



INTERNATIONAL SOCIETY FOR HORTICULTURAL SCIENCE

Section Tropical and Subtropical Fruits

Newsletter No 9 July 2013



Dear Colleagues,

Thanks for your contribution for the e-Newsletter. In the last six months (January-June 2013), the Section has organized symposiums on Mango at Dominican Republic and Temperate Zone Fruits in the Tropics and Subtropics at Thailand. The Section is organizing IV International Symposium on Papaya, VIII International Pineapple Symposium, International Symposium on Tropical Fruit and International Symposium on Mango during the 29th International Horticultural Congress at Brisbane, Australia in August 2014. Please visit www.ihc2014.org for details of the mentioned symposiums and for many other exciting activities at the congress.

I believe you will enjoy reading the e-Newsletter. Your comments and suggestions towards improving its utility will be highly appreciated.

With best wishes,

Professor Dr.Sisir Mitra
Chair

Section Tropical and Subtropical Fruits
International Society for Horticultural Science



Working Group Report

Pineapple

1. VIII International Pineapple Symposium will be held at Brisbane, Australia, August 18 to 21, 2014 during 29th International Horticultural Congress. Organization for the 8th International Pineapple Symposium is progressing well. The event will include 3 days of presentations and a field trip to visit commercial pineapple farms in the region. The field trip will showcase production of processing and fresh fruit. The symposium has an active webpage which is linked with the larger International Horticultural Congress of which it is a part. All accommodation and registration bookings and submission of abstracts will be handled through the IHC website accessible from the pineapple webpage. Deadlines have been established for all these activities and the symposium is open for abstracts. The pineapple scientific committee has also been active organizing invited speakers, a list of which will be published soon. The organizers and Australian pineapple industry look forward to hosting the symposium and welcoming the world pineapple community to Australia.

2. V Simpósio Brasileiro da Cultura do Abacaxi (V Brazilian Pineapple Symposium), Palmas, Tocantins, Brasil, 23 and 24.10.2013

Symposium organized by The Secretariat of Agricultura of the State of Tocantins (SEAGRO-TO) and Embrapa Cassava & Fruits and the support of the Brazilian Fruitculture Society (Sociedade Brasileira de Fruticultura – SBF), this event will focus on presentations and discussions on the present status, challenges and perspectives of the pineapple industry in Brazil, the second-largest producer in the world. Information may be found at www.vsimposioabacaxi.com.br.



3. The Pineapple Working Group (PWG) has been contacted by the recently founded IPO – the International Pineapple Organization - through its executive director Will Caven for establishing a working relationship with the ISHS PWG. IPO is organizing a Global Pineapple Conference to be held at San José, Costa Rica, on November 1, 2013. The PWG will possibly be present at this event as a chance to know more about IPO and to discuss ways of cooperation. IPO is managing a blog - <http://www.i-pineapple-a.blogspot.com.br/> - with information on the pineapple business.

4. The 20th annual edition of the pineapple newsletter is being prepared by its editor and PWG member, Prof. Duane Bartholomew, for distribution before the end of this year. The Pineapple News has been a rich source of useful information for scientists, students, growers and other professionals and people involved in the pineapple production chain.

5. At San José, Costa Rica, was held the VII Congeso Nacional de Suelos (National Soil Congress), November 6-8, 2012, at which almost a whole day was dedicated to presentations and discussions on Suelos y Piña (Soils and Pineapple). Soil management for prevention of erosion, correction of acidity, adjustments of chemical properties and nutritional aspects were addressed, including an interesting talk by Prof. Duane Bartholomew on nitrogen fertilization of pineapple.

Domingo Haroldo Reinhardt,
Chair PWG-SETS-ISHS
Cruz das Almas, Bahia, Brazil,



Mango

Dominican Republic celebrated the Xth ISHS International Mango Symposium

The Xth ISHS International Mango Symposium was held during 2-7th June 2013 at the Convention Center of the Barceló Complex in Bavaro, Punta Cana, Dominican Republic under the lemma 'Mango, Opportunities and Challenges for the 21st century'.

The objective of the Symposium was to put in contact local, regional and international actors dealing with mango production to share knowledge about all aspect of this crop, through oral and posters presentation and field trips. There were 60 oral presentations, including 8 keynote lectures and 30 posters covering different aspects of world market production, breeding and biotechnology, physiology and reproductive biology, cultural techniques, climatic change, pests and diseases, post harvest, fruit processing and marketing.

The meeting was attended by 254 participants from 32 countries, including 50 local extension people and leading mango producers. The Symposium was inaugurated by Dr. Víctor Galán Sauco. Chair of the ISHS Mango Working Group, representing ISHS, Engineer Luís Ramón Rodríguez, Ministry of Agriculture, Engineer Juan José Espinal, of CEDAF (Centro para el Desarrollo Agropecuario y Forestal), Engineer Rafael Pérez Duvergé, Executive Director of IDIAF (Instituto Dominicano de Investigaciones Agropecuarias y Forestales), Engineer Rafael Leger, President of PROMANGO (Cluster of Dominican Mango) and Engineer Juan Chávez, Executive Director of CONIAF (Consejo Nacional de Investigaciones Agropecuarias y Forestales). Engineer Luís Ramón Rodríguez gave the inaugural speech dealing with the actual situation and future perspectives of the mango in the Dominican Republic

During the field trip day the participants visited mango farms and packing houses and also attended the Expo mango 2013 Fair, annual activity celebrated in the city of Baní. During this visit the ISHS was given the recognition of 'distinguish visitor of the city'.

International symposium on Mango will be held during IHC 2014, Brisbane, Australia in August 2014. For information please see the IHC website.

Dr. Victor Galan Sauco
Chair
Mango Working Group, SETS-ISHS



Temperate Fruits in the Tropics and Subtropics (TFTS)

TFTS e-Newsletter is again on publication after a long break with the **Vol. 2 No. 9**. This newsletter contains usual announcements of the ISHS meetings related to the temperate fruit growing under subtropical and tropical conditions. Members are requested to send articles and information to Prof. Dr. Ayzin B. Kuden

Prof. Ayzin B. Kuden

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The 9th International Symposium on Temperate Zone Fruits in the Tropics and Subtropics (TZFTS) was held at Chiang Mai, Thailand from 26-28 March 2013 with 183 participants from 17 countries. The program consisted of a keynote address, eight invited lectures, and several interesting contributed lectures on production, biotechnology, breeding, physiology, plant protection, postharvest management and processing of temperate fruits in the tropics and subtropics. There were 22 poster presentations with excellent inputs displayed for two days during the symposium. On the third day of the symposium, participants visited Inthanon Royal Agricultural Station, Doi Inthanon and Royal Agricultural Research Station at Chiang Mai. The visit was highly educative to see the improved cultivation techniques of grape, persimmon, fig, strawberry, peaches, kiwifruit, etc. The participants enjoyed the fresh fruits of different cultivars of peach, kiwifruit, grape and apricot.

Social and cultural events and the wonderful banquets featuring Thai cuisine and drinks were enjoyed by the participants. During the symposium, a Working Group meeting was organized and it was decided that the 10th TFTS Symposium will be held in 2017 in Oman. The participants also unanimously elected Prof. Dr. A.B. Kuden, Turkey, as the new Working Group Chair of TFTS.

Prof. Ayzin B. Kuden

Chair

TFTS Working Group-SETS-ISHS



Lychee, longan and other *Sapindaceae* crops

The 4th International Symposium on Lychee, Longan and Other Sapindaceae Fruits was held in White River, South Africa, from 2-6 December 2012. The symposium was attended by 150 delegates from South Africa, China, Thailand, India, Israel, Australia, Mexico, Chile, Brazil, Egypt, Germany and New Zealand. Four keynote presentations, 40 oral and 40 poster presentations were delivered. Presentation and poster viewing were spread over 4 days, interspersed with a mid-symposium technical tour.

During the symposium, presenters reported on recent advances and the most interesting topics relating to world production, marketing and technology transfer, cultural practices and crop physiology, postharvest management, pest and disease control as well as germplasm and breeding of litchi and longan. Good overviews of various orchard management practices to improve litchi production over a wide range of cultivars in different countries were presented. Such practices include the use of plant growth regulators, mulching, pruning practices and orchard mechanization. Research papers on the use of sulphur treatments to extend the postharvest shelf-life as well as alternative to sulphur, including coatings, different packaging, hydro-cooling to maintain fruit quality as well as drying techniques for both litchi and longan fruit were discussed. Besides chemical and organic control strategies for pests and diseases, the role of breeding efforts and the use of genetic markers for improved cultivars that extend the harvesting season were discussed.

To give the delegates a truly South African experience, they were treated to a game drive with dinner in the bush in the famous Kruger National Park. There was also entertainment by a marimba band and gumboot dancers during the dinner after the technical tour.

Regina Cornje,
ARC Institute for Tropical and Subtropical Crops,
Nelspruit, South Africa.



Jackfruit and Other Moraceae

The First International Symposium on Jackfruit and Other Moraceae was held at the Bangladesh Agricultural University, Mymensingh, Bangladesh from 18-20 November 2012. Jackfruit being the national fruit of Bangladesh, the symposium attracted many researchers from the country, but was also attended by participants from India, Malaysia and Vietnam. There was a broad range of presentations covering the topics of genetics, breeding, germplasm evaluation, pest and diseases management, postharvest handling and processing. There were three keynote, 22 oral and 16 poster presentations. After the sessions, the participants went on a field trip to the GermPlasm Centre of Bangladesh Agricultural University. Participants were offered a wonderful gala banquet to close the event.

Sisir Mitra,
Working Group Chair,
Jackfruit and Other Moraceae.
SETS-ISHS

Forthcoming events

Symposia Scheduled

Working Group	Name of Symposium	Symposium Date	Location
Papaya	IV International Symposium on Papaya	August 2014	Brisbane Australia
Pineapple	VIII International Pineapple Symposium	August 2014	Brisbane Australia
	International Symposium on Tropical Fruit	August 2014	Brisbane Australia
Mango	International Symposium on Mango	August 2014	Brisbane Australia
	International Symposium on organic Waste to Horticultural Resource	August 2014	Brisbane Australia
Tropical Viticulture	IV International Symposium on Tropical Wines	August 2014	Brisbane Australia
Guava and other Myrtaceae	IV International Symposium on Guava and Other Myrtaceae	16-19 August 2015	Nelspruit, South Africa
Mango	XI International Mango Symposium	28 September – 2 October 2015	Darwin, Australia
	VI International Symposium on Tropical and Subtropical Fruits	26-28 September 2016	Kafr El-Sheikh, Egypt



New Working group chairs

Working group	Chair
Persimmon	Prof. Dr. Zhengrong Luo Department of Pomology Key Lab of Horticultural Plant Biology Huazong Agricultural University Shizishan, Wuhan 43007, China Email: luozhr@mail.hzau.edu.in
Lychee, Longan and other Sapindaceae Fruits	Prof. Dr. Xuming Huang College of Horticulture South China Agricultural University Guangzhou 510642, China Email: huangxm@scau.edu.cn
Temperate Fruits in the Tropics and Subtropics	Prof. Dr. A.B. Kuden Department of Horticulture Faculty of Agriculture Cukurova University Adana, Turkey Email: abkuden@cu.edu.tr

Exotic Fruit

Dragon fruit or pitaya

The dragon fruit or *Hylocereus undatus*, is one of the many species in the Cactaceae family grown for its edible fruit. Other species that have been commercialized are the *Selenicereus megalanthus* and *Hylocereus polyrhizus*. These species are differentiated by the colour of the fruit and the flesh. The fruit of *H. undatus* is bright pink with white flesh while *H. polyrhizus* is a bright red fruit with red flesh. The *S. megalanthus* or yellow pitaya is a yellow colour fruit with translucent to white flesh. The flesh of all the species is dotted with tiny, edible black seeds.



The pitaya is now commercially cultivated in Vietnam, Thailand, Malaysia, Australia, Israel, Indonesia and China. In Vietnam, the cultivated area increased from 560 hectare to 26,100 hectare between 2000 and 2012. At present, dragon fruit is the leading exported fruit of Vietnam, which contributed to more than 50% of total fruit export value of the country. The turnover of dragon fruit export was USD 10.4 million in 2005 which increased to 181.0 million in 2012. Vietnam export dragon fruit to more than 40 countries in the world and the main export destinations are China, Thailand, Indonesia, Japan, and US.

The pitaya is a species of dry tropical climates. It grows well with annual rainfall of 600-1300 mm. The plants are able to tolerate drought, heat, poor soil. It grows well in a wide range of temperatures of 20-38°C. It is commercially propagated by cutting, although micro propagation protocol has also been developed and is used for rapid release of improved clones or genotypes.

The dragon fruit is a perennial climbing segmented cactus with triangular fleshy stems growing to a height of 1-3 m or more. Wooden or concrete posts can be used as support, with a frame on the top to train the branches. One to four plants can be used for each post depending on its size. When the branches are hang over the frame, they starts flowering that is usually 12-15 months after planting. The plant is very shallow rooted and majority of the roots are





soil does not dry out completely. A balanced fertilizers containing nitrogen, phosphorus and potassium along with organic manures, and lime is necessary for good growth and fruiting. Urea sprays (3-5%) encourage vegetative growth. The pitaya may be attacked by a range of pests that include mites, thrips, ants, scale insects, mealy bugs, beetles, slugs, borers, nematodes, fruit flies, and mice. Birds, bats and rats feeding on the fruit also cause problems. Diseases from fungi and bacteria can occur if injury or wet conditions are present. A bacterium *Xanthomonas campestris* can cause rot in the stem, leaving the main stem intact; brown spots on the fruit can be attributed to the fungus *Dothiorella*.

The fruit is non-climacteric, having the best flavor, soluble sugar and acidity level when harvested at full colour stage. Fruits can be stored for 30-40 days at 5°C and 90% relative humidity.

In Memoriam

It is with deep sadness I am reporting about the sudden demise of Dr. Jacky Ganry on 4 February 2013 at St Gely du Fesc, France.

Jacky was strong contributor to ISHS since 1994. He served as Council member for France, and was on the ISHS Executive Committee as Chair of the Section Tropical and Subtropical Fruits from 2006-2010. This Newsletter of Section Tropical and subtropical Fruits was his brain child and he first circulated the Newsletter in 1996. Jacky was instrumental in establishment of the GlobalHort and International Network for Improvement of Banana and Plantain (INIBAP).

Jacky worked intensively in Africa for development of horticulture as a sustainable livelihood security in collaboration with CIRAD.

Jacky will certainly be missed by many in the CIRAD, ISHS and GlobalHort.

I will miss him personally as a good friend.

Sisir Mitra