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Your Global Partner in Tropical Fruit Development

Newsletter of the International Tropical Fruits Network (TFNet)

Mar-Apr 2012

Vacuum fry technology for tropical fruits to be introduced in Fiji



SPAT engineer Agung demonstrates the vacuum-dry machine to the Fijian participants

A 'training-for-trainers' course on food processing was conducted at the Sentra Pengembangan Agribisnis Terpadu (SPAT) Training Center in East Java, Indonesia for 3 Fijian participants from 31 May to 2 June 2012. The training was the outcome of a meeting initiated by TFNet between Fijian Ambassador to Indonesia H.E. S.T. Cavuliati and SPAT Managing Director Unggul Abinowo.

more on page 5

Fruits in season

Fruits	FOB price per kg (USD)							
	Malaysia	China	Indonesia	Bangladesh	Philippines	India	Vietnam	Thailand
Custard Apple						1.00-1.50	1.00-2.00	
Durian	2.10 - 3.50	2.60 - 3.10	3.00-5.00				1.20-3.00	2.40 - 2.80
Guava	1.60-2.50	2.00-5.00	0.79-1.00			0.33-0.68		0.69 - 0.79
Loquat		0.60-0.90						
Lychee		0.50-0.80				1.80-4.50	0.50-0.70	4.69-7.02
Mandarin	1.00-1.20	0.40-0.65						
Mango				1.20 - 1.50	1.10-1.60	0.55-2.00	0.50-1.10	1.00-1.50
Pomelo	0.55-0.75	4.60-8.50			2.80-4.66		0.50-3.00	2.25-2.58
Sapodilla						0.30-1.00	1.20-1.40	1.00 - 2.00
Wax Apple	2.00-4.00							1.25-3.50
Mangosteen			0.80 - 1.00					1.68 - 1.98
Rambutan	1.00 - 1.71						1.00 - 1.50	1.00 - 2.00

Source: Alibaba.com

5TH INTERNATIONAL SYMPOSIUM ON TROPICAL AND SUBTROPICAL FRUITS

18-20 June 2012
Guangzhou, China

more info on
PAGE 3

5th Session

INTERNATIONAL TROPICAL FRUITS NETWORK

GENERAL ASSEMBLY

21 June 2012
Guangzhou, China

TFNet welcomes Australia as a new country member!

Inside the Newsletter

- Page 3 China to host ISTSF 2012 and 5th Session of the TFNet General Assembly
- 4 7th International Postharvest Symposium
- 4 Related events
- 5 Malaysia holds training on carambola for ASEAN member countries
- 6 Vietnamese festival highlights safe agriculture products
- 7 Mango peak season begins in the Mekong Delta
- 8 Salak: Tempting exotic fruit
- 10 Salak remains among top Indonesian fruit exports amidst calamities
- 11 Salak fruit cake recipe
- 12 Indian mango prices soar as harsh weather damages crops
- 13 Thai Lychee prices expected to shoot up as drought cripples production
- 14 Peru launches new marketing campaign for avocados
- 14 Pesticide-free Taiwanese carambola remains a stable export

Welcome to the March / April issue of the TFNet newsletter.

TFNet was involved in facilitating a training course for fruit and root crop processing for participants from the Island Republic of Fiji, in East Java, Indonesia in April. As a result of the training, the vacuum fry technology for fruit chip production will be introduced in Fiji by the end of the year.

In most Asian countries, this time of the year is the beginning of the fruit season. This issue highlights the current mango season in country member Vietnam. Another event held in Vietnam in April is the VAC festival which promotes the improvement of food safety for horticultural crops, aquaculture, and livestock in the Mekong Delta area.

The featured fruit this month is the 'salak' or *Zalacca* or 'snakefruit' an indigenous and also the national fruit of Indonesia, which is gaining popularity and exported to China, Malaysia, and Singapore. A feature on the current mango season in India and the effect of drought on litchi production in Thailand is also reported.

These coming months will be busy for the TFNet Secretariat, who are involved actively in the coorganising of the 5th International Symposium on Tropical and Subtropical Fruits and the 5th Session of the TFNet General Assembly this June, both in Guangzhou, China.

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China to host ISTSF 2012 and 5th Session of the TFNet General Assembly

GUANGZHOU, CHINA: Preparations for the *5th International Symposium on Tropical and Subtropical Fruits* (5th ISTSF) to be held in Hua Tai Hotel, Guangzhou, China on 18-20 June 2012 are well underway. It is the foremost tropical fruit event of the year, jointly organized by the Fruit Tree Research Institute of the Guangdong Academy of Agricultural Sciences, International Tropical Fruits Network (TFNet), International Society for Horticultural Sciences, Hunan Agricultural University, and Guangdong Fruit Association.

The symposium aims to highlight recent research and development in production and postharvest fruit technologies; discuss current issues on consumer demand, market access, and trade; provide a forum for information exchange among researchers, producers, academicians, traders, policy makers, and other stakeholders in the tropical and subtropical fruit industry; and establish and strengthen network

linkages between the researchers, producers, traders, policy makers and other stakeholders in the tropical and subtropical fruit industry.

The plenary session will be held on 18 June, followed by concurrent oral and poster presentations on the following themes:

- Germplasm diversity and breeding
- Molecular biology and biotechnology
- Production Technology and Physiology
- Postharvest and Processing Technology
- Pest and Disease Management
- Economics, Marketing, and Trade

A day after the symposium, participants are invited to join a field visit to the organic banana farm in Zeng Cheng City Guangzhou, Jiangnan Wholesale Fruit Market,

Baiyun National Agricultural Science and Technology Parks, and the Litchi and banana germplasm center at GDAAS

More than 300 participants are expected to attend the symposium. To register, log on to www.istsf2012.com/registration.php

After the 5th ISTSF, the 5th Session of the TFNet General Assembly (GA) will be held on 21 June 2012 also in the Hua Tai Hotel, Guangzhou, China. Part of the agenda includes appointing new Board Members for 2012-2015 and laying out the TFNet 3-year plan. The GA is open to all TFNet member categories.

www.istsf2012.com
Guangzhou, China

5th International Symposium on Tropical and Subtropical Fruits | 18-20 June 2012



7th INTERNATIONAL POSTHARVEST SYMPOSIUM 2012 (IPS 2012)

25-29 June 2012 | Kuala Lumpur, Malaysia
Putra World Trade Center (PWTC)

Bearing the theme *Postharvest for Wealth and Health*, IPS 2012 aims to highlight advances in the global postharvest horticulture research and development, facilitate a forum for information exchange, and strengthen linkages among stakeholders involved in the horticulture industry. Sessions are divided into the following topics: Pre-harvest Effects on Postharvest; Postharvest Physiology; Postharvest Technology; Postharvest Pathology and Entomology; Quality, Safety, and Security; Handling, Packaging, and Shipping Technology; and Consumers and Marketing.

Three plenary sessions will be conducted during the symposium. These are *Postharvest for Wealth and Health* by Dr. Shiow Y. Wang

Website: <http://postharvest2012.mardi.gov.my>

of the United States Department of Agriculture - Agricultural Research Service (USDA-ARS); *New Emerging Technologies and Postharvest Sciences* by Prof. Pietro Tonutti of the Scuola Superiore Studi Universitari Sant'Anna, Italy; and *Bridging the Gaps Between Postharvest Technology, Commercialisation, and Consumer Needs* by Dr. Ron B. H. Wills of the New Castle University, Australia.

Workshops will also be held, bearing the following themes: *Postharvest Technologies for Developing Countries* by Dr. Elhadi M. Yahia of the Autonomous University of Queretaro, Mexico; *Managing Chilling Injury* by Dr. Chien Yi Wang of the United States Department of Agriculture - Agricultural Research Service (USDA-ARS); *Antioxidants, Bioactive Compounds and Health-Promoting Substances* by Dr. Angelos Kanellis of the Aristotle University of Thessaloniki, Greece; and *Emerging Postharvest Technologies - From Concept to*

Reality by Dr. Errol W. Hewett of the Massey University, New Zealand.

Other invited speakers hail from renowned institutions in the United States of America, Jamaica, Canada, New Zealand, Malaysia, Australia, Greece, South Korea, South Africa, Thailand, United Kingdom, Italy, and Mexico.

Participants can also join a one-day technical tour to postharvest packing houses, distribution, and collecting centers; productions sites; and other places of interest. Post-symposium tours to the Northern Malaysian Peninsular, Southern Malaysian Peninsular, and the Malaysia Borneo will also be organized.

IPS 2012 is jointly organized by ISHS, Malaysian Agricultural Research and Development Institute (MARDI) and Universiti Putra Malaysia (UPM), with the International Tropical Fruits Network (TFNet) as part of the technical and organizing committee.

Related Events

4th IMO Global Mango Conference

Focus: Mangoes
Date: 29 June 2012
Venue: Trinidad and Tobago
Website: <http://mangoworldmagazine.blogspot.com/2012/02/4th-imo-global-mango-conference.htm>

Fruit flies and other dipterous plant pests

Focus: Fly families, Integrated pest management, invasiveness
Date: 9-11 July 2012
Venue: Riga, Latvia
Website: <http://www.rpd-conference.org>

4th Agribusiness Economics Conference

Focus: Globalizing food chains and the emerging economies: Agribusiness potentials and issues
Date: 10-11 July 2012
Venue: Davao City, Philippines
Website: <https://sites.google.com/a/upmin.edu.ph/4abe>

I International Symposium on Jackfruit and other Moraceae

Focus: Jackfruit and other Moraceae fruits
Date: 31 August - 2 September 2012
Venue: Mymensingh, Bangladesh
Website: <http://sssbdbau.org/index.php/News-Events/first-international-symposium-on-jackfruit-and-other-moraceae.html>

II Asia Pacific Symposium on Postharvest Research Education and Extension

Focus: Integrated innovation and extension for standard quality and safety of agricultural products for export
Date: 18-20 September 2012
Venue: Yogyakarta, Indonesia
Website: <http://aps2012.ipb.ac.id>

Lychee Symposium 2012

Focus: Lychee, Longan and Other Sapindaceae Fruits
Date: 2-6 December 2012
Venue: White River, South Africa
Website: <http://www.lychee2012.com>

Vacuum fry technology for tropical fruits to be introduced in Fiji

(...continued from page 1)

Food processing activities provide viable options for smallholders to mitigate glut problems, add value to products, and provide additional income. Using vacuum fry technology, participants were trained on the production of jackfruit and sweet banana chips.

Modules of the course included lectures by food processing specialists and hands-on sessions in the production of various food products like fruit and root crops. The course focused on small- and medium-scale production of chips and snacks from cassava, yam, and sweet potato and vacuum fried fruit chips. Participants were also taught on the importance of sanitation, food safety measures and certification, besides the proper handling of different equipment. TFNet CEO presented a lecture on the issues and challenges in developing the tropical fruit industry highlighting examples on juice and puree production, minimal processing, and fruit chip production using vacuum fry technology.



Participants preparing the materials for vacuum-frying

Efforts are underway to introduce the vacuum fry and other equipment to Fiji. TFNet is also scheduled to conduct a food processing workshop in Fiji on September this year.

News

Malaysia holds training on Carambola for ASEAN member countries

SERDANG, MALAYSIA: The ASEAN Cooperation in Food, Agriculture and Forestry initiated a training on carambola held in the Malaysian Agricultural Extension Training Institute (AETI) on 29 Apr – 12 May 2012.

15 participants from 3 countries attended the training, which covered topics on carambola production, soil management, pest & disease management, post harvest handling, SPS issues, and market access. TFNet Technical Officer Palasuberniam Kaliannan was invited as a resource speaker on the Challenges in the Export Market for Tropical and Sub-tropical Fruits, with focus on Carambola.

The participants went on a field trip to a vapour heat treatment centre, a Fruit Grading Centre of the Federal Agriculture Marketing Authority. They also visited Exotic Star (M) Sdn Bhd in Kajang, a TFNet associate member and one of the leading exporters of carambola. Participants were able to see the importance of integrated crop



Visit to Vapour Heat Treatment Complex in Serdang

management in the value chain.

Malaysia is the leading exporter of carambola in the ASEAN region, with an export value of US \$15 million in 2010. The fruits are mainly exported to Europe, the Middle East, and Singapore.

Vietnamese festival highlights safe agriculture products

CAO LANH CITY, VIETNAM: The 1st Festival of Safe VAC products was organized by the Southern Vietnam Gardening Association (VACVINA), in cooperation with newspaper Rural Economy and the local Dongthap provincial government on 15-20 April 2012.

The festival highlighted agricultural products grown and raised from an ecosystem that closely integrates gardening, fish rearing, and animal husbandry. VAC stands for Vietnamese words *vuon* (garden), *ou* (fish pond), and *chuong* (animal shed).

More than 200 participants from 14 provinces in South Vietnam displayed their products in kiosks to more than 40,000 visitors. Products included the latest farming technology and equipment, organic and fresh agricultural products, and seedlings.

Visiting farmers and agriculture enthusiasts also attended different workshops on the VAC farming system that aim to meet GAP (good agriculture practice) standards for improved food quality.



**Booth of the Southern Fruits Research Institute (SOFRI),
an associate member of TFNet**

The first workshop discussed the value chain of VAC safe products including the development of the products from production to market, fruit production and trading in the Mekong Delta, safe fish and pig production, the value chain of Vietgap pomelo and pink mandarin, and export of Vietnamese fruits.

The second workshop discussed the applications of science & technology in the VAC system. These include biotechnology, organic farming, role of pesticides in safe VAC production, treatment of fish ponds & husbandry cages, benefits of proper fruit bags, pest and disease management, and cattle husbandry.

The last seminar highlighted mechanization in agricultural production. These include the application of laser-controlled leveling machines in large production areas, machines for rice and sugarcane production, technology and machinery for animal husbandry feed production, postharvest technologies for dragon fruit and papaya, and the Taiwanese experiences in mechanization.

Former Vietnamese Deputy Prime Minister Truong Vinh Trong graced the festival with his presence. Other VIPs include the president of VACVINA and local government leaders from Cao Lanh City and surrounding provinces.

TFNet CEO Yacob Ahmad was one of the esteemed guests of the festival.



**Sponsors of the festival receiving a token from the former
Vietnamese Deputy Prime Minister Truong Vinh Trong**



Safe agricultural products for export

Mango peak season begins in the Mekong Delta

Mango is the most popular tropical fruit after bananas and its production and trade surpasses other fruits, including pineapples, papayas, and avocados. The production for mango had increased in the last decade, from 25 million mtons in 2000 to 38 million mtons in 2010. This increase is due to the rising demand and exports to the US, Europe and the Middle East. The main mango producers in 2010 were India, which produces about 41 % of worlds' production, followed by China, Thailand, Pakistan, Mexico and Indonesia.

Vietnam is currently the 11th largest producer of mango with an estimated production of 0.5 million mtons in 2010 across an estimated area of 75,000 ha. The main mango growing provinces are found in the South Vietnam Mekong Delta area, namely Dong Thap, Tien Giang, Khanh Hoa, Dong Nai, Vinh Long and An Giang. Most are small farmers who grow mangoes in mixed fruit orchards. However, there are advanced farmers with mango holdings of up to 10 ha each. Mangoes grown in North Vietnam are less popular.

The peak mango season in Vietnam is April, although the fruit is available throughout the year through floral manipulation techniques using chemicals, pruning and water regime control.

The Hoa Loc variety is considered the best and preferred variety in South Vietnam, followed by the abundant and common Cat Chu, and the average Ba Mua. During the peak season, the ex-farm prices for these varieties range from 20,000 – 25,000 VND (USD 1.20) per kg for the Hoa Loc, 10,000 VND (USD 0.50) for the Cat Chu 9 and only 5,000 VND (USD 0.25) for the Ba Mua variety. The retail price of the fruit in the city is about two to three times the ex-farm price.



Local mango collection center in Vietnam

Mango is mainly produced for the domestic market but is also exported to China and the Middle East. With the improvement in fruit quality through the support of effective research and development, efficient extension system, formation of farmers' groups, and the involvement of the private sector, Vietnamese mangoes will start exporting to the New Zealand market within the year.



Mango sold in Ho Chi Minh market

Salak:

Tempting exotic fruit

Known internationally as “snake fruit”, the exotic salak derives its name from its reddish-brown scaly skin. While the fruit looks intimidating to eat, peeling the skin reveals a white clove-like flesh. Gourmands describe the fruit as crunchy like an apple but tastes like a mix of pear, pineapple, and banana with hints of jasmine and lily. While it is grown mostly for food, recent studies reveal that salak has antioxidant properties.

Salak (*Salacca zalacca*) is native and widely cultivated in Java and Sumatra, Indonesia and there are a few growers in Thailand, Vietnam, and Malaysia. It has been introduced to New Guinea; the Philippines; Queensland, Australia; Ponape Island, Caroline Archipelago; and the Fiji Islands.

Plant Description

The fruit grows from a very short-stemmed palm tree, with leaves up to 6 m long. Leaves resemble those of coconut trees with a 2 m-long petiole, laden with spines up to 15 cm long and numerous leaflets. Fruits are usually produced when the trunk reaches 10 to 20 cm. Roots are adventitious and grow superficially that strong winds can topple tall trees.

Salak thrives in humid tropical lowlands and soil pH between 5-7. Because of the superficial root system, the palm requires lots of water all year round but cannot stand flooding. Fruit yield and quality in Java diminish on plants above 500 m altitude. Salak is usually grown under shade.

Fruit Description

The fruit grows in clusters at the base of the palm. They have

the same size and shape of a ripe fig. It can be peeled by pinching the tip, causing the skin to unravel and it can easily be pulled off. Salak contains three garlic clove-shaped lobes, each having a large inedible seed.

Varieties

There are at least 30 Salak cultivars grown throughout Indonesia. Two popular cultivars are Salak Pondoh from Yogyakarta province and Salak Bali from Bali Island.

Salak Pondoh is popular among Indonesian consumers because of the intensity of its aroma, which can seem overripe even before full maturation. It has three superior variations: Pondoh Super, Black Pondoh, and Pondoh Gading. Market price of this variety is around Rp 10,000-12,000 (USD 1.10-1.30) per kg.

On the other hand, Salak Bali is a popular with both locals and tourists because of its lighter aroma. It feels starchy when eaten. The most expensive cultivar of the Salak Bali is the Gula Pasir, which literally means “sand sugar” because of its fine-grained properties. Gula Pasir is smaller than the normal salak but notably sweeter. It fetches for Rp

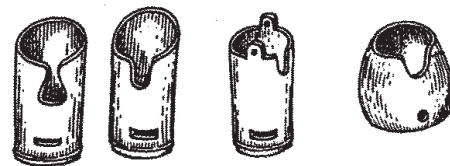
15,000-30,000 (USD 1.50-3.00) per kg in Bali markets.

Propagation

Seeds can be sown directly in the field or in nursery beds, however, seed propagation is not recommended as fruit quality and yield are inconsistent.

Vegetative propagation is more commonly used to maintain yield and quality. The most common methods is through plant suckers. However roots are often intricately entangled and utmost care is necessary to prevent damage.

Indonesian farmers carefully dig around the roots and plant the suckers in segmented bamboo tubes or coconut shells, while the suckers are still attached from the plant. The plants are then later removed to be planted in the field.



Vegetative propagation using segmented bamboo tubes and coconut shells

Culture

Young palms require heavy shade and is normally intercropped in mixed gardens with bananas, mangoes, etc. Male trees should be around 10% of the total population and are evenly dispersed among female trees. Hand pollination is practiced by shaking a flowering male spike above a female flower.

Weeding should be done before the leaf canopy is closes. Suckers have to be removed because they can reduce the fruit yield of the mother palm. Lateral shoots may be spared and be allowed to grow into fruiting stems.

Old plant parts are cut off and either buried or burned for fertilizer. Farmers also use manure, urea, triple superphosphate, and potassium muriate. Different fertilizers have various effects on the fruit – using nothing but urea is said to produce large but perishable fruits.



Salak fruits ready for harvest

Pests and Diseases

Common diseases include fruit rot caused by *Mycena* sp., black leaf spots caused by *Pestalotia* sp., and pink disease caused by *Corticium salmonicolor*. Pests include weevils (*Omotenus miniatocrinitus*, *O. serrirostris*, and *Nodocnemis* sp.), Monophagous beetle (*Calispa elegans*), Polyphagous caterpillar (*Ploneta diducta*), leaf roller (*Hidari* sp.), scale insect (*Ischnaspis longirostris*) and several rodents. Farmers also report an unidentified grub feeding on the roots and devastating entire stands of salak orchards in central Java.

Harvesting

Salak fruits mature five to seven months after pollination. The tree produces fruits all year round but usually peak around May and December in Indonesia. Harvesting takes place at a fruit age of 5-7 months. Fruits are recommended to be harvested before they are fully ripe, by severing the bunch using a reaping knife.

In hot and humid climates, fruit will stay fresh in room temperature for a week after picking. Below 10°C, fruits last up to 3 weeks. Research is needed to establish maturity indices for harvesting and develop techniques to control fruit rot.

Market

Fruit quality is determined according to size, with bigger fruits fetching a higher price. For the domestic market, fruits are wrapped in banana leaves (or other cushioning systems) to prevent damage before they are packed in bamboos boxes. Bamboo boxes are recommended because they provide protection and air circulation. For export, fruits are arranged in single-layered cardboard carton.

Nutrition Facts

Serving Size: 1 fruit medium (100 gr)

Amount per Serving
Calories 60

Calories from Fat 0.0

	% Daily Value *
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 0mg	0%
Total Carbohydrate 8g	2%
Dietary Fiber 1g	4%
Sugars 0g	
Protein 0g	0%

Est. Percent of Calories from:

Fat	%
Carbs	100%
Protein	%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calories needs.

Source: www.livestrong.com

Food Value

Salak is mostly consumed fresh. They can also be candied, pickled, canned and fermented into wine.

The fruit mostly contains carbohydrates, with trace amounts of sodium, potassium, calcium, manganese, iron, magnesium, zinc, and copper.

A study published in the *Journal of Agriculture and Food Chemistry*, rats fed with salak significantly hindered the rise in plasma lipids and the increase in antioxidant activity.

Other Uses

Boundary or barrier or support: A closely-planted row of palms forms an impregnable hedge and the very spiny leaves are also cut to construct fences.

The bark of the petioles may be used for matting. The leaflets are used for thatching.



**Salak collection center in
Central Java**



Salak sold in a supermarket

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Feature

Salak remains among top Indonesian fruit exports amidst calamities

The 2010 volcanic eruptions of Mount Merapi, Indonesia severely crippled salak (snake fruit) production in the Central Java area, destroying 1,400 hectares and affecting up to 3,800 hectares of plantations. Sleman Agriculture, Fishery, and Forestry Agency told The Jakarta Post that salak producers lost more than Rp 200 billion (USD 21.8 million) due to the eruption.

Ash were reported to weaken

the branches of the trees, causing the fruits to decompose. Locals in Magelang, Central Java said that it would take at least three years before they can harvest from new trees. This paralyzed the local economy as salak trees are the main source of income in Magelang, Central Java.

To prevent the local economy from collapsing, the Indonesian National Disaster Management

Agency (BNPB) allocated 8 Rp billion (USD 871k) for its cash-for-work program. Villagers were hired to remove decaying salak leaves and broken fronds, salvaging some of the plants. This can speed up the recovery of the area and provide a substitute income to the farmers.

Meanwhile in Eastern Java, a prolonged 2011 rainy season reduced salak fruit quality and yield. Nyoman Sujana, head of

Banjar Dukuh Sibetan Cooperative Unit, said that this dropped the price of salak by almost 70% from Rp 8,000 to Rp 1,500 per kilogram.

With the help of government programs, salak farmers are slowly recovering. Exporters of Fruits and Vegetables Association chairman Hasan Widjaja said that Indonesia exports one ton of salak to Singapore and up to seven tons to China every week during peak. Salak exports are expected to grow annually because Indonesia is the only country that produces the fruit.

The lack of post-processing technology remains the primary obstacle in export, as fruits become overripe when they reach other countries. Overripe fruits are pungent and are not well received by foreign markets.



Farmers in Central Java cleaning up salak trees destroyed by the 2010 Mt. Merapi eruption.
(Photo courtesy of salakpondohmerapi.blogspot.com)

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Salak Recipe

Salak Fruit Cake

(from www.1001bakingrecipes.com)

Ingredients

Cake

130g plain flour
½ tsp. bicarbonate of soda
¼ tsp. baking powder
40 g ground hazelnut
130 g caster sugar
¼ teaspoon salt
150 ml water
80 g butter
2 eggs
150 g salak fruit flesh, chopped
50 g raisins

Butter Cream Frosting

200 g butter
200 g icing sugar
1 tbs. vanilla essence

Garnishing

1 tbsp. raisins
¼ tsp. icing sugar

Instructions

1. For the cake: sift flour, soda and baking powder together. Combine with ground hazelnut, sugar and salt. Beat until just blended in a mixer.
2. Add water, butter, and eggs into flour mixture. Beat in high speed for 3 minutes.
3. Fold in chopped salak fruit and raisins.
4. Spread batter into a lined 10 x 20 cm loaf pan. Bake in preheated oven at 180°C for 40 minutes. Remove from oven and cool completely.
5. To make frosting: beat butter, icing sugar and vanilla essence until fluffy.
6. Spread butter cream on top of cake. Sprinkle with some raisins, dust with icing sugar or decorate as desired.

Indian mango prices soar as harsh weather damages crops

INDIA: The temperamental weather has led to a delay in harvest, causing mango prices to rise from Rs 1,000-4,000 (USD 19-76) to Rs 5,000-10,000 (USD 95-190) per box (4 dozen-10 dozen pieces). The cause of delay vary from area-to-area, including unusual heavy rainfall, drought, and strong winds.

Mangoplantations in northwest and east India experienced up to 18mm of rainfall on the 2nd week of April 2012, with strong winds blowing off mango blossoms and fruits from trees.

This has delayed the Alphonso mango harvest in the state of Andhra Pradesh, which normally starts in March. Alphonso mangoes are the most popular variety in India because of its high quality, while the Kesar variety is second. Kesar mangoes from the western state of Gujarat also suffered the same fate, with harvests delayed by six weeks.

Meanwhile, the city of Kolar in South India is faced with "extremely dry weather and zero moisture in the soil" as stated by horticulture department officials in an interview with *The Times of India*. From the usual 1.5 million tons per year, officials expect that yields could drop to as low as 150,000 tons. Raspuri and Badam mangoes, considered low-quality varieties, have tripled in price locally. The Alphonso variety is expected to be too expensive for the common man.

As of the 3rd week of April, prices have also tripled in the city of Coimbatore in South India. The Alphonso and Imampasanth varieties cost Rs 180 (USD 3.50) per kg in wholesale markets, even higher in retail outlets. For lesser

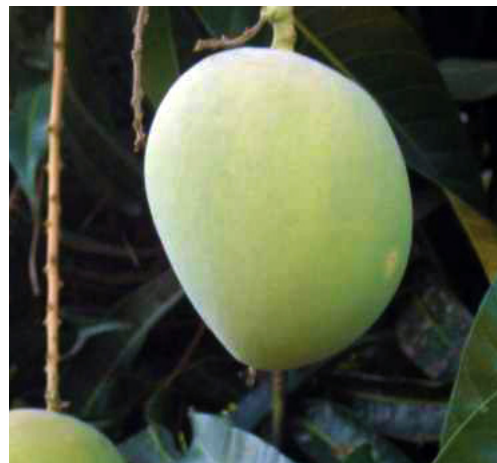
varieties Nadusalai, Bangapalli, and Senthuram, prices range from Rs 60-80 (USD 1.10-1.50). Other varieties are even scarcely available, with only three tons arriving per week from the usual 15 tons.

For Coimbatore, unexpected rains and a cyclone lowered flowering last December.

For Kanpur City in North India, strong westerly winds blowing at a speed of 50-55 kph damaged up to 40% of mangoes. Prior to this, January rains, winds from cyclonic winds, and "extremely low" temperatures caused irrecoverable loss during the flowering stage.

Production in Western India is also affected by erratic temperatures. Farmers report that night temperatures reach below 9°C and shoot up to 36°C in daytime during the flowering months. Growers in the area witnessed a constant decline in yields for the last three years.

The decrease in production ultimately decreased exports. For Pune City in Western India, the Maharashtra State Agricultural



Marketing Board (MSAMB) stated in an interview with *The Times of India* that they will only meet 75 metric tons out of the 150-mtdemand of the US. Exports to the US only reached 84.48 metric tons in 2011, less than 50% of the 275-metric-ton figure in 2008.

The Agriculture Produce Marketing Committee (APMC) in Mumbai confirmed that export orders have also declined. As a result, export prices rose by 50%.

However, the supply is expected to arrive in a few weeks. Prices of Alphonso are expected to plummet lower than Rs 700 (USD 13.30) per box of 4 dozen pieces

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Thai Lychee prices expected to shoot up as drought cripples production

More than 20,000 villages in 56 provinces of Thailand have been stricken with drought since February, said the Thai Disaster Prevention and Mitigation Department in an interview with the Bangkok Post.

The optimal temperature to produce lychee is between 20 and 30 degrees Celsius. However, however, the temperature reached as high as 40°C. This could be detrimental to Chiang Mai's lychee industry, which occupies more than 3,200 hectares.

"The damages are huge, even though farmers have tried to battle the heat using water sprinklers," Chiang Mai Longan Farmers Cooperative chairman Adulchai Intakhao tells Asia One News. He adds that while water sprinklers helped, the water pressure damaged young fruits.

Water levels in major rivers have fallen by up to 5m,



Thai lychees sold in a street market
(Photo courtesy of sleepwalkingintokyo.wordpress.com)

limiting water supply and preventing boat transports and trade barges from passing through. Receding water in reservoirs also threatens several agricultural industries, dropping to less than 50%.

The dry spell has hurt the output of

other crops like corn and rice.

Thailand recently has been experiencing extreme meteorological swings, with last year's flooding preceding the current drought. In 2010, a similar drought caused \$450 million in crop damages. After a year, the 2011 flooding caused \$40 billion in damages across all sectors of Thailand's economy.

Efforts to mitigate the heat have been employed by the Thai government. The Bureau of Royal Rainmaking and Agricultural Aviation (BRRAA) and the Royal Thai Air Force have performed 11 rainmaking operations since February 20. Five royal rainmaking operation centers have been established to produce rain and fill up reservoirs to a sufficient level.

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Peru launches new marketing campaign for avocados

The Peruvian Avocado Commission launches a new marketing campaign to commemorate its re-entry to the American Market, in line with the June-September avocado season. The campaign "Monumental Taste" conveys Peru's heritage along with its cuisine and products.

Peru is set to ship 60 million pounds of avocados to the United States in 2012, answering most of the 1.4 billion pound demand. The additional US imports of the Hass variety of avocados could mean lower prices and bigger selections for its consumers.

"We are thrilled to be able to bring high-quality Peruvian avocados to the United States during the highest period of avocado consumption," said Peruvian Avocado Commission Chairman and CEO of Agropecuaria Las Lomas de Chilca, Enrique

Camet. "Avocados from Peru will complement the California avocado season, allowing the avocado industry to finally keep up with the demands of consumers for more Hass avocados."

The integrated marketing effort is designed to raise consumer awareness and encourage product support at the retail level. Media channels include billboards near retail outlets, radio, and in-store signage in New York, Philadelphia, Chicago, Los Angeles, San Diego and Sacramento for the first year.

Local concerns

However, some local growers in California fear that domestic groves might be in danger, despite extensive anti-pest protections imposed as part of the agreement. California accounts for 86 percent of US avocado production, including most of the country's Hass. The

introduction of foreign pests could pose danger for the local industry. Thus, US officials imposed systematic inspection, packaging, and sanitation requirements as a condition of allowing the imports.

The past nine years, more than 28 million Hass avocados from Mexico have been inspected. Dangerous pests were found only twice.

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Feature

Pesticide-free Taiwanese carambola remains a stable export

With food contamination involving pesticide residues being a major concern to consumers, a special way of growing carambola in Taiwan makes them especially appealing to health conscious consumers, said veteran farmer Chen Chia-hsin, who in 2000 introduced net house cultivation to his orchard. Chen, who has more 20 years of experience in the business, won a Taiwanese national award for outstanding farming skills the same year.

Chen says that net house farming reduces pesticide usage by more than 50 percent. Carambolas are covered by paper bags in their early stage of growth and stay protected from insects and other pests until they are harvested. The controlled environment also allows the fruit to be harvested year-round, whereas in the past it could only grow in fall and winter. This passes the traceability and certification systems initiated by the Taiwanese Council of Agriculture that is instrumental in ensuring product quality and safety.

Taiwanese carambola exports have remained stable over the years, exceeding 2,500 tons. Hong Kong and mainland China make up the majority of Taiwan's outgoing shipments, followed by North America. The European Union is also a potential market, but is mainly dominated by Malaysian carambolas that are used for plate decoration.

This article is an abridged version of "Taiwan's struggling star fruit sector stages comeback" by Meg Chang, published in Taiwan Today.



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Email: info@itfnet.org

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MEMBERSHIP APPLICATION FORM

Name (Government/Organization/Individual): _____

Correspondence Address: _____

City: _____ Postcode: _____

State/Province: _____

Country: _____

Telephone: _____

Fax: _____

Email: _____

Payment Enclosed (USD): _____

Authorized Signature: _____

Name: _____

Designation: _____

Date: _____

I/We wish to join TFNet as:

- ☐ Country Member
- ☐ Associate Member
- ☐ Ordinary Member

Membership Fees per calendar year
(as of 20 Aug 2009)

- Country Members: USD 5,000 (one time)
- Associate Members: USD 500
- Ordinary Members: USD 50

Payment by International Bank Draft payable to

Account name: **International Tropical Fruits Network**

Account number : **A/C No. 7121-4700-0396**

Bank address: Malayan Banking Berhad

No. 231-233, Jalan 18/23, Taman Sri Serdang,
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