



INTERNATIONAL SOCIETY FOR HORTICULTURAL SCIENCE

Section Tropical and Subtropical Fruits

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Dear Colleagues,

Wish you and your family a Happy, Healthy and Prosperous New Year

In 2017, the Section is responsible for organizing four symposia (please see forthcoming events of 2017). We are pleased to inform that for the first time the Section has organized successfully the First International Symposium on Tropical Plantation Crops at Cairns, Australia from 20-25 November, 2016. We have also organized VI International Symposium on Tropical and Subtropical Fruits at Kafr El-Sheikh, Egypt from 26-28 September, 2016 and IV International Symposium on Guava and Other Myrtaceae at Cairns, Australia from 20-25 November, 2016 in the last six months.

This e-Newsletter is yours and you are welcome to use it as a vehicle to disseminate information to other colleagues. We will be happy to receive your comments, suggestions and will look forward for your inputs for the next issue.

With regards,

H.Jaenicke
Vice-Chair

S.K. Mitra
Chair

Section Tropical and Subtropical Fruits



Pomegranate (*Punica granatum*) Production in Turkey

The pomegranate also called 'Nar' in Turkish is a native plant to north-eastern part of Turkey and southern Caspian belt of Iran. It is an ancient plant that has been in cultivation for 5000 years. Pomegranate is one of the most important fruit trees cultivated in several countries with tropical and subtropical climatic conditions. Among these countries, India, Iran, China and Turkey are main producers. Other important producers are Chile, California, Spain, Tunisia, Morocco, Afghanistan, China, Pakistan, Azerbaijan, Armenia, Uzbekistan, Peru, Georgia, Mexico, Australia, Tadjikistan, Argentina, Algeria, South Africa, Indonesia, Cyprus, Egypt, Israel, Italy and Saudi Arabia (Gozlekci *et al.*, 2011; Ulrike, 2011). In Turkey, the cultivation of this fruit since antique was mostly carried out in the Mediterranean, Northeast and Anatolia provinces.

Total world production of pomegranate in 2014 was estimated to be more than 3.500,000 tonnes. The countries with the largest area of production include China (1.200,000 tonnes), Iran (1.009,885 tonnes), India (743,100 tonnes approx.), and Turkey (445,750 tonnes), with the leading exporting countries being Iran and India (Personal communication, 2014; Tuik, 2015).



The production trend analysis of pomegranate in Turkey showed that, the country produced 33.000 tonnes in 1985, which increased to 53.000 tonnes in 1995, and in 2000, it was 59.000, in 2005 it was 80.000, in 2010 production was 208.502 tonnes, and lastly in 2015, the production have risen progressively to 445.750 tonnes (Tuik, 2015). The Mediterranean zone has suitable ecological conditions for pomegranate cultivation, which accounts for 52.6% (234.609 tonnes) of total pomegranate production of Turkey. The Aegeanzone takes second place with 148.012 tonnes,

and third one is South-East zone with 51.790 tonnes. Antalya province ranks first (107.237 tonnes), the second highest producer was Mugla (65.748 tonnes) and Mersin (61.919 tonnes) followed third position (Tuik, 2015).

Turkey geographically is located between 42° 06' - 35° 51' north latitudes and 25° 40' - 44° 48' east longitudes in the northern hemisphere of the world. The country shares border with three seas, namely Aegean, Black and Mediterranean Seas. Turkey has both subtropical and temperate climatic conditions. The country also has nine agricultural zones that included Aegean, Black Sea, Central-North, Central-South, Central-East, Mediterranean, Marmara, North-East and South-East. Among these nine agro zones, Aegean,



Mediterranean and South-East zones have the most suitable climatic conditions for pomegranate production. The Mediterranean and Aegean zones have rainy and warm winter seasons, hot and dry in summer season, which is a typical characteristic of the Mediterranean climates. The South-East zone has harsh climatic condition, that is, the winter season is characterized by rain, snow and cold, whereas summer by hot and dry climate. The overall temperature is very high during the vegetation period in the South-East zone than those found in the Aegean and Mediterranean zones.

Turkey has very huge potential in pomegranate production because, the cultivation of this fruit is seen everywhere with suitable climatic conditions for its cultivation, including gardens, roadside, coastal and the mountainous areas, up to altitudes of 1000 m. Although, the cultivation of these fruits are usually carried out as a regular plantation, mixed cropping with other fruit trees or scattered plants have been recorded in some pomegranate producing zones of Turkey.



Turkey is a center of origin for pomegranate and has rich pomegranate genetic diversity. There are several local pomegranate accessions which are well adapted to different ecological conditions of Turkey. There are several varieties of pomegranates which are widely distributed in many parts of Turkey as a result of intensive breeding works. The accessions have been cultivated with traditional methods from ancient times until now and can be selected for resistance to diseases, pests, cold, and drought, etc. (Caliskan and Bayazit, 2013).

Currently, there are 47 cultivars and 261 genotypes recorded across different ecological zones of Turkey. The most commonly cultivated pomegranate in Turkey are Hicaznar, Katırbasi, Devedisi, Lefan, Zivzik, Fellahyemez, SilifkeAsisi and Beynari, YufkaKabuk, Ekşilik, Ernar, Suruç, Giliksiz, Ekşigöknar, etc. Hicaznar cultivar is the most popular cultivar in different regions both locally and internationally because the fruit has very appealing properties with redness peel and dark aril color and sweet-sour fruit taste for consumers. It is the most exported pomegranate in Turkey and for that singular reason, it has named as export pomegranate and in Turkish and it is called 'IHRAC NARI' (export pomegranate). The most recently developed cultivars from the Research Institutions in Turkey include BatemHicannar, BatemYilmaznar, BatemOnurnar, BatemEsinnar, İzmir1513, İzmir1267, İzmir1264, İzmir2, İzmir10.

The pomegranate trees are known for their long life span and also one of the most draught-tolerant tree plant. The tree can continue bearing fruit for a long period of time, but the production rate of the fruit declines after fifteen years. The tree has well developed root system that can grow to all sides and deep in the soil. The roots regenerate new suckers upon the death of the main trunk to prolong the existence of the plant. The tree can grow up to 9 meters high depending on the variety. Some dwarf varieties are also commercially available. The shrub-like

The tree plant is more or less spiny. The tree bark is brown-reddish or light brown in color at the younger stage, which changes to greyish tone or dark gray with time as the plant matures. The tree has dense branches which grow in all directions. The bearing of the fruits mostly occurs on the 2-3 year old branches. The leaves are oppositely arranged in the form of a narrow oblong spindle, about 0.5-2 cm wide and 1-8 cm long. In Turkey, the pomegranate tree is usually planted in winter with planting distance between 4-6 m.

The cultivation of pomegranate in Turkey in recent times is on the rise and gaining more popularity because of the numerous benefits to the people ranging from economic gains to health among other benefits. The pomegranate fruits are used in making variety of products such tea, delights, sour juice, etc.

Pomegranate Production Problems and Management

The production pomegranate in Turkey is limited by many disease and pest problems among them include diseases such as Brown spot (*Alternaria alternata*), Coniella Fruit rot (*Coniella granati*), Fruit rots (*Alternaria* spp., *Penicillium* spp., *Aspergillus niger*), Phytophthora root and root throat rot (*Phytophthora* spp.), *Eutypalata* and the pest include: Pomegranate aphid (*Aphis punicae*), pomegranate whitefly (*Siphoninus phillyreae*), Citrus mealybug (*Planococcus citri*)



Pomegranate fruit juice

Pomegranate leaf scab (*Aceria granati*), and Sour dough beetles (*Carpophilus* spp.), Carob moth (*Ectomyelois ceratonia*), Orange moth (*Cryptoblabes gnidiella*), Tree yellow worm (*Zeuzera pyrina*) and Mediterranean fruit fly (*Ceratitis capitata*) among others. The most frequent physiological disorder often encountered by pomegranate producers in Turkey has been sunburn and fruit cracking. Rats are the most harmful rodents of pomegranate fruits. The incidence of these diseases and pests vary from region to region and could cause heavy fruit losses. Beside these problems, other limitations faced by most farmers in Turkey include processing, marketing storage and lack of technical know how on the part of the farmers. These pest and disease problems can be managed by removing and destroying the diseased fruits, application of recommended chemicals such as Fludioxonil and Fenhexamid fungicides, pruning of the infected twigs and branches and using of resistance cultivars. Regular irrigation system such as the use of drip irrigation and sprinkler systems when use in the orchards, could solve some of these fruit splitting and cracking problems, thereby resulting in high productivity. We also recommend that during harvest, greater care should be carried out to avoid causing bruises and wounding on the fruits which could affect the storage life. Farmers should also harvest at the right time neither early nor late. Planting of early and late varieties could solve the marketing problems.



In conclusion, Turkey has a huge production potential of pomegranate fruits. The fruit production is on the rise, as this could be seen in an increase number of cultivation areas as well as an increase in the rate of pomegranate export to the other countries of the world. The number of pomegranate orchards in Turkey has been increasing rapidly in recent years because of high profit earnings. The cultivar Hicaznar is the most important cultivar for export to European countries. In order to increase productivity, the newly developed cultivars together with other good varieties should be used in establishing of pomegranate plantations. Additionally, farmers should also be educated on the technicalities in pomegranate production.

In recent times, many new companies are joining this sector of agriculture industry due to high increase in the prices of pomegranate fruits both locally and internationally. The consumption of this fruit has also increased within the local population due to its numerous health benefits. Based on the pomegranate production trend analysis from different years as examined in this study and with little government support, we predict that in the very near future, Turkey may likely become the number one on the pomegranate production chart in the world.

References

- Caliskan, O., and Bayazit, O. 2013. Morpho-pomological and chemical diversity of pomegranate accessions grown in eastern Mediterranean region of Turkey. *J. Agr. Sci. Tech.* 15, 1449-1460.
- Gozlekci, S., Ercisli, S., Okturen, F., and Sonmez, S. 2011. Physico-chemical characteristics at three development stages in pomegranate cv. Hicaznar. *Not Bot Hort Agrobot Cluj* 39(1), 241-245.
- Turk, G., Sonmez, M., Aydin, M., Yuce, A., Gur, S., Yuksel, M., Aksu, E.H., and Aksoy, H. 2008. Effects of pomegranate juice consumption on sperm quality, spermatogenic cell density, antioxidant activity and testosterone level in male rats. *Clinical Nutrition* 27(2), 289-296.
- Ulkrike, A.F., Reinhold, C., and Dietmar, R.K. 2011. Identification and quantification of phenolic compounds from pomegranate (*Punica granatum* L.) peel, mesocarp, aril and differently produced juices by HPLC/DAD-ESI/MS. *Food Chemistry* 127, 807-821.

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PRODUCTION AND TRENDS OF PERSIMMON IN SPAIN

Persimmon species (*Diospyros kaki* Thunb) originated and domesticated in Eastern Asia spread to temperate areas in North and South hemispheres. However, still more than 90% of the production is located in Asia, being China, Korea and Japan the main producers in the world.

China is the highest producer of persimmon with more than 3.5 million tons followed by Korea and Japan. The production outside Asia is located mainly in the Mediterranean basin. Spain is the fourth producer with 175.000 tons, followed by Brazil, Azerbaijan, Uzbekistan and Italy. Minor production is located in Israel, Turkey, New Zealand, Australia and Iran.



Production in the Mediterranean basin and Spain.

The varieties introduced in the Mediterranean countries were of astringent type: pollination constant astringent (PCA) and pollination variant astringent (PVA). A few cultivars of pollination variant non-astringent (PVNA) were also introduced in Italy. Spain presents the greatest and fastest increase of persimmon production among the Mediterranean countries in the last years, mainly due to the variety grown and new post harvest and marketing procedures. Twenty years ago, persimmon trees were grown along the eastern of Spain as isolated trees in gardens and family orchards or in small plantings for local consumption. Halfway through the 20th century, small plantations were initially established with native varieties available at this time: 'Tomatero', 'Picudo' (Costata) and 'Cristalino' in regions of Valencia province. All of them produced astringent type fruits. In this period a new variety was identified in the 'Ribera del Xúquer' area. The new variety was named 'RojoBrillante', which means bright red. The quality of this new PVA variety along with the development of technology for removing the astringency brought a revolution in persimmon growing within the region. All together, a new way of persimmon consumption and marketing was established. Now Spanish persimmon can be marketed and exported to many countries in Europe and overseas.



Figure 1: RojoBrillante variety

Production and surface have been increased in the last 15 years. In a few years, persimmon species evolved from a minor crop to become one of the fastest growing fruits in European markets. However, the crop is located in only two provinces. The province of Valencia with a production in 2012 of 144.000 tons is the main area followed by the province of Huelva with 16.000 tons. In the rest of the country the presence of the species relies as isolated trees in family gardens for local consumption. The production in Valencia relies on the cultivar 'RojoBrillante' which accounts for 96% of the crop in Valencia and 88% of the total Spanish production. The production area in Valencia increased from 6 ha in 1992, to 1988 ha in 2002 and 3714 in 2012. This increase was linked to the production and marketing of the variety 'RojoBrillante'. The origin of 'RojoBrillante' cultivar remains uncertain, it is believed to come from a bud mutation found in a local cultivar named 'Cristalino' in the 1940s (Llácer et al., 2008).



Origin and spread of the crop in the Mediterranean Basin

Diospyros kaki Thunb. originated in Eastern Asia, where many indigenous cultivars arisen, mainly in China, Japan, and Korea. Its culture began several centuries B.C. in China, and later, in the 7th century, persimmon was introduced into Japan and in the 14th century into Korea. There is no information of persimmon culture in Europe until the 17th century, and its spread worldwide occurred in the 18th century (Sugiura, 1997). Although a relatively recent introduction in Europe, the species has adapted well, and production expanded for the past 200 years in the Mediterranean basin. Though there are some documents that place the persimmon in Spain from the 16th century, its diffusion across the Mediterranean basin only occurred throughout the last two centuries, first as ornamental tree valued for the wood quality, and later as an isolated fruit tree in family gardens coexisting with citrus, fig and olive trees, or else in small plantings destined for the local consumption (Llácer et al., 2008).

Since the introduction of persimmon in Spain local cultivars have been developed that reflect the influence of natural (random seedlings and bud mutations) and human selection. The culture of these local cultivars has been limited by the astringency of the fruits. In Spain, the production of persimmon has increased recently as an alternative to the major fruit crops, due to the successful post-harvest treatment for removing the astringency, which allowed exportation of firm fruits. The low number of varieties grown implies several commercial and sanitary problems that can compromise the future of the crop. Efforts for the implementation of the range of persimmon varieties available are being carried out by means of introduction and evaluation of germplasm resources from other countries and by obtaining new varieties by breeding. Currently, non astringent varieties from Japan are a good alternative for increasing the number of cultivars. On the other hand, a breeding program based on crosses of 'RojoBrillante' and non astringent cultivars are in progress.

References

- Llácer, G., Martínez-Calvo, J., Naval, M., and Badenes, M.L. 2008. From germplasm to fruit export: the case of 'RojoBrillante' persimmon. *Adv. Hort. Sci.* 22(4), 281-285.
- Sugiura, A. 1997. Keynote Address. Proc. 1st Int. Persimmon Sym, Chiang Mai City, Thailand, 17-19 July 1996. *Acta Horticulturae* 436, 15-19.



Figura 2: Orchards of persimmon in Valencia area



Figura 3: Packing house.

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Update on Australian mango production

Mango Production: In Australia, mangoes are predominantly grown in the Northern Territory, Queensland, and when combined, produce approximately 95% of the total national crop. In recent years production volumes from the Northern Territory have grown to the point that it now equals production from Queensland. Mangoes are also grown in Western Australia, New South Wales, Victoria and South Australia (Figure 1).



Harvest Windows: The seasonal harvest starts in the Northern Territory and Western Australia in September, followed by Queensland's dry tropical regions (Townsville / Burdekin / Bowen) in mid-November, Mareeba / Dimbulah in early December, Central Queensland in late December, and South East Queensland and Northern New South Wales in January (Table 1).

Production Volumes: Total volume of fruit marketed fluctuates from year to year, due to seasonal conditions and the irregular bearing nature of the crop. Average production marketed over the last five years has been approximately 53,500 tonnes. The gross value of production (GVP) at farm gate is approximately \$140 million per annum. 2016/17 mango season production is forecasted to be 43,589 tonnes.

Varieties: There are a range of commercial mango varieties grown in Australia for the domestic and export markets. The main varieties and their respective approximate market share are: Kensington Pride (65%), Calypso™ (20%), R2E2 (6%) and Honey Gold™ (4%) and Keitt (3%). Other late season varieties include: Palmer, Kent, Pearl and Brooks.



R2E2

The production in the 2016/17 mango season per region, per variety and per week is detailed in the Table 1. The price at different domestic market is detailed in the Table 2. These information are collected and made available to the mango industry by Australian Mango Industry Association (AMIA) with the help of the mango levy. In Australia, mango growers pay a compulsory levy of 1.893 cents per kilogram or 13.25 cents per 7 kilogram tray for each tray of mangoes sold domestically or internationally. Levies are collected by the Levies Revenue Service (LRS), an agency of Department of Agriculture, and are passed onto Horticulture Australia Limited (HAL) to manage and invest in a range of programs. The spread of the levies are seen below:



Calypso

Levy	Cents per Kilogram	Cents per 7 Kilogram Tray
Marketing and Promotion	1	7
Research and Development	0.75	5.25
Plant Health Australia	0.029	0.2
Emergency Plant Protection Response	0.114	0.8
Total	1.893	13.25

(This update is compiled from AMIA and Ausmarket websites by Dr. Ping Lu, Chair of the Mango Working Group)



Table 1. Australian mango production ('000 trays, 7 kg/tray) - 2016/2017 forecast/dispatch to the markets (updated 6 Dec. 2016)

WEEK BEG	29 AUG	5 SEP	12 SEP	19 SEP	26 SEP	3 OCT	10 OCT	17 OCT	24 OCT	31 OCT	7 NOV	14 NOV	21 NOV	28 NOV	5 DEC	12 DEC	19 DEC	26 DEC	2 JAN	9 JAN	16 JAN	23 JAN	30 JAN	6 FEB	13 FEB	20 FEB	27 FEB	6 MAR	13 MAR	Total		
DARWIN (Estimated crop volume 1.8 m trays)																																
KP	1%	1%	1%	2%	2%	8%	10%	15%	15%	20%	10%	10%	5%																			
R2E2						3%	4%	4%	15%	24%	24%	21%	5%																			
CALYPSO									10%	20%	20%	20%	15%	15%																		
OTHER				7%	7%	4%	4%	14%	14%	14%	14%	11%	11%																			
VOLUME*	4	12	15	12	12	28	27	117	322	339	303	200	148	50																	1589	
KATHERINE (Estimated crop volume 1.7 m trays)																																
KP						3%	4%	4%	5%	10%	15%	20%	19%	15%	5%																	
R2E2									10%	10%	17%	17%	16%	10%	10%	10%																
CALYPSO										10%	10%	20%	20%	20%	10%	10%																
HONEY GOLD												10%	25%	25%	25%	15%																
OTHER											20%	20%	20%	20%	20%																	
VOLUME*						4	5	13	58	58	92	245	240	281	200	100															1296	
BOWENBURDEKIN (Estimated tray volume 1.2 m trays)																																
KP										2%	10%	11%	19%	15%	17%	18%	4%	4%														
R2E2										10%	5%	10%	15%	18%	25%	14%	1%															
HONEY GOLD															24%	48%	28%															
OTHER														16%	44%	40%																
VOLUME*										7	10	80	156	205	250	220	40	30													998	
MAREEBA/DIMBULAH (Estimated crop volume 1.95 m trays)																																
KP														1%	1%	5%	15%	13%	31%	21%	7%	6%										
CALYPSO															3%	5%	5%	14%	16%	15%	15%	10%	9%	8%								
R2E2															10%	7%	8%	11%	26%	15%	23%											
HONEY GOLD															3%	3%	4%	8%	24%	7%	10%	21%	16%	4%								
KEITT																					9%	20%	23%	21%	21%	6%						
OTHER																3%	3%	3%	3%	3%	3%	4%	4%	4%	16%	26%	20%	4%	4%	3%		
VOLUME*														4	45	80	145	200	380	280	230	180	160	110	50	40	15	15	10	1944		
CENTRAL/SE QLD (Estimated crop volume 400K trays)																																
KP																1%	1%	16%	30%	31%	11%											
CALYPSO																						8%	17%	24%	25%	8%	8%	8%				
R2E2																1%	6%	11%	5%	12%	9%	15%	27%	14%								
HONEY GOLD																						3%	8%	16%	22%	22%	22%	8%				
KEITT																							28%	34%	15%	18%	5%					
OTHER																						9%	9%	4%	18%	24%	17%	9%	9%			
VOLUME*																		1	7	12	16	34	38	57	81	66	57	26	5	400		
*BLACK - Actual weekly volume of trays dispatched from the region across all varieties																																
*RED - Forecast weekly volume of trays dispatched from the region across all varieties																																
																																Overall Total 6227



Table 2. Australian Mango Report (adapted from <http://www.ausmarket.net.au/mango.htm>)

Daily Mango prices for Friday 9 December 2016

Species/Variety/Tonnes	Market	State	Region	Pack	Price Range		Most Sales		Best	Avg Kg	Supply	Demand	Carrover	Quality
					Low	High	Low	High						
MANGOES, Calypso	ADL	Y	Darwin	18LCtn	25.00	30.00				10	Mod	Adeq	Some	Mixed
Calypso, No1	ADL	Y	Darwin	SLTray	22.00	24.00				7	Mod	Adeq	Some	Good
Kensington Pride, No1, ExLarge <14	ADL	Y	Katherine	SLTray	20.00	25.00				7	Mod	Adeq	Some	Good
Kensington Pride, No1, Large 14-16	ADL	Y	Katherine	SLTray	24.00	28.00				7	Light	Adeq	Some	Good
Kensington Pride, No1, Medium 18-20	ADL	Y	Katherine	SLTray	28.00	30.00				7	Mod	Adeq	Some	Good
R2E2, No1	ADL	QY		SLTray	20.00	24.00				8	Mod	Adeq	Some	Good
Calypso, No1 89.04T	BRS	Y		Mod 6	30.00	45.00				11	Light			Good
Calypso, No1, Large 14-16	BRS	Y		SLTray	18.00	22.00				7	Light			Good
Calypso, No1, Medium 18-20	BRS	Y		SLTray	22.00	24.00				7	Light			Good
Kensington Pride, Extra	BRS	YQ		SLTray	30.00	36.00				7	Light			Good
Kensington Pride, No1, ExLarge <14	BRS	YQ		SLTray	20.00	25.00				7	Heavy			Fair
Kensington Pride, No1, Large 14-16	BRS	Y	Katherine	SLTray	20.00	25.00				7	Mod			Good
Kensington Pride, No1, Large 14-16	BRS	YQ		SLTray	20.00	25.00				7	Heavy			Fair
Kensington Pride, No1, Medium 18-20	BRS	YQ		SLTray	20.00	30.00				7	Heavy			Fair
Kensington Pride, No1, Medium Large, Count 14-18	BRS	Y	Katherine	SLTray	20.00	30.00				7	Mod			Good
Kensington Pride, No2	BRS	YQ		18LCtn	12.00	24.00				10	Heavy			Good
Kensington Pride, No2	BRS	YQ		SLTray	10.00	16.00				7	Heavy			Fair
Kensington Pride, Out of Grade	BRS	YQ		18LCtn	8.00	12.00				10	Mod			
Kensington Pride, Out of Grade	BRS	YQ		SLTray	8.00	14.00				7	Mod			
R2E2, Extra	BRS	YQ		SLTray	20.00	30.00				8	Mod			Good
R2E2, No1, Medium 11-12	BRS	YQ		SLTray	16.00	20.00				8	Heavy			Good
R2E2, No2	BRS	YQ		18LCtn	12.00	16.00				10	Mod			Good
R2E2, No2	BRS	YQ		SLTray	10.00	14.00				8	Mod			Good
Culinary, Asian Queen, No1	BRS	Y		Kg	5.00					1	Light			Good
Culinary, Falant	BRS	Y		Kg	7.00					1	VLight			Good
Culinary, Keo Savoy	BRS	Y		Kg	7.00					1	Light			Good
Culinary, NamDok Mai	BRS	Y		Kg	5.00					1	Light	Adeq	Some	Mixed
Calypso	MLB	Y		10KgTra	20.00	28.00				10	Mod	Fair	Some	Fair
Calypso, Extra	MLB	Y		12KgCtn	36.00	65.00				12	Mod	Fair	Some	Fair
Calypso, No1	MLB	Y		9KgTray	20.00	25.00				9	Mod	Fair	Some	Fair
Kensington Pride, Extra	MLB	Q	Mareeba	SLTray	40.00	48.00				7	VLight	Fair	Some	Fair
Kensington Pride, Extra	MLB	Y		SLTray	30.00	36.00				7	Good	Fair	Some	Fair
Kensington Pride, No1	MLB	Y		18LCtn	20.00	25.00			30.00	10	Good	Fair	Some	Fair
Kensington Pride, No1, ExLarge <14	MLB	Y		SLTray	20.00	25.00				7	Good	Slow	Some	Fair
Kensington Pride, No1, Large 14-16	MLB	Y		SLTray	20.00	25.00				7	Good	Slow	Some	Fair



Kensington Pride,No1,Medium 18-20	MLB	Y		SLTray	20.00 - 25.00		7	Good	Slow	Some	Fair
Kensington Pride,No1,Small >20	MLB	Y		SLTray	20.00 - 25.00		7	Good	Slow	Some	Fair
Kensington Pride,No1,Unspecified	MLB	Q	Mareeba	SLTray	35.00 - 40.00		7	VLight	Fair	Some	Fair
Kensington Pride,No2	MLB	Y		18LCtn	15.00 - 20.00		10	Good	Slow	Some	Mixed
Kensington Pride,No2	MLB	Y		SLTray	10.00 - 20.00		7	Good	Slow	Some	Fair
R2E2,No1	MLB	Q		18LCtn	20.00 - 28.00		30.00 10	Mod	Fair	Some	Fair
R2E2,No1,Large 8-10	MLB	Q		SLTray	18.00 - 25.00		30.00 8	Mod	Fair	Some	Fair
R2E2,No1,Medium 11-12	MLB	Q		SLTray	18.00 - 25.00		30.00 8	Mod	Fair	Some	Fair
R2E2,No1,Small >12	MLB	Q		SLTray	18.00 - 25.00		30.00 8	Mod	Fair	Some	Fair
R2E2,No2	MLB	Q		18LCtn	12.00 - 15.00		10	Mod	Fair	Some	Mixed
Culinary,Unspecified	MLB	Y		Kg	2.00 - 3.00		1	Mod	Fair	Some	Mixed
Calypso,No1	SYD	Y		10KgTra	30.00 - 36.00		10	Mod	Fair	Some	Fair
Calypso,No1	SYD	Y		SLTray	16.00 - 20.00		24.00 7	Mod	Fair	Some	Fair
Kensington Pride,Extra	SYD	Q	Atherton	SLTray	35.00 - 45.00 40.00		7	VLight	Good	Some	Good
Kensington Pride,Extra	SYD	Y		SLTray	30.00 - 35.00		36.00 7	VLight	Good	Some	Fair
Kensington Pride,No1	SYD	QY		18LCtn	28.00 - 36.00		10	Mod	Fair	Some	Mixed
Kensington Pride,No1,ExLarge <14	SYD	QY		SLTray	16.00 - 24.00 20.00		7	Mod	Fair	Some	Mixed
Kensington Pride,No1,ExLarge <14	SYD	QY		SLTray	16.00 - 22.00		24.00 7	Mod	Fair	Some	Mixed
Kensington Pride,No1,Large 14-16	SYD	QY		SLTray	16.00 - 24.00 22.00 - 22.00		26.00 7	Mod	Fair	Some	Mixed
Kensington Pride,No1,Medium 18-20	SYD	QY		SLTray	16.00 - 24.00 22.00 - 22.00		26.00 7	Mod	Fair	Some	Mixed
Kensington Pride,No1,Unspecified	SYD	QY		SLTray	16.00 - 24.00 22.00		7	Mod	Fair	Some	Mixed
Kensington Pride,No2	SYD	QY		18LCtn	10.00 - 20.00 12.00 - 14.00		10	Good	Fair	Some	Mixed
Kensington Pride,No2	SYD	QY		18LCtn	12.00 - 16.00 15.00		10	Good	Good	Some	Mixed
Kensington Pride,No2	SYD	QY		SLTray	6.00 - 14.00		7	Good	Slow	Some	Mixed
Kensington Pride,Out of Grade	SYD	Y		SLTray	3.00 - 10.00 5.00 - 8.00		7	Good	Slow	Some	Poor
R2E2,Extra	SYD	QY		SLTray	20.00 - 24.00		26.00 8	Mod	Good	Some	Good
R2E2,No1	SYD	QY		SLTray	16.00 - 22.00 16.00 - 18.00		8	Good	Good	Some	Mixed
R2E2,No2	SYD	QY		18LCtn	12.00 - 24.00 20.00		26.00 10	Good	Fair	Some	Mixed
R2E2,No2	SYD	QY		SLTray	12.00 - 16.00		8	Good	Fair	Some	Fair
R2E2,Out of Grade	SYD	Y		SLTray	4.00 - 10.00		8	Mod	Slow	Some	Poor
Culinary,Keo Savoy	SYD	Q		Kg	4.00 - 6.00		6.50 1	Light	Good	Some	Good
Culinary,NamDok Mai	SYD	Q		Kg	5.00 - 6.00		1	Light	Good	Some	Mixed
Culinary,R2E2	SYD	Q		Kg	3.00 - 4.00		1	Light	Fair	Some	Good

Intakes (tonnes) for each Market appear beside the first listing for that Market. States N=NSW, Y=Northern Territory, Q=QLD, V=Victoria W=WA, I=Imported.

Dr. Ping Lu, Chair, Working Group on Mango, ISHS

Forthcoming events-2017: Section Tropical and Subtropical Fruits



Date and venue	Symposium	Contact/s
June 19-23, 2017 Palermo, Italy	International Symposium on Flowering, Fruit Set and Alternate Bearing.	Prof. Tiziano Caruso (tiziano.caruso@unipa.it) Professor Sisir Mitra (sisirm55@gmail.com) http://www.fsab2017.it
July 10-16, 2017, Baise City, Guangxi, China	XII International Mango Symposium	Wen-ming Huang (tdxfb37@163.com) Prof. Dr. Xinhua He (honest66222@163.com) Prof. Cheng-xin He (228268892@qq.com) http://www.mango2017.com.cn
September 18-20, 2017, Muscat, Oman	X International Symposium on Temperate Fruits in the Tropics and Subtropics	Dr.Rashid Al-Yahyai (alyahyai@squ.edu.om) http://tfts2017.info
October 15-19, 2017, Havana, Cuba	IX International Pineapple Symposium	Proposed
October 24-27, 2017, Merida Yucatan, Mexico	V International Symposium on Papaya	Dr. Jorge M. Santamaria (jorgesm@cicy.mx) http://www.cicy.mx/sitios/V-Symposium-on-papaya/index.html