shadow of Sicily's famous volcano, Mount Etna. The Nov. 30 to Dec. 3, 2009 symposium was

and included oral and poster sessions. Following the introductory welcoming speeches and a keynote lecture on citrus genomics by Manuel Talon, from IVIA in Spain, the first day's sessions focused on citrus genomic research and the good progress being made in genome sequencing, genetic mapping and the application of these new technological resources to past and present challenges in citrus science and production. The second day led off with a keynote lecture on citrus tristeza virus, presented by Mark Hilf of the USDA-ARS. This was followed first by a session on genetic transformation technology development, its potential role in scion and rootstock improvement, and as a tool for functional genomic research to associate gene sequences with their actual roles in citrus trees and fruit. Two other sessions were organized on the second day: One was devoted to environmental and physiological stresses and molecular tools for studying plant responses to these abiotic stresses; the second was focused on the detection and control of major diseases.

organized under the Citrus Section of the International Society for Horticultural Science, and convened graciously by Alessandra Gentile and Eugenio Tribulato of the University of Catania. There were more than 120 registered participants representing at least 25 countries — a very comfortable number that allowed excellent opportunities for interaction and discussions among the participants. For many, the atmosphere of the meeting was not unlike a large family reunion!

Seven sections of the symposium were established by topics,

It was refreshing to the Florida participants to attend a session on diseases that barely touched upon Huanglongbing; this was a consequence of the greater proportion of participants from the Mediterranean region and their fortunate lack of intimate familiarity with the scourge of greening!

The third day had three formal sessions. The first addressed the applications of citrus tissue culture technology for breeding new varieties and for propagation. The second session targeted fruit development, and new understanding of the processes of pigment

development and fruit maturation.

The final formal session focused on fruit quality attributes, including volatiles, flavor and studies aimed at overcoming the grapefruit-drug interaction challenge. Of course, being in the heart of the world's number-one blood orange producing region, Sicily, it was appropriate that a talk was given on anthocyanin pigments, the "secret of Sicilian blood oranges," by Cetti Licciardello from the nearby CRA in Acireale.

After the formal sessions ended, the delegates received a presentation on the plans for the next Congress from Luis Navarro, who will preside over the next International Society of Citriculture Congress to be held in Valencia, Spain, in 2012. The presentation included some of the sights and points of interest in Valencia and the Spanish citrus industry. Discussions followed on who will host the next International Citrus Biotechnology Symposium and when. Florida was nominated and selected as the host location for the next "family reunion," with the dates remaining to be established; rest assured, it will not be an 11-year gap as between the first and second symposia!

That evening, the delegates were treated to a wonderful evening of Catania's culture and food, with a farewell dinner in the most spectacular of the old palaces in the city. The evening's festivities began with a cocktail hour and live music performed by a local group of musicians playing traditional and contemporary music. And then dinner ... of course we were in Sicily, so the food



Author Fred Gmitter, second from right, has dinner with others at the symposium.



Clementine fruit harvested in Calabria region, with stem and leaf intact to ensure freshness to consumers.

was absolutely fantastic, and complemented very well by the surrounding atmosphere of elegant architecture and paintings adorning the banquet hall!

The last day of the symposium took many of us to where we really prefer to be — in the field. We visited the Palazelli research farm of the CRA, located in Lentini, where we were met by CRA citrus-breeding scientists Giuseppe Reforgiato, Santo Recupero, and Giuseppe Russo. We had the opportunity to walk through the farm to see the breeding and genetics program and many of their advanced selections of mandarins and blood oranges, as well as to visit the phytosanitary repository housing foundation plants

of the major varieties for the industry. From there, we traveled to the Science and Technology Park of Sicily (STPS), where we were hosted by Antonio Catara, the president of the STPS and a well-known citrus pathologist from Italy. The park houses a number of laboratories specializing in agricultural research while aiming at the subsequent commercialization of products — a joint venture between academia and business.

Eleven years was too long a time to wait for the Second International Citrus Biotechnology Symposium, but our hosts in Sicily made it very much worth the wait. Likewise, it should be pointed out that another key reason

for the success of the symposium, beyond the charm of the location, was the quality of the scientific research presentations delivered by the world's authorities in citrus biotechnology, and the personal and professional interactions that followed.

As hosts of the next symposium in the coming four or five years, we Floridians have a challenge to surpass the experiences we had in Catania. Can airboat rides, gator wrestling and Florida cracker cuisine rise to the occasion? Sure can!

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