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FR*ui*TROP **m**agazine

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English edition

Litchi

Increasingly concentrated

Pinapple European market:
A new record in 2018?

European Stone fruits:
Initial info on the 2018 harvest

Southern Hemisphere Kiwi:
Good vibes about the summer

Producer country file:
The **Cherry** in Turkey

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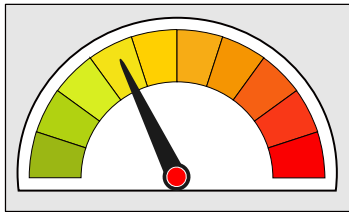
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Three letters form the hot topic in the French agricultural industries: EGA, which stands for States General for Food. After a massive concertation of all the industry players, including consumers, the time has come to write the Act (see editorial in **Fruitrop** 256). And as usual, we are left with a text whose ambitions have largely been revised downward. So it will be no revolution, since France is part of a European and world collective which has rules, in particular relating to competition. While this text nonetheless bears seeds of a profound change, certain pitiful and ridiculous deviations could have been avoided, such as the submission



of an amendment making it obligatory to stipulate the number of phytosanitary treatments on fresh fruits and vegetables. Proposing such an amendment shows the lack of knowledge among our parliamentarians, prepared to give way cheaply to the food fear lobbies. Since if there is an ultra-technical subject, it is that of phytosanitary treatments. You have to stipulate the product, the dose, the toxicity, the additive, the application mode, the type of phytosanitary treatment, at what stage of development, including seeds or planting stock, etc. So if it is difficult to inform the consumers properly, you may as well misinform them by providing the illusion that you are providing the necessary information for correct decision making. The number of treatments in itself is strictly insignificant! There as elsewhere, mere number-crunching makes no sense. That is why the industry

players have for many years sought more accurate indicators, e.g. TFI (Treatment Frequency Indicator), though this remains no less criticisable*. Whatever the chosen indicator, it will in every case be eminently more complex to implement than simply counting treatments. Yet at the risk of wanting to inform consumers, we use what science and technology propose. We do not know at the time of writing whether the amendment will pass, yet in any event it provides powerful symbolism, common to all sectors: scientific truth is pushed out by the media circus, provided that you make it look like you are taking action.

Denis Lœillet

* Excellent paper by Yves Guy from 2007, on "Reflections on the selection criteria for phytosanitary pressure indicators"

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FRUITROP

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Cover photograph © Christian Lavigne

Banana

April/May 2018

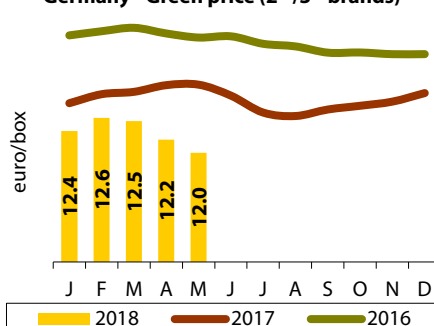
Despite the arrival of spring in **April**, banana sales maintained a good level because of the small presence of competing fruits. However, the supply pressure continued to increase, which shook the market. While combined Africa-French West Indies volumes remained in short-fall, they were readily offset by dollar bananas (late production peak from Ecuador, at above-average levels, peak from Colombia, seasonal increase from Costa Rica). In addition, the logistical disruptions continued, with the simultaneous arrival of several ships and therefore saturation on the various markets. Hence deferred volumes were available, and spot supplies at competitive prices continued to flourish in both Eastern and Western Europe. Prices continued to freefall to reach historically low records toward the end of the month, particularly in Eastern Europe.

In early **May**, the crisis reached its height and prices their lowest level. However, the saturation started to ease toward mid-May thanks to the waning dollar banana supply (end of Colombian peak starting to fall, smaller shiploads in Ecuador given the poor market situation). Hence the historic price fall was halted, though they topped out at extremely low levels for the season, with some stocks still available on certain markets, especially in Eastern Europe.

NORTHERN EUROPE — IMPORT PRICE

May 2018 euro/box	Comparison	
	previous month	average for last 2 years
11.97	- 2 %	- 12 %

Germany - Green price (2nd/3rd brands)



■ **Panama disease (TR4) in Israel: presence confirmed since 2016.** While the spread of Panama disease tropical race 4 often causes hysteria among world banana trade players, news of the discovery of a new hot spot (@fruitrop twitter feed) has just gone practically unnoticed. This is doubtless the result of the highly efficient advertising strategy of the Israeli authorities. In the May 2018 bulletin of the European and Mediterranean Plant Protection Organisation (EPPO), Israel officially and simultaneously announced that it had detected the presence of the disease on its soil in July 2016, and eradicated it in 2018. This staggering effectiveness is something unique worldwide, of which the Australian authorities, world champions in eradicating this disease, must be jealous. Since after years of struggle, they have admitted defeat, now resigning themselves to living with this new sanitary constraint. Israel did not fall short. It has driven TR4 out of its national territory, while it has been present over the border in Jordan since 2013. However, voices are being raised in astonishment at such effectiveness, or in indignation that Israel did not reveal the presence of the disease on its territory earlier, which would have helped prevent its possible spread via land, people, equipment and also planting stock, one of the main producers of which is based in Israel. Conversely, others although always ready to go on about the apocalyptic effects of the spread of such a disease to the very existence of the Cavendish banana, see nothing

wrong with that, accepting at face value the twenty reassuring lines of the press release. When questioned over the issue of the eradication, specialists are of course dubious over such a success, given the lack of explanation over the means used, not to mention the natural mistrust of the national authorities which for two years covered up the danger. Technically, eradication is extremely unlikely unless for example the soil has been removed and treated to a significant depth, on the two affected areas: Shfeya region (Carmel coastal plain), and the Lake Galilee region. Furthermore, the fungus may enter a dormancy phase while maintaining its pathogenic capacity for decades after being cut off from its food source, the banana plant. Finally, the vicinity of the Israeli and Jordanian production zones, the catchment areas, the water networks are all potentially permanent vectors of reinfestation (see "Tropical race 4 of Panama disease in the Middle East", Randy Ploetz et al., *Phytoparasitica* (2015) 43:283-293).

So there are just two possibilities, either Israel has indeed eradicated the disease and it needs to explain how and provide guarantees of its good faith, or the poor frightened dears, which no longer even organise their conferences in the production zones for fear of introducing and spreading the fungus, put an end to the farce, since it cannot be as frightening as all that... at any rate going on their deafening silence to the Israeli announcement.

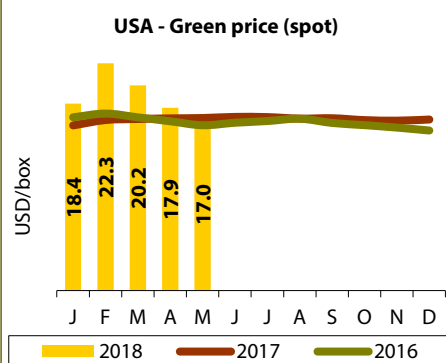
Source: CIRAD

EUROPE - RETAIL PRICE

Country	May 2018		Comparison	
	type	euro/kg	April 2018	average for last 3 years
France	normal	1.64	- 2 %	- 3 %
	special offer	1.21	- 16 %	- 22 %
Germany	normal	1.28	- 1 %	- 6 %
	discount	1.10	- 1 %	- 4 %
UK (£/kg)	packed	1.05	0 %	+ 4 %
	loose	0.80	0 %	+ 8 %
Spain	platano	2.23	+ 5 %	+ 9 %
	banano	1.21	- 3 %	- 8 %

Banana

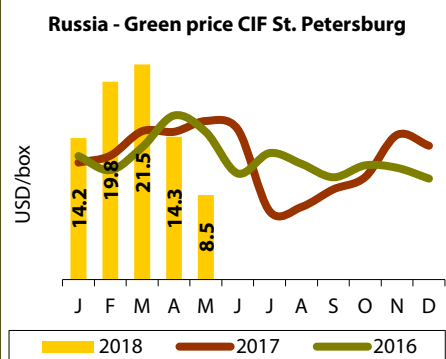
UNITED STATES



UNITED STATES - IMPORT PRICE

May 2018 USD/box	Comparison	
	previous month	average for last 2 years
16.99	- 5 %	+ 2 %

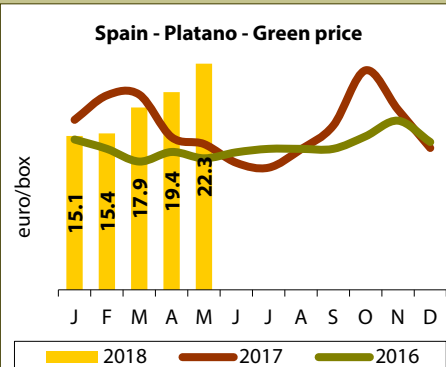
RUSSIA



RUSSIA - IMPORT PRICE

May 2018 USD/box	Comparison	
	previous month	average for last 2 years
8.47	- 41 %	- 45 %

CANARIES



CANARIES - IMPORT PRICE*

May 2018 euro/box	Comparison	
	previous month	average for last 2 years
22.30	+ 14 %	+ 63 %

* 18.5-kg box equivalent

■ Banana supply to the EU-28: inflated volumes in April.

April 2018 was a highly impressive month when the supply reached 591 000 tonnes, an absolute record for April, and practically 7 % more than one year previously. Over the first four months of 2018, the supply climbed to 2 259 000 tonnes, i.e. a gain of 1.8 %. Over twelve months (May 2017 to April 2018), there was a more distinct gain with + 3.6 % on the previous twelve months: 6 414 000 tonnes, i.e. + 222 000 tonnes. In April, as was the case for the previous months, the dollar sources proved a big hit, with 11 % growth on April 2017! Ecuador is as usual at the head of the ranking. After a marked dip in Q1, Colombia bounced back with great vigour in April (+ 11 %). In April Costa Rica also confirmed its very fine performance going back to February. The ACP origins continued to lose ground, both in Africa (- 5.1 % due to Cameroon) or elsewhere (- 5.6 %). European production was split into two: the French West Indies gradually came

back onto the market after Cyclone Maria, while the Canaries supply registered a record for the first four months, with April marking the end of this growth cycle.

Source: CIRAD

■ Banana supply to the USA: ongoing positive trend in terms of volumes.

As with the EU, there was a very heavy supply in April 2018: + 11.6 % on April 2017. The performance was closer to average from the beginning of the year (+ 0.9 %) due to Q1 being very light in terms of volumes (especially March). Over twelve months, the US market went up by 5 % to 4 247 000 tonnes (+ 200 000 tonnes). As elsewhere, it was Ecuador which set the upward trend (+ 29 % over four months), while the positions of Guatemala and Costa Rica declined; while Honduras collapsed by 20 %. Mexico had a strong rise (+ 7 %), clearly favouring shipments to the United States over the EU.

Source: CIRAD

Banana – EU & USA – Supply from January to April 2018 (provisional)

000 tonnes	2016	2017	2018	2018/2017 difference
EU-28 - Supply	2 109	2 218	2 259	+ 2 %
Total imports, of which	1 881	2 039	2 078	+ 2 %
MFN	1 512	1 670	1 733	+ 4 %
ACP Africa	214	225	209	- 7 %
ACP others	154	138	135	- 2 %
Total EU, of which	228	179	181	+ 1 %
Martinique	63	24	27	+ 10 %
Guadeloupe	19	14	0	- 97 %
Canaries	139	135	147	+ 9 %
USA - Imports	1 562	1 572	1 581	+ 1 %
Re-exports	189	191	187	- 2 %
Net supply	1 373	1 381	1 394	+ 1 %

EU sources: CIRAD, EUROSTAT (excl. EU production) / USA Source: US Customs

EUROPE - IMPORTED VOLUMES - MAY 2018

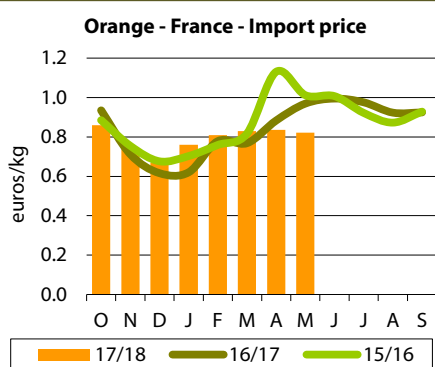
Source	Comparison		
	April 2018	May 2017	2018 cumulative total compared to 2017
French West Indies	↗	- 3 %	- 20 %
Cameroon/Ghana/Côte d'Ivoire	↗	0 %	- 4 %
Surinam	↗	- 24 %	- 3 %
Canaries	↘	- 19 %	+ 3 %
Dollar:			
Ecuador*	↗	+ 6 %	+ 7 %
Colombia*	↘	- 2 %	- 10 %
Costa Rica	↗	+ 10 %	+ 8 %

Estimate made thanks to professional sources / * total for all destinations

Orange

April/May 2018

Competition and oversupply weighed down on the orange market. For the table orange, Spanish Navelate shipments remained in shortfall and were only partially offset by increasing volumes of Navel Powell (9 % above average in April/May). However, the competition on the juice oranges segment was very strong: Egyptian volumes flooded the market at competitive prices (much higher potential than last season), and Turkish fruits were also available. In this context the Spanish Valencia Late season progressed slowly, suffering the same price pressure as its competitors while production prices remained high. Hence despite rather fluid sales (temperatures still cool, summer fruits delayed by the climate conditions), prices for all origins and varieties remained low and disappointing for the season.



PRICE	Type	Average monthly price euro/15-kg box	Comparison with average for last 2 years
	Dessert orange	12.45	- 18 %
	Juice orange	11.85*	- 15 %

VOLUMES	Type	Comparison	
		previous month	average for last 2 years
	Dessert orange	↘	- 6 %
	Juice orange	↗	-

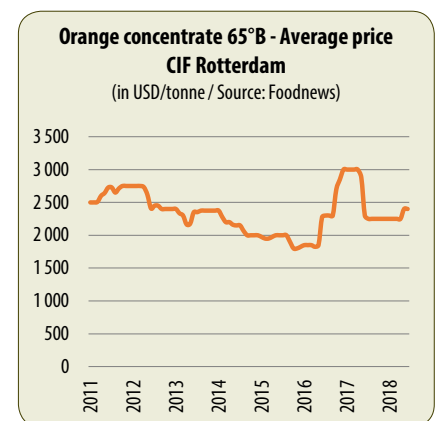
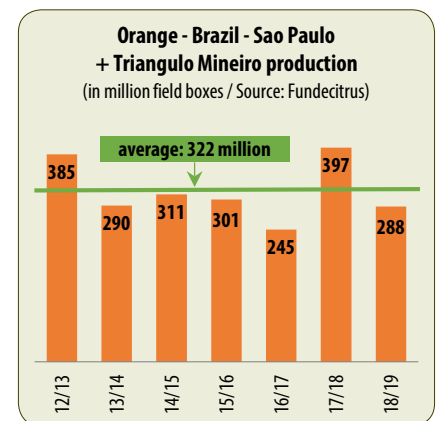
VOLUMES	Varieties by source	Comparison		Observations	Cumulative total / cumulative average for last 2 years
		previous month	average for last 2 years		
	Spanish Navelate	↘	- 23 %	Volumes still in shortfall because of rainfall in production zones, and campaign ahead of schedule. Campaign drawing to a close.	- 16 %
	Spanish Valencia late	=↗	- 25 %	Limited rise due to strong competition from other origins such as Egypt. Volumes still in shortfall.	- 24 %

* Spanish Valencia late price

■ **Orange juice: prices on the up in 2018-19.** The magnitude of the Brazilian harvest is more than ever the orange juice price gauge, with Florida now only playing second fiddle due to the collapse of its production. Hence the Brazilian harvest in 2018-19 is set to be rather lean: the 288 million field crates expected in Sao Paulo State and the Triangulo Mineiro zone marked a downturn of approximately 28 % from the bumper 2017-18 season, a level 10% below the six-year average. The fault lies with the alternate bearing phenomenon and the rather unfavourable climate conditions for fruit setting. This fall came while Brazilian stocks maintained a low level, despite a big climb from June 2017 (306 000 t in June 2018 as opposed to 107 000 t in June 2017, yet from 510 000 to more than 760 000 t from June 2012 to June 2015). In all probability, they should plummet between 55 000 and 155 000 t in June 2019 according to Citrus BR. Given this prospect of limited production and stocks, prices of 65°B concentrate quite logically began to increase, reaching 2 400 USD/t into Rotterdam in late April (+ 300 USD/t). The recent survey conducted by Fundecitrus demonstrated a near status quo in the cultivation area. While surface areas collapsed by approximately 30 000 ha between 2015 and 2018, the number of trees remained practically stable at 194.4 million (- 1.7 % on 2015) thanks to the increasingly widespread practice of high-density planting (668 trees per ha in 2018 as opposed to 550 in 2010). Furthermore, the cultivation area is increasingly concentrated in the hands of medium to large and high-tech facilities. Hence approximately 1 700 production

facilities disappeared between 2015 and 2018, which practically all comprised less than 50 ha. The planting rate remained stable at approximately 7 to 8 million trees per year since 2015, a level well below the 10 to 12 million trees seen at the beginning of the decade.

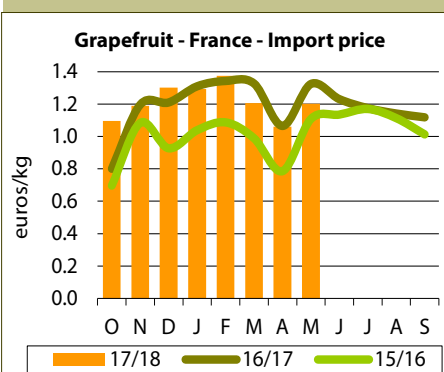
Sources: Fundecitrus, Citrus BR, IEG



Grapefruit

April/May 2018

The grapefruit market held firm in April before suffering from pressure in May. Despite quiet demand, prices in April remained above average because of the waning supply. As the Corsican season began, the last Spanish and Turkish stocks were available and Israeli shipments embarked on their seasonal fall. The first shipments from South Africa were delayed by the lack of coloration of the fruits in production. In May, while Israel and Corsica continued their fall, shipments from South Africa picked up, rapidly registering above average levels given the predicted surplus export potential (+ 5 % on 2017). Hence the lines switched only very slowly to the incoming origin. The proportion of small sizes and lack of coloration also hindered sales for South Africa. In this context, prices rapidly dropped to lower levels than in previous campaigns.



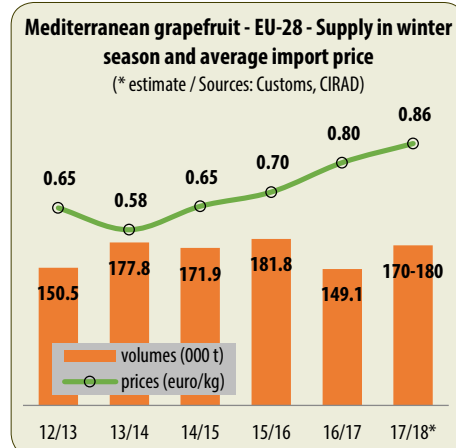
■ **US market more open to South African citrus.** The US market should soon be more open to South African citrus. At present, only fruits originating from Western and Northern Cape, zones free from Black spot, are permitted. The new regulations stipulate expanding export authorisation to the zones affected by this disease, which should no longer be considered as a quarantine disease. This decision, which should take effect for the 2019 campaign, is opening up interesting prospects for easy peeler, orange and grapefruit producers (cold treatment still being a practically unsurmountable handicap for the lemon). South Africa exported approximately 55 000 t of citrus to the USA in 2016 and 2017.

Sources: CGA, ITC

■ **EC Mediterranean grapefruit market in 2017-18: even better than in 2016-17!** If 2016-17 was a very good season for Mediterranean exporters, 2017-18 was apparently even better according to Customs figures (still provisional), in terms of both volumes and price. The gap left by Florida, hit by Hurricane Irma, is not

unrelated to this fine performance. Turkey, highly discreet in 2016-17 due to frost, apparently saw its volumes climb by nearly 35 to 40 %. Spain reportedly continued to nibble into the market share, with volumes up by approximately 5 to 10 % and probably close to the record from 2014-15. Only Israeli shipments to Europe apparently maintained only an average level close to that of 2016-17, with Asian diversification markets conversely receiving bigger volumes. All the origins saw their campaign average price rise considerably, often reaching record levels.

Sources: Customs, CIRAD



PRICE	Source	Average monthly price euro/17-kg box equivalent	Comparison with average for last 2 years
	Mediterranean	13.90	- 3 %
	Tropical	18.15	- 5 %

VOLUMES	Source	Comparison	
		previous month	average for last 2 years
	Mediterranean	↗	- 12 %
	Tropical	↘	+ 12 %

VOLUMES	Source	Comparison		Observations	Cumulative total / cumulative average for last 2 years
		previous month	average for last 2 years		
	South Africa	↗	+ 12 %	Volumes on the rise and above average in May. Production potential higher than in previous years, and high proportion of small sizes.	+ 23 %
	Israel	↘	- 12 %	Fall in incoming shipments, campaign nearing its end, some stocks available.	+ 5 %
	Corsica	↘	-	Season nearing its end. Production potential below the three-year average due to losses caused by winds.	-

Grapefruit – European Union – Supply in winter season

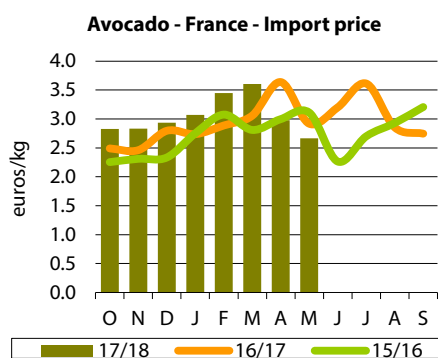
in 000 tonnes	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 trend
United States	46.0	40.7	41.8	38.2	31.4	23.3	- 40/45 %
Mediterranean (main suppliers)	170.7	150.5	177.8	171.9	181.8	149.1	+ 15/20 %
Turkey	82.0	52.8	87.7	70.7	95.6	60.8	+ 35/40 %
Spain (Ailimpo)	44.6	52.3	48.5	63.3	52.5	58.0	+ 5/10 %
Israel	44.2	45.4	41.7	37.9	33.8	30.3	+ 5/- 5 %

Professional sources, Customs

Avocado

April/May 2018

The avocado market dipped in April, and buckled under the weight of the supply in May. Hass volumes were bigger than in 2017 because of the rise of the summer origins. The main suppliers (Peru, South Africa), with much greater export potentials than in previous years, rapidly rose to historically high levels (April/May combined total: + 17 % on 2017 for Peru and + 41 % for South Africa). In this context despite dynamic sales (programmes, promotions), prices started to drop in April first for the more abundant small sizes, and this trend intensified in May. The market was unable to withstand the supply pressure, and prices were lower than last year, though still average for the season. Conversely, the green varieties did not hold up as well: the oversupply due to heavy volumes from Peru and South Africa drove prices down to an extremely low level in May.



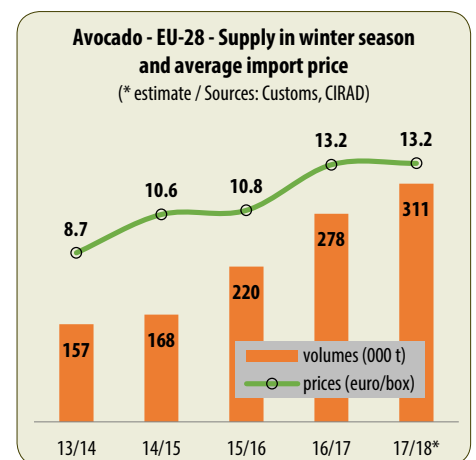
PRICE	Varieties	Average monthly price euro/box	Comparison with the last 2 years
	Green	5.52	- 23 %
	Hass	12.71	0 %

VOLUMES	Varieties	Comparison	
		previous month	average for last 2 years
	Green	↘	+ 14 %
	Hass	↗	+ 29 %

VOLUMES	Source	Comparison		Observations	Cumulative total / cumulative average for last 2 years
		previous month	average for last 2 years		
	Peru	↗	+ 31 %	Big increase in incoming shipments to reach a historically high peak. Volumes well above average for Hass (+ 35 %) and barely average for green varieties (+ 2 %).	+ 35 %
	South Africa	↗	+ 42 %	Volumes picking up to an above-average peak for Hass (+ 51 %) and green varieties (+ 26 %).	+ 33 %
	Mexico	↘	- 74 %	Fall in supply, season beginning to wind down.	+ 3 %
	Brazil	↘	- 9 %	Beginning of the end of the season in May, after a high early peak in April.	- 2 %

■ **Review of the 2017-18 avocado winter season: boom in Mexico and Morocco.** The Customs figures from April made it possible to refine the review of the 2017-18 winter campaign published in the May 2018 edition of FruiTrop. According to this data, the market achieved a better than predicted performance in terms of volumes, up by approximately 12 %. The rise in Mexican volumes was apparently even bigger than initially anticipated (at least 63 000 t shipped to the EU-28, i.e. 26 000 t more than in 2016-17). In addition, Moroccan shipments, not included in the previous estimate, literally exploded (at least 23 000 t imported, i.e. 13 000 t more than in 2016-17), thanks to the growth in surface areas and very good climate conditions. We should recall that this growth in total volumes was combine with very good performance in economic terms, with the average campaign price calculated by our Market News Service maintaining the record level from 2016-17.

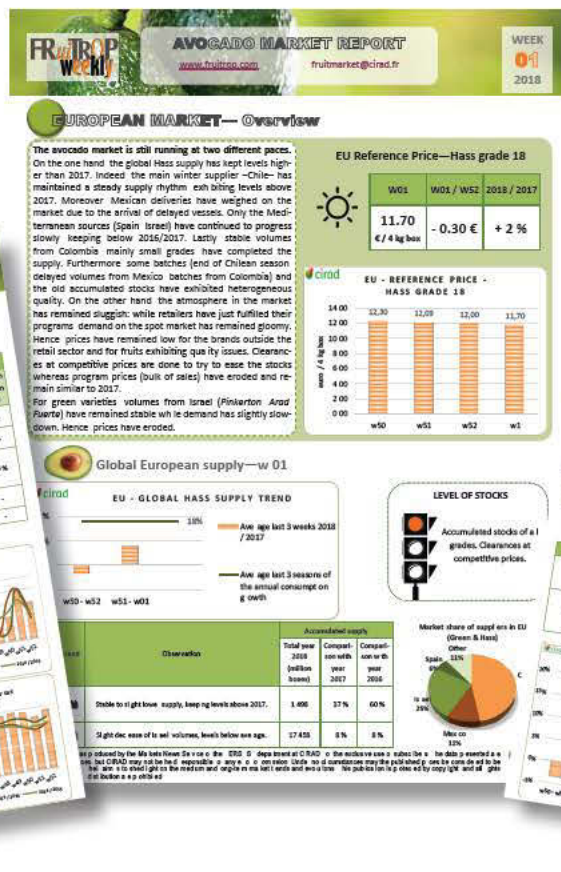
Sources: Customs, CIRAD



Avocado – European Union – Supply in winter season

in tonnes	2013-14	2014-15	2015-16	2016-17	2017-18	2017-18 compared to 2016-17
Chile	62 968	42 797	78 244	90 138	95 000	+ 5 %
Mexico	6 293	12 918	45 593	36 884	63 000	+ 71 %
Spain	36 700	50 600	37 700	55 200	50 000	- 9 %
Israel	42 844	46 086	34 995	56 600	45 000	- 20 %
Colombia	1 142	3 740	11 189	24 024	28 000	+ 17 %
Morocco	4 766	7 798	7 115	9 552	23 000	+ 141 %
Dominican Rep.	1 810	3 034	4 445	5 527	7 000	+ 27 %
Greece	740	765	987	424	400	- 6 %
Total	157 266	167 741	220 318	278 351	311 400	+ 12 %

Source: CGA



Weekly avocado market report

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Mango

April/May 2018

After a slight improvement in March, the European mango market took another downturn in **April**. Peruvian volumes held up throughout the month, unlike at the same time in 2017 when they rapidly dipped and caused a supply trough. Meanwhile Brazil increased its shipments, a strategy in place for the past few years to cope with the late start to the West African campaign and the gradual disappearance of Peru. In this context the earlier and quicker start by Côte d'Ivoire led to a substantial and lasting oversupply of the European market. After the Amélie containers received in the first half of April, came a rapid succession of increasing Kent shipments from week 16 onwards. The influx of merchandise of various origins, varieties and quality weighed down heavily on sales, with prices ebbing bit by bit. Far from last year's record levels, certain transactions were made at less than 4.00 euros/box at the end of the month. In addition, demand was focused more on seasonal products, though scarce and offered at high prices.

The air-freight market fared no better in April, given the ongoing big Peruvian shipments. Many batches exhibiting advanced maturity had to be sold rapidly, which of course led to price concessions. The omnipresence of Peruvian mangos offered at moderate prices complicated mango sales from other origins, espe-

cially from West Africa. The often mediocre quality of the Burkinabe fruits (maturation, development) considerably impaired their sales. Kent from Mali and Côte d'Ivoire were marketed, though definitely not at the prices anticipated by the recipients.

May carried on in the same vein as late April, with the European mango market being particularly poor. The extension of the Peruvian campaign with big volumes, plus increasing shipments from Côte d'Ivoire, with on top of that shipments from Brazil and Central American origins, caused a massive oversupply. Consumers switched to seasonal products and the moderate mango demand impaired the sales conditions. Storage also led to a qualitative deterioration of the fruits, consolidating the cycle of poor sales-accumulation of volumes-qualitative deterioration-ongoing low prices. Peru's withdrawal in mid-May did not provide any improvement, since flows from Côte d'Ivoire and Brazil con-

tinued to pour onto the markets. It was only at the very end of the month that sales conditions recovered after a long phase of stock clearances. Côte d'Ivoire was tormented this year between the extension of the Peruvian campaign and concentration of its own tonnages of heterogeneous quality. The rapid dip in availability at the end of the month benefited produce from Mali and Puerto Rico, which kept better.

The air-freight market too was swollen, with large shipments in excess of the level of demand, increasingly focused on seasonal fruits. The heterogeneity of the fruit maturity made sales difficult and slow. The early start to the Mexican campaign in the middle of the month, although moderate in terms of volume, aggravated the prevailing oversupply. In this context fruits from Burkina Faso and Mali struggled to sell. At the end of the month, the decrease in shipments hinted at an improvement in market conditions for the coming weeks.

MANGO - IMPORT PRICE ON THE FRENCH MARKET							
Weeks 2018		14	15	16	17	April 2018 average	April 2017 average
Air-freight (euro/kg)							
Peru	Kent	3.50-4.50	4.00-4.50	3.50-4.50	3.50-4.50	3.60-4.50	5.50-6.00
Burkina Faso	Amélie	2.80	2.50	2.00	2.20	2.35	3.15-3.30
Burkina Faso	Valencia	2.50-3.00	3.00-3.50	3.00	3.00	2.85-3.10	3.40-4.25
Burkina Faso	Kent	-	-	3.00-3.50	2.00-3.00	2.50-3.25	3.85-4.95
Mali	Amélie	-	2.80	2.00-2.50	2.50-2.80	2.40-2.70	3.20
Mali	Valencia	3.00	3.00-3.50	2.50-3.00	3.00	2.85-3.10	3.25-3.75
Mali	Kent	-	-	-	3.00-3.50	3.00-3.50	4.25-4.50
Côte d'Ivoire	Kent	-	4.00-4.50	3.00-4.00	3.00-4.00	3.30-4.15	4.50-5.00
Sea-freight (euro/box)							
Brazil	T. Atkins	-	-	-	3.00-4.00	3.00-4.00	7.00-8.00
Brazil	Keitt	-	4.50-5.50	4.50-5.50	3.00-5.00	4.00-5.30	7.50-8.00
Brazil	Palmer	-	4.50-5.50	4.50-5.50	4.00-5.00	4.30-5.30	7.50-8.50
Peru	Kent	5.50-7.00	5.00-5.50	4.50-5.50	4.00-5.00	4.75-5.75	7.50-8.75
Côte d'Ivoire	Amélie	4.00-4.50	4.00-4.50	-	-	4.00-4.50	6.00-6.65
Côte d'Ivoire	Kent	-	-	4.00-5.00	4.00-5.00	4.00-5.00	7.00-8.00

MANGO - IMPORT PRICE ON THE FRENCH MARKET								
Weeks 2018		18	19	20	21	22	May 2018 average	May 2017 average
Air-freight (euro/kg)								
Peru	Kent	3.00-4.00	3.50-4.50	4.00-4.50	4.00-4.50	-	3.60-4.35	5.00-5.05
Burkina Faso	Valencia	2.50	2.50	-	-	-	2.50	3.00-3.50
Burkina Faso	Kent	2.00-3.00	2.00-3.00	2.50-3.50	3.00-3.50	3.50-3.80	2.60-3.35	2.85-3.20
Mali	Valencia	2.50	2.00-3.00	-	-	-	2.75-3.25	2.80-3.50
Mali	Kent	2.00-3.00	2.00-3.00	3.00-4.00	3.00-4.00	3.50-4.00	2.70-3.60	2.90-4.10
Côte d'Ivoire	Kent	2.00-3.50	2.00-3.00	2.00-4.00	2.00-4.50	4.00-4.80	2.40-3.95	4.00-4.40
Mexico		-	-	5.00	4.50-5.00	4.50-5.00	4.65-5.00	-
Sea-freight (euro/box)								
Brazil	Keitt	3.00-3.75	3.00-4.00	3.00-4.00	-	-	3.00-3.90	7.50-8.00
Brazil	Palmer	3.00-3.75	3.00-4.00	3.00-4.00	-	-	3.00-3.90	7.50-8.00
Peru	Kent	3.00-4.50	3.00-4.50	3.00-4.50	-	-	3.00-4.50	-
Côte d'Ivoire	Kent	3.00-4.50	3.00-4.00	2.00-4.00	2.00-4.00	5.00	3.00-4.30	4.80-6.30
Mali	Kent	-	-	-	4.00-4.50	5.00	4.50-4.75	-
Puerto Rico	Keitt	-	-	-	-	5.00-6.00	5.00-6.00	5.00-6.00

EUROPE

EUROPE

MANGO - INCOMING SHIPMENTS (estimates in tonnes)					
Weeks 2018	14	15	16	17	
Air-freight					
Peru	150	150	50	50	
Burkina Faso	10	10	10	5	
Mali	20	20	40	50	
Côte d'Ivoire	100	100	100	100	
Sea-freight					
Brazil	2 700	2 300	2 450	2 100	
Peru	5 800	5 000	5 000	4 300	
Côte d'Ivoire		330	4 800	5 700	

MANGO - INCOMING SHIPMENTS (estimates in tonnes)					
Weeks 2018	18	19	20	21	22
Air-freight					
Peru	30	20	10	-	-
Burkina Faso	5	5	5	5	5
Mali	40	30	30	20	30
Côte d'Ivoire	100	50	50	50	50
Sea-freight					
Brazil	2 040	1 630	1 760	1 740	1 870
Peru	2 330	1 320	460	-	-
Côte d'Ivoire	6 820	6 600	2 400	1 230	440

Pineapple

April/May 2018

The pineapple market in April saw a rather tight situation. After Easter, there was a downturn in demand. However sales remained fairly fluid in the first half-month since the overall Sweet supply was heavily disrupted by various shipping delays, which relieved the pressure on the markets. The operators however had to adjust their prices downward to remain fluid and best manage the supply irregularity. The lack of demand vitality throughout the month least affected operators associated with the supermarket sector. They managed without too much difficulty to maintain more or less stable rates, while those which were outside of these circuits had to heavily adjust the price lever to prevent stocks from forming.

The situation was also fairly tight on the air-freight market. The post-Easter dip in demand was aggravated by the start of the school holidays. On the Cayenne market, the low coloration and quality concerns over the Beninese supply particularly benefitted the Ivorian and Cameroonian fruits, not necessarily more coloured but distinctly more regular in terms of quality. So several operators opted to heavily scale back their imports pending an improvement in demand. On the Sugarloaf market the lack of coloration of the Beninese supply helped the more coloured fruits from Ghana and Togo earn better value. At the end of the month, the big reduction in imports produced its effects, and demand was livelier, albeit boosted by promotions on Cayenne. The supply was topped up by several small additional batches of Sweet from various origins, including Ghana, offered at between 2.30 and 2.50 euros/kg depending on availability.

The increase in the overall Victoria supply after Easter, when demand was seeing something of a downturn, forced the operators to be more flexible on prices to remain fluid. The supply was fairly unbalanced, with a high proportion of size 8 fruits. However, the situation improved at the end of the month, thanks in particular to a tropical storm which contributed to greatly reducing the overall supply.

In May, the pineapple market was disrupted by numerous shipping delays, as well as by the succession of public holidays which, depending on the circum-

stances, contributed to improving or complicating marketing. Hence during the first half-month, shipping delays and public holiday facilitated the absorption of the overflow of fruits due to simultaneous volumes from delayed ships. The supply, at the time unbalanced and unevenly distributed across the European markets, sold more or less well, according to the sizes. Once again, the supermarket sector took in the majority of volumes. The big increase in the Costa Rican supply from mid-May generated a downward trend which continued until the end of the month. The Costa Rican supply, more substantial because of the natural flowering, was much bigger than demand. In a context of flat demand the simultaneous arrivals of ships weighed down heavily on the market, with rates on a downward trend.

Overall, air-freight market activity was somewhat quiet. In the first half-month, the supply was disrupted by Air France strikes. Nonetheless, the market was not under-supplied. The overall Cayenne

supply constantly shrank throughout the month. Fruits from Cameroon, the number one in this niche, often exhibited heterogeneous quality, while the Beninese supply seemed less and less interesting to purchasers because of its lack of reliability. Sales were more fluid and steadier on the Sugarloaf market, where once again it was the most coloured fruits from the three main origins (Ghana, Benin and Togo) which sold best. Availability of a supply of green fruits from Benin and Ghana contributed to the widening of the rates bracket, to between 1.80 and 2.30 euros according to the coloration. The top-up supply of Sweet from Cuba, Costa Rica and Ghana sold well on footings of between 2.20 and 2.40 euros/kg.


Throughout May, the Victoria supply was limited. The paucity of volumes from the Indian Ocean helped Ghana make some incursions into this niche, with quantities just as limited. Attracted more by seasonal fruits, demand sometimes struggled to absorb what volumes were on the market.

PINEAPPLE - IMPORT PRICE IN FRANCE - MAIN SOURCES					
Weeks 2018		14	15	16	17
Air-freight (euro/kg)					
Smooth Cayenne	Benin	1.80-2.00	1.80-1.90	1.80-1.90	1.80-1.90
	Cameroon	1.80-2.10	1.80-1.90	1.80-1.90	1.80-1.90
	Ghana	2.00-2.30	2.00-2.30	2.00-2.30	2.00-2.30
	Côte d'Ivoire	1.90-2.00	1.90	1.90	1.90
Victoria	Reunion	3.00-4.50	3.00-4.50	3.00-4.00	3.00-4.00
	Mauritius	3.30-3.60	3.00-3.60	3.00-3.60	3.00-3.60
Sea-freight (euro/box)					
Smooth Cayenne	Côte d'Ivoire	7.00-9.00	6.00-7.00	6.00-9.50	7.00-9.00
Sweet	Côte d'Ivoire	9.00-10.50	9.00-10.50	9.00-10.50	9.00-10.50
	Ghana	9.00-10.50	9.00-10.50	9.00-10.50	9.00-10.50
	Costa Rica	8.00-9.50	6.50-8.50	6.00-8.50	6.00-9.00

PINEAPPLE - IMPORT PRICE IN FRANCE - MAIN SOURCES						
Weeks 2018		18	19	20	21	22
Air-freight (euro/kg)						
Smooth Cayenne	Benin	1.80-2.00	1.80-1.90	1.80-1.90	1.80-1.90	1.80-1.90
	Cameroon	1.80-2.00	1.80-2.00	1.80-2.00	1.70-2.00	1.70-2.00
	Ghana	2.00-2.30	2.00-2.30	2.00-2.30	2.00-2.30	2.00-2.30
	Côte d'Ivoire	1.90	1.90-2.00	1.90-2.00	1.90-2.00	1.90-2.00
Victoria	Reunion	3.50-4.00	3.00-3.50	3.50.00	3.50.00	3.40-3.80
	Mauritius	3.20-3.60	3.20-3.60	3.20-3.60	3.20-3.60	3.00-3.40
Sea-freight (euro/box)						
Smooth Cayenne	Côte d'Ivoire	6.00-8.00	6.00-9.00	6.00-8.00	6.00-7.00	6.00-7.00
Sweet	Côte d'Ivoire	9.00-10.50	9.00-10.50	9.00-10.50	9.00-10.50	8.00-9.50
	Ghana	9.00-10.50	9.00-10.50	9.00-10.50	9.00-10.50	8.00-9.50
	Costa Rica	6.00-9.00	6.00-9.00	6.00-8.50	6.00-8.50	5.00-7.00

Temperate fruits & vegetables

Charentais Melon – Provisional planted areas in Morocco, Spain and France



in hectares	2018	2017
Dakhla	250	250
Agadir/Taroudant	50	50-80
Marrakech/Kenitra	1 250	1 250
Total Morocco	1 550	1 550-1 580
Almeria	300	300
Malaga/Murcia	4 300	4 300
Other regions	150	150
Total Spain	4 600	4 700
South-East	5 700	5 700
South-West	2 800	3 500
Centre-West	4 300	4 500
Other regions	250	nc
Total France	13 050	13 700

Source: Medfel

■ The melon affected by the climate conditions.

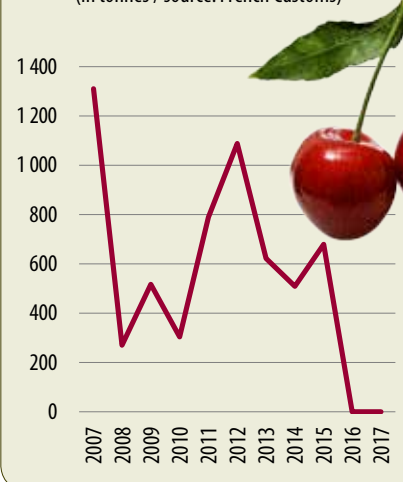
The forecasts unveiled at the end of April at Medfel confirmed the initial estimates for the Mediterranean Basin. Charentais surface areas were stable (1 400 ha) across practically all of the production zones in Morocco, though with the greenhouse segment expanding in Marrakech (50 % of surface areas). However, this year should not bring big yields, because of the winter climate conditions. After a considerable increase in 2017 for Charentais, surface areas should stabilise in Spain, especially since the recurrent drought, particularly marked in 2017, is rather urging caution. There were approximately 1 210 ha for green, with yellow surface areas, planted mainly between Sevilla, Malaga, Murcia and Alicante amounting to 3 540 ha. A big reduction in surface areas is expected in France in certain areas, especially in the South-West and Centre-West. There is also some delay due to the poor climate conditions (rain and cold). The French melon will be in place in early May from heated tunnels, around 20 May for non-heated high tunnels, yet the beginning of the semi-forcing tunnel crop harvest will only come around 15-20 June.

Source: Medfel

■ **Turkish cherry once again authorised in France.** Following publication of the Decree of 6 April 2018, suspending the introduction into France of fresh cherries produced in a European Union Member State or third country in which dimethoate use is authorised for cherry tree treatment, the list of countries authorised to export cherries to France was updated by the amendment of 5 May. This expanded to Turkey the authorisation already granted to Chile and Argentina. This decision followed the various exchanges between the DGAL in France and the Turkish authorities, which clarified the position of the latter regarding the ban on the use of dimethoate for the Turkish cherry, whereas it had hitherto only been a recommendation. Furthermore, the introduction into France of cherries from Austria, Croatia, Romania, the Czech Republic, Canada and the United States remains unauthorised. The amendment also provides importers with the possibility of introducing fresh cherries produced in non-specified third countries. However, they need to be able to submit to the competent authorities an official certificate from third producer countries production attesting that no phytopharmaceutical products containing the active substance active dimethoate are authorised for treating cherry trees in this country.

Source: Infofruit

Cherry - Turkey - French imports (in tonnes / source: French Customs)



■ **Fine, dry weather until July.** The weather forecasts, published in early May by the experts at météo Consult, predicted a finally rather dry June for France, with seasonal temperatures, though rather cold in Spain which will be subject to low pressures. Then seasonal weather is expected in July for France, with low precipitation, although there will definitely be storms coming up from the South, where low pressures will prevail. Conversely, August is a more uncertain month for Mainland France: low pressures extending over France might generate more rain, though temperatures could remain seasonal. This year, the anticyclone could more generally be located in Northern Europe. Furthermore, the initial info on the North Atlantic cyclone season hints at a marked activity, though not as much as last year which was one of the seven biggest in terms of activity since the beginning of the surveys, after a fairly quiet decade. Hence the 2018 season should be around average for the past thirty years, with two or three major hurricanes, though with climate indices, such as the current low temperatures over the Atlantic Ocean, which should reduce the activity.

Source: Infofruit

Sea freight

April/May 2018

The combination of a shortage of reefer equipment and optimal deployment of the reefer fleet once the Chilean table grape season had come to an end meant that the supply of capacity throughout the month was always likely to be tight. However, it was good demand from banana charterers prompted by an unusually weak exit price in Ecuador that was the principal reason for the monthly TCE average remaining in profitable territory. Despite a third successive year of weak demand from squid charterers in the South Atlantic, the small segment remained buoyant, with supply and demand in balance. Ongoing demand in the Indian Ocean for tuna and a strong start to the blue whiting season in the Faroe Islands, coupled with good demand in both Russia and Nigeria, led to the absorption of more tonnage for longer than the typical Mauretania to West Africa voyage. The smaller units were also able to capitalize on the shortage of larger vessels for spot banana business. Given that Cool Carriers was the only operator able to fulfill the Argentinean citrus specifications into the Med in their entirety, it no real surprise that it was able to see off all-comers for the 6 + 3 voyage contract. It helped that Cool presented the most competitive offer! However it was also interesting that the operator was able to secure a significant rise on the admittedly modest rate it achieved last year. Meanwhile, with the supply of specialized reefer capacity in both large and small segments exceeding demand, it is difficult to understand why the container lines continue to leave so much money on the table by not adjusting rates. On the other hand, if the carriers did take steps to exploit the imbalance, they would most likely be accused of profiteering...! Nevertheless, it is clear that there is a structural issue in play: unless there is a step increase in

the manufacture of reefer equipment, the current position will only worsen. The problem is that voyage and per diem rates are so low there is no financial or commercial incentive to build. Unless or until this changes, there will be serious consequences for the global trade in reefer.

Taken in isolation, **May** was a dull month in chartering activity terms. There was little-to-no action in the large segment and never quite enough in the small segment for operators to drive rates northwards. The reefer continued to benefit from the shortage of equipment available to the carriers, although perhaps less so than in April, when there were more Ecuadorian bananas to ship. Taken in context however, there was a better balance between the supply and demand for capacity in May 2018 than there has been since 2015, which was a strong year for squid. That this balance was not reflected in the monthly TCE average was partly down to the lack of fixtures (large segment), but principally due to the rise in cost of bunker fuel. The rise led to the imposition of a highly contentious emergency bunker surcharge by all the major carriers. Seatrade followed suit. Whether they will all be able to implement the charge remains to be seen: in early June, the European Shippers' Council formally submitted a letter of complaint to the EU Commissioner for Competition, Margrethe Vestager. Maintaining the theme, the UN International Maritime

Organisation's (IMO) new environmental rules for marine fuels are finally beginning to focus minds of the shipping community. To curb emissions from ships, the IMO has decided to cap sulphur content in marine fuel oil, cutting the limit from 3.5% to 0.5% in 2020. In order to comply, ship owners will either have to switch to more expensive, higher-quality marine fuel, invest in emissions-cleaning systems referred to as "scrubbers" or use alternative fuels such as liquefied natural gas. There is currently a US\$200-plus per MT premium on low sulphur oil when compared to the high sulphur bunker fuel used by shipping, and this will rise further if demand exceeds supply. On this issue, reefer shipping has two inter-related clear and present problems: one commercial, the other logistical. The additional fuel costs will need to be absorbed somewhere along the chain: given that the weakest link in reefer supply chains is the producer, inevitably it will be the cargo interests and not the retail customers who are hit the hardest. The second issue is that of supply. Stakeholders are warning that the industry won't be able to refine enough of the requisite quality low sulphur alternative in time for the big switch. If an extension cannot be considered, the IMO will be obliged to grant exemptions on a case-by-case basis. Which will be complicated! There will be a further consequence to the upgrade – a return to super slow steaming. This will have a disproportionate impact on shippers of time sensitive, perishable products.

EUROPE

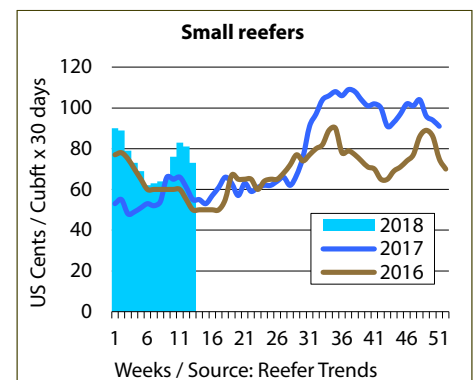
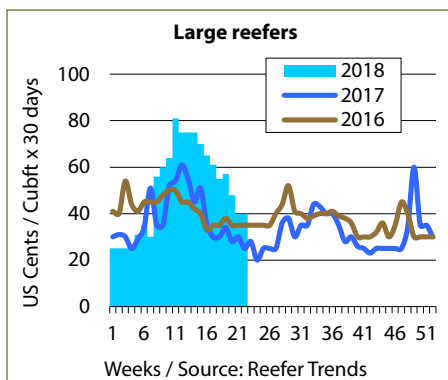
MONTHLY SPOT AVERAGE

USD cents/cubic foot x 30 days	Large reefers	Small reefers
April 2018	66	83
April 2017	42	53
April 2016	39	51
May 2018	38	81
May 2017	29	57
May 2016	36	62

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Pineapple market in Europe and the USA

A new record in 2018?

Growth in pineapple consumption was confirmed, on both the European and US markets. After 2017 which was a record year in terms of worldwide supply, 2018 is set to be even better. Nonetheless, the fall in import prices since mid-2017 seems to be continuing, and could hinder the dynamic.



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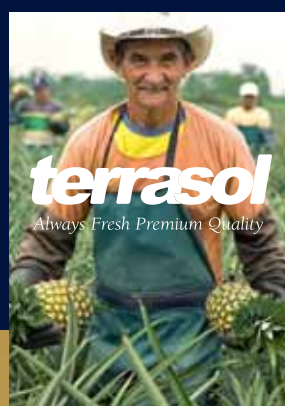


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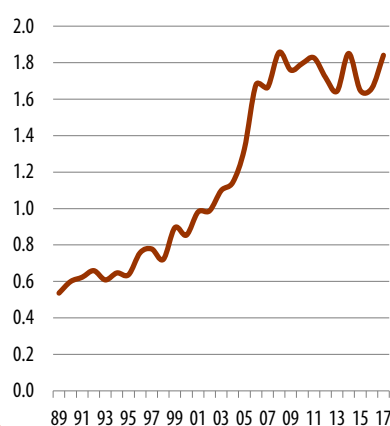


New European record

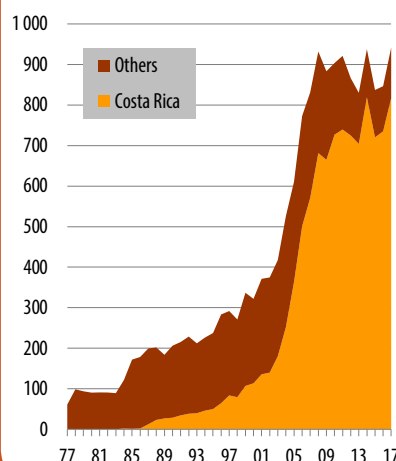
As the Customs statistics confirm, 2017 marked a new historic record for pineapple imports onto the European market: 942 000 tonnes, i.e. 11 % growth on 2016 and 4 000 tonnes more than the previous record from 2014. Such quantities are in excess of our already optimistic projections (see FruiTrop 252, October 2017). With 1.84 kg per capita, Europe would regain an apparent consumption very similar to 2014, which was 1.85 kg.

Costa Rica, the number one supplier to the European market with a stable market share of 90 %, rose to fuel this growth, after the fall in volumes in 2015 and 2016 following climate and economic profitability problems (low returns explained partially by the fluctuation in the euro/dollar exchange rate). Nearly 817 000 tonnes were imported from this origin in 2017, a level slightly below the historic record of 2014. The growth is also attributable to other market suppliers, such as Ecuador which consolidated its place as the number two supplier to the European market since 2015 and registered 24 % growth from the previous year, thereby exceeding 40 000 tonnes. Meanwhile the African origins regained better performances, especially Côte d'Ivoire, which after years of freefall, seems to be taking an upturn, back to similar levels to 2011.

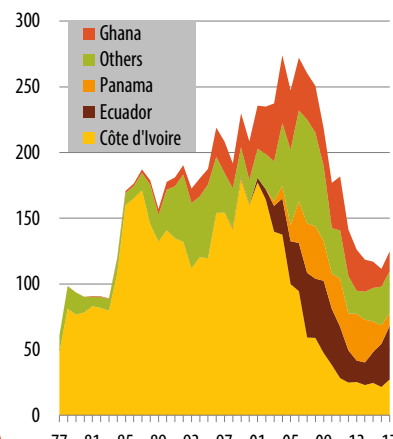
Fresh pineapple - EU - Consumption
Including EU enlargements
(in kg per capita / source: Eurostat)



Fresh pineapple - EU - Imports
(in 000 tonnes / source: Eurostat)



Fresh pineapple - EU Imports excluding Costa Rica
(in 000 tonnes / source: Eurostat)

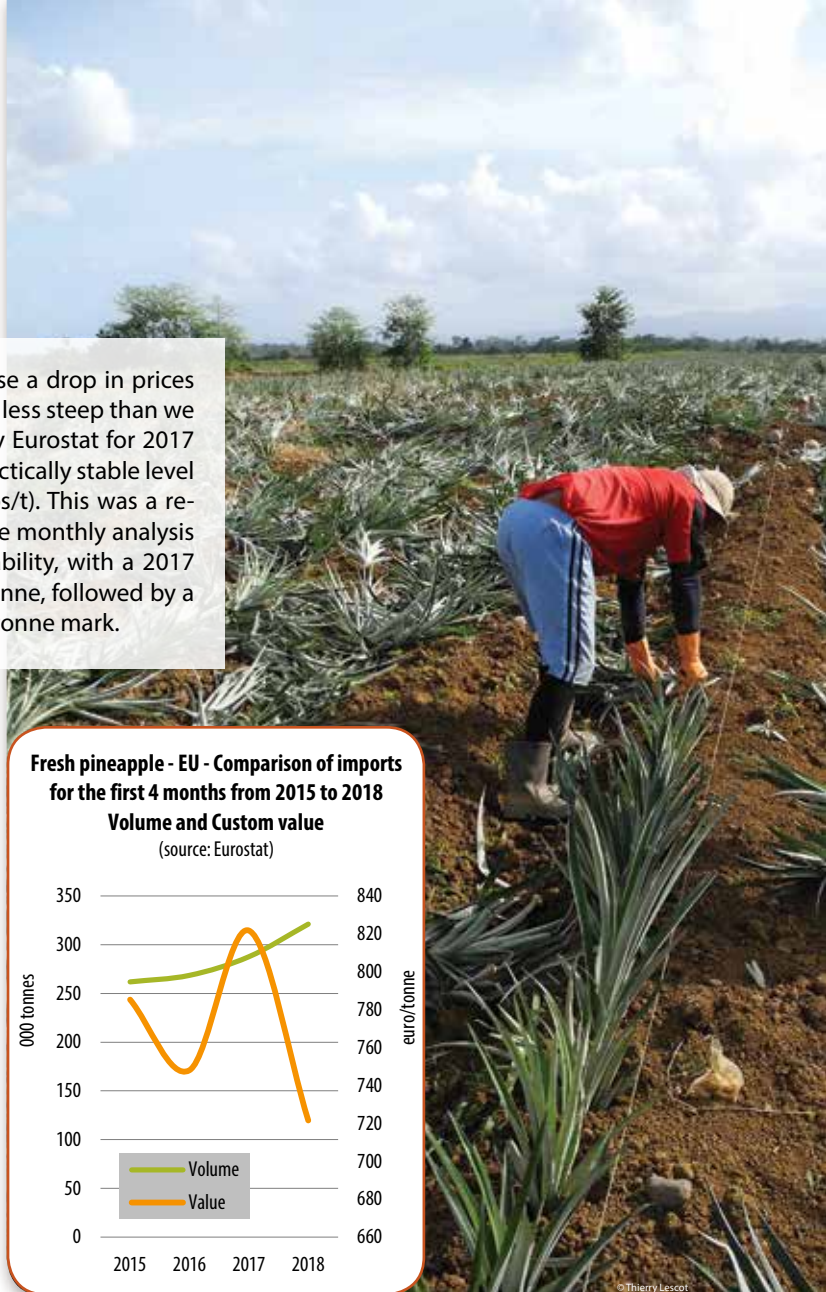


Price stability? Watch out for fake news!

So it was predictable that this colossal supply would cause a drop in prices after their record level in 2015. Nonetheless, the fall seems less steep than we might have believed. The unit import values published by Eurostat for 2017 showed an average of 750 euros/tonne for all origins, a practically stable level from 2016 and just 2 % below the 2015 record (767 euros/t). This was a remarkable performance given the weight of the supply. The monthly analysis of the Customs value reveals the great inter-annual variability, with a 2017 first half when prices were still high at above 800 euros/tonne, followed by a second half when rates collapsed to below the 700 euros/tonne mark.

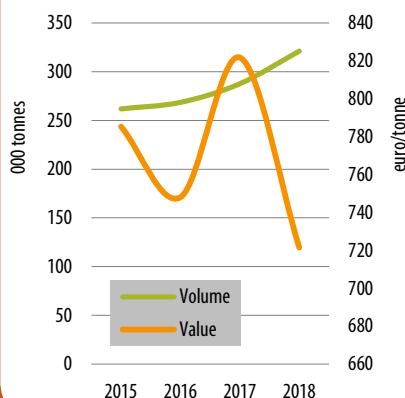
The trend continued in early 2018. Although Customs prices over the first four months of 2018 climbed to above 700 euros/tonne – a better result than the very difficult one from late 2017 – the start seems to have been one of the worst for the last four years. This did not augur well for the rest of 2018, the second half being even less lucrative than the first.

The supply actually continued to rise, with cumulative import values over the first four months of the year 12 % higher than for the same period in 2017. Costa Rica continued its breakthrough, with 14 % growth from last year. Conversely, unlike in 2017, growth from the number two European supplier, Ecuador, reached a standstill. Imports from this origin were down by 8 % over the period, probably because of the colder temperatures due to the La Niña phenomenon at the beginning of the year. A special mention goes to Colombia, asserting itself on the European market with a rise of 17 %.



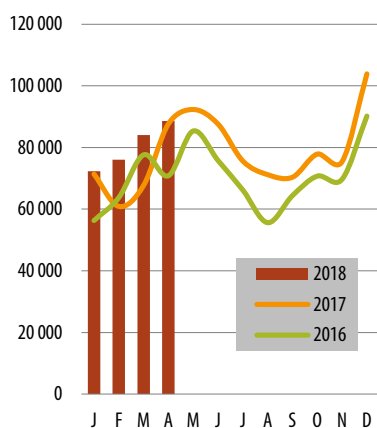
**Fresh pineapple - EU - Comparison of imports
for the first 4 months from 2015 to 2018**
Volume and Custom value

(source: Eurostat)



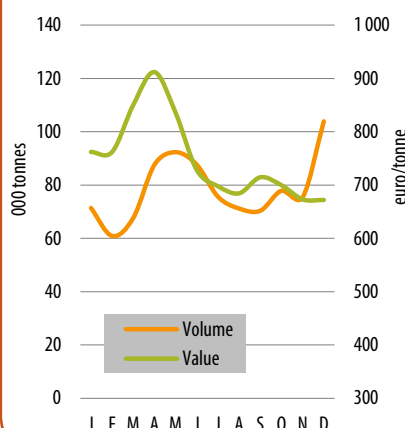
**Fresh pineapple - EU - Monthly imports
from all origins**

(in tonnes / source: Eurostat)



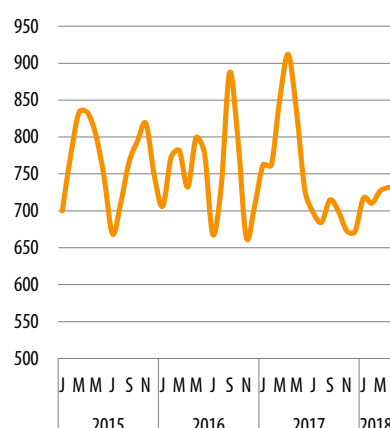
Fresh pineapple - EU - Monthly imports in 2017
Volume and Custom value

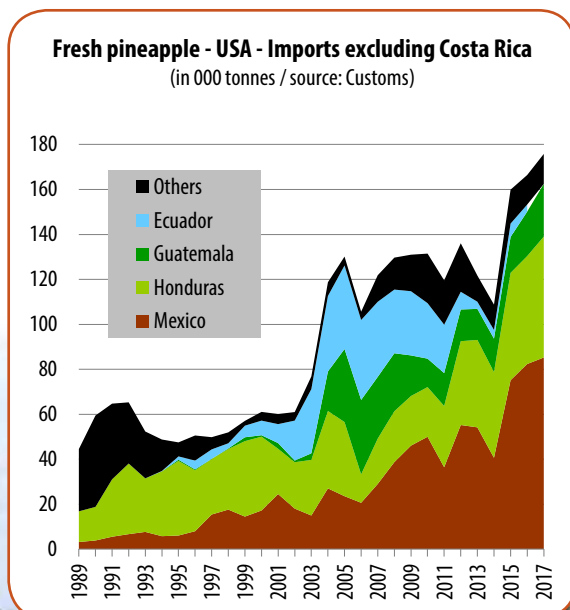
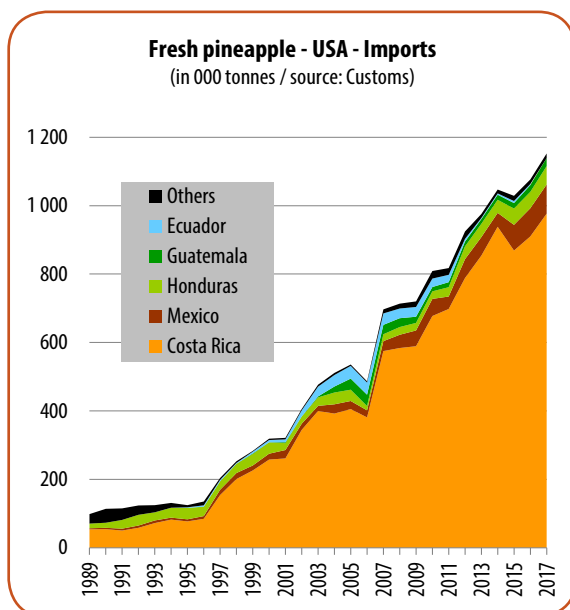
(source: Eurostat)



**Fresh pineapple - EU - Customs value
from 2015 to 2018 (partial)**

(in euro/tonne / source: Eurostat)



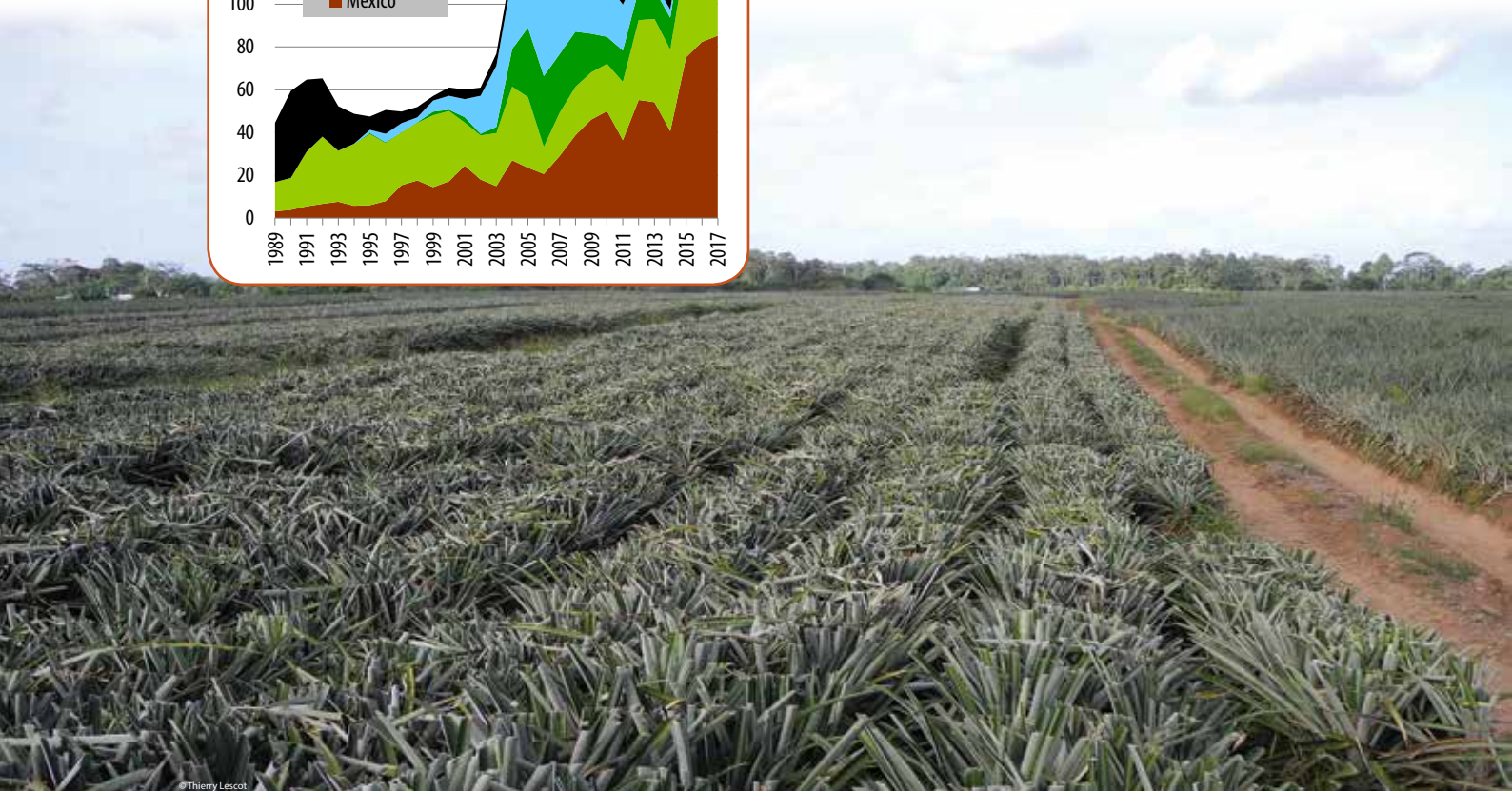


And in the USA: yes we can?

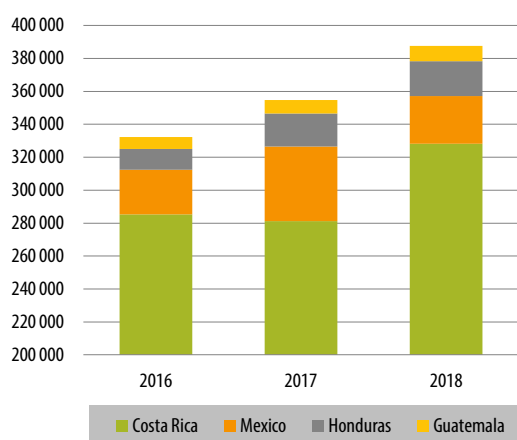
Supply records are also being observed on the other side of the Atlantic, where imports exceeded 1.1 million tonnes in 2017. There all the origins without exception registered positive performances. Costa Rica rose (910 000 tonnes), yet did not bear its 2014 record (938 000 t). The other suppliers also saw a surge. This was particularly true for Mexico, which exceeded 85 000 tonnes, and above all the Central American origins, Honduras and Guatemala, which exhibited fine vitality, with growth of 12 % and 18 % respectively from 2016.

This trend continued and indeed intensified in early 2018. Over the first four months of the year, imports increased by 9 % from the same period of 2017. This represented an even more dynamic growth rate than in 2016 and 2017 (+ 7 %), despite the steep downturn by Mexico (- 36 %), with a winter cold spell causing a production slowdown in early 2018. So growth for the period was driven by the highly dynamic Costa Rica, Guatemala and Honduras.

However, as on the European market, the price drop which had started in 2016 intensified in early 2018, with an average of 534 USD/tonne. We need to go back to 2005 to find such low Customs values on the US market.



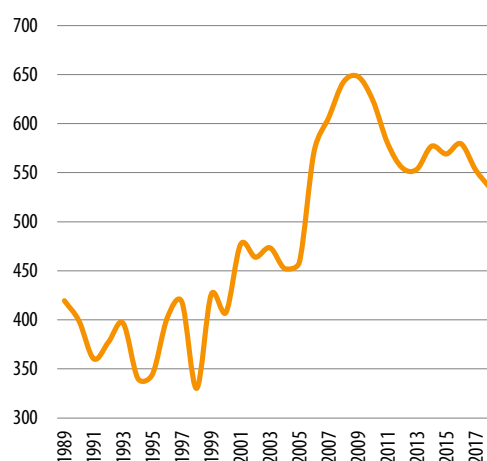
**Fresh pineapple - USA - Cumulated imports
from January to April**
(in tonnes / source: Customs)



© Agnès Delefortrie

Whereas Costa Rica did not surpass its 2014 performance, the US and European Union markets beat absolute supply records. So their growth was fuelled by the increase from the other market suppliers. It is hard to say how 2018 will end. Production is set to beat new records, given the production growth by the world number one, Costa Rica. According to the Costa Rican Agriculture Ministry (MAG), there were 44 500 ha of pineapple in production in 2017, as opposed to 40 000 in 2015 and 2016. Bearing in mind that the weather remained set fair, the good dynamic in exports from the world number one MD2 supplier might not end in 2018. On the Mexican side, growth in the sector is also booming. SAGARPA estimates the 2018 export potential at around 100 000 tonnes. Given the rather short start to the year (cold), Mexican volumes had not yet reached their peak. Hence while the EU and USA might set a new record in terms of supply in 2018, the markets seem to have been caught again in the vicious spiral of destruction of value. Growth there may be, yet at what price? ■

Fresh pineapple - USA - Average import price
(in USD/tonne / source: Customs)



Carolina Dawson, CIRAD
carolina.dawson@cirad.fr

Sea-freight pineapple

Supermarket sector as the sole and last resort for the pineapple?



After going through a trough due to the bad weather which hit the country in 2013 and 2014, Costa Rican pineapple production has taken an upturn. Far from drawing the necessary lessons, namely that their production earns better value when it is not in excess, Costa Rican producers replanted large surface areas of MD-2 (Extra Sweet) in the unreasoning hope of continuing to sell their produce at very high rates as in 2015 and 2016. The fresh pineapple supply is far in excess of current demand from the European markets, and while the worst has been avoided in terms of price for the instant, it is in particular thanks to the supermarket circuits without which the European market could not manage to take in the large volumes on the market. As such, not all the operators are in the same boat, and only those which have partnerships with the supermarket sector are still managing for the time being to avoid losing out.



www.cdc-cameroun.com



URGENT OPEN INTERNATIONAL INVITATION TO TENDER NO 004/CDC/GBM/ITB/18 FOR THE SUPPLY OF EQUIPMENT FOR CDC GROUP BANANA OF 4/7/18

Tel.: 23333 22 51, Fax: 23333 26 80.

Website: www.cdc-cameroon.com

FINANCED BY THE CDC 2018 BUDGET AND THE EUROPEAN UNION AS PER BANANA
ACCOMPANYING MEASURES (BAM) 2017 PROGRAMME

Article 1. SUBJECT OF THE INVITATION TO TENDER

The General Manager of the Cameroon Development Corporation (CDC) launches an Urgent Open International Invitation to Tender for the supply of Equipment for CDC Group Banana Department.

Article 2. NATURE OF THE SERVICES

The nature of the services involves the transportation, handling and supply of the equipment for CDC Group Banana Department as per the following lots;

Lot 1. Supply of 3No Mini Hydraulic Excavators.

Lot 1. Supply of 1No. 4WD Agricultural Tractor 70-90PH with end Loader Bucket, 1No. 4WD Agricultural Tractor 150-160PH, 2No. 4WD Agricultural Tractor 70-90PH and 1No. Agricultural Trailer.

Article 3. ESTIMATED BUDGET FOR THE SUPPLIES

The estimated budget for the supplies is as follows;

LOT	DESCRIPTION	AMOUNT IN EUROS	AMOUNT IN (FCFA) HT
1	Supply of 3No Mini Hydraulic Excavators.	185,051	121, 385,488
2	Supply of 1No. 4WD Agricultural Tractor 70-90PH with end Loader Bucket, 1No. 4WD Agricultural Tractor 150-160PH, 2No. 4WD Agricultural Tractor 70-90PH and 1No. Agricultural Trailer	158,100	103, 706,802
	Total	311,652	225,092,290

Article 4. CONSULTATION AND ACQUISITION OF TENDER FILE

For details of the tender file, interested Bidders can consult the CDC website at www.cdc-cameroon.com, or at the General Manager's Office (Room 208), CDC Head Office Bota – Limbe, South West Region, Cameroon during working hours (7am to 4pm) Monday to Friday as from the 4/9/18. Bidders shall be expected to pay a non-refundable fixed sum of 198 Euros (131,000FCFA) for the Tender to the ARMP Special Account No. 335 98800001-89 with BICEC.

Article 5. PLACE, DATE AND TIME FOR SUBMISSION AND OPENING OF BIDS

Offers shall be deposited at the General Manager's Office (Room 314), CDC Head Office Bota – Limbe on or before the 4/9/18 at 1.00pm Local time or by Registered mail to Cameroon Development Corporation. The Bid Opening session shall take place at the CDC Internal Tenders Board Office opposite CDC Head office Bota-Limbe on the 4/9/18 at 2 pm local time

Article 6. COMPLEMENTARY INFORMATION

For further complementary information, Bidders should contact the Engineering Service Manager, Group Banana CDC Tiko, P.O BOX 282 Tiko, in writing, Telephone No: 233 35 11 06, 233 35 11 78, Fax: 233 35 11 64; Mobile: 651 17 90 14; E-mail: simopierre@cdc-cameroon.com

DONE AT BOTA, THIS

FRANKLIN NGONI NJIE
GENERAL MANAGER



URGENT OPEN INTERNATIONAL INVITATION TO TENDER NO 002/CDC/GBM/ITB/18 FOR THE SUPPLY OF EQUIPMENT FOR CDC GROUP BANANA DEPARTMENT OF 28/3/18

Tel.: 23333 22 51, Fax: 23333 26 80.

Website: www.cdc-cameroon.com

FINANCED BY THE CDC 2018 BUDGET AND THE EUROPEAN UNION AS PER BANANA
ACCOMPANYING MEASURES (BAM) 2017 PROGRAMME

Article 1. SUBJECT OF THE INVITATION TO TENDER

The General Manager of the Cameroon Development Corporation (CDC) launches an Urgent Open International Invitation to Tender for the supply of Equipment for CDC Group Banana Department

Article 2. NATURE OF THE SERVICES

The nature of the services involves the transportation, handling and supply of the equipment for CDC Group Banana Department as per the following lots;

Lot 1. Supply of Fungicide Treatment Equipment for CDC Mafanja and Ndongo Units

Lot 2. Supply of Palletization Equipment for CDC Mafanja Unit

Article 3. ESTIMATED BUDGET FOR THE SUPPLIES

The estimated budget for the supplies is as follows;

LOT	DESCRIPTION	AMOUNT IN EUROS	AMOUNT IN (FCFA) HT
1	Supply of Fungicide Treatment Equipment for CDC Mafanja and Ndongo Units	166,784	109, 403,100
2	Supply of Palletization Equipment for CDC Mafanja Unit	114,040	74, 805,336
	Total	280,824	184,208,436

Article 4. CONSULTATION AND ACQUISITION OF TENDER FILE

For details of the tender file, interested Bidders can consult the CDC website at www.cdc-cameroon.com, or at the General Manager's Office (Room 208), CDC Head Office Bota – Limbe, South West Region, Cameroon during working hours (7am to 4pm) Monday to Friday as from the 28/3/18. Bidders shall be expected to pay a non-refundable fixed sum of 183 Euros (120,000FCFA) for the Tender to the ARMP Special Account No. 335 98800001-89 with BICEC.

Article 5. PLACE, DATE AND TIME FOR SUBMISSION AND OPENING OF BIDS

Offers shall be deposited at the General Manager's Office (Room 314), CDC Head Office Bota – Limbe on or before the 3/8/18 at 1.00pm Local time or by Registered mail to Cameroon Development Corporation. The Bid Opening session shall take place at the CDC Internal Tenders Board Office opposite CDC Head office Bota-Limbe on the 3/8/18 at 2 pm local time

Article 6. COMPLEMENTARY INFORMATION

For further complementary information, Bidders should contact the Engineering Service Manager, Group Banana CDC Tiko, P.O BOX 282 Tiko, in writing, Telephone No: 233 35 11 06, 233 35 11 78, Fax: 233 35 11 64; Mobile: 699 35 17 59; E-mail: simopierre@cdc-cameroon.com

DONE AT BOTA, THIS

FRANKLIN NGONI NJIE
GENERAL MANAGER

NB: Although the tender file on the website shows that the bid opening session shall take place on the 28th of May, 2018, take note that it has been postponed to the 3rd of August, 2018



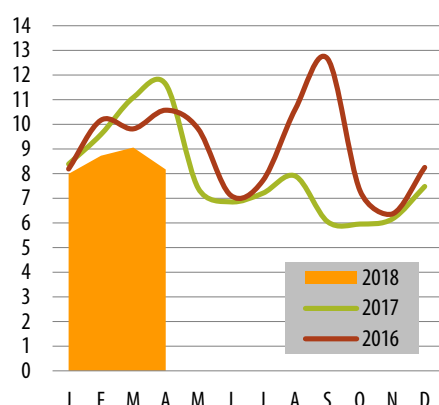
The Costa Rican pineapple supply represents approximately 90 % of the European market supply. The very high rates obtained on the European markets in 2015 and 2016 were due to the bad weather which destroyed some of the production in 2013 and 2014. The Costa Rican supply was no longer sufficient to satisfy both the fresh and processed markets (juices and canned fruit). The processing industry, short of fruits, considerably raised its purchase prices from the producers, thereby limiting availability for the fresh market. The increase in rates which followed has now been forgotten since the supply is once again easily sufficient, and prices paid to producers by the manufacturers have slipped back to fairly low levels. So the European market must again face the influx of Costa Rican fruits.

However, it is the persistent lack of vitality of demand which is concerning the operators. There are two clearly distinguishable types of operator: those whose main outlet is supermarket sector partners, and those which are dependent on wholesale markets or re-export sales to sell their fruits. Access to the supermarket sector makes it possible to govern prices and volumes over pre-defined periods. There are many seeking to be listed by these big supermarket chains, but not all of them make it. The supermarket sector does not take in all the volumes, and those left over end up on the wholesale or re-export markets where competition is fiercer and where it is difficult to obtain more or less stable prices from one week to the next. With the European market having taken in more than 900 000 tonnes of fresh pineapples in 2017, we can understand the key role played by these big supermarket groups in marketing the fruits.

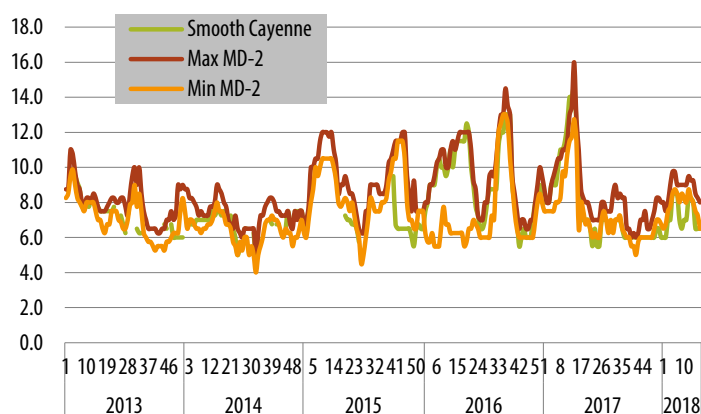
To earn better value for their produce, some established brands, such as Del Monte, Anadou and Fruitpoint to name but a few, opted for segmentation of their supply based on coloration. Hence the most coloured fruits (more yellow-orangey) are marketed as the top end of these brands, and so are valued at above-market prices. Coloration is becoming the means by which these brands are now seeking to stand out from the others against the great diversity of quality of the sea-freight supply. It is interesting to note that it is also these brands which, each at their level, are seeking to better stabilise their sale prices over the course of a campaign by controlling the volumes placed on the market.

Costa Rican producers are for now continuing to overload the European market because of the relative good health of the euro, while demand is flat. An operation conducted at the end of 2017 hinted at the possibility of also developing their fresh fruit exports to China. While this godsend had consolidated them in their productivity strategy, it now seems less realistic. Malaysia was apparently planning to produce MD-2 for the Chinese market, as the Philippines already does. If that were confirmed, we might fear that some of the new

Sea-freight Costa Rican Sweet pineapple - Germany Import price (in euro/box / source: Thierry Paqui)



Sea-freight pineapple - European Union - Import price (in euro/box per week / source: Thierry Paqui)



Costa Rican produce, potentially earmarked for China, could be redirected to the European market, aggravating a little more the fruit marketing problems in Europe.

The period from week 40 2017 to week 17 2018 was characterised above all by completely flat demand, often incapable of absorbing the fruits on the market. In addition, the ships often arrived behind schedule, which gave rise to periods of tension when the cumulative supply was too big, followed by periods of shortage when ship arrivals were deferred. Although average rates fluctuated between 6.00 and 9.00 euros/box, this period leaves the operators with a fairly bitter taste, since demand has remained at a standstill, continuously forcing them to fight to sell their fruits.

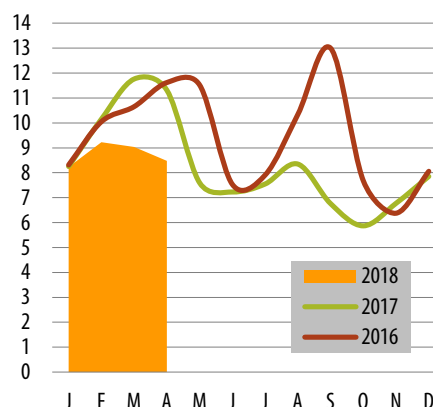
Over the previous campaigns, week 40 2017 to week 1 2018 were often livelier with the end-of-year holidays in the line of sight. Unfortunately this year, from October, the operators really struggled to sell their pineapples because of listless demand. Outside of the promotions organised by the supermarket chains, sales remained very weak. So operators opted to heavily scale back their imports to support rates and prevent market saturation in November. These import downturns, which coincided with shipping delays, had no effect on demand or on sales, since in late November, substantial storage batches sold at clearance prices. So it was not until Christmas weekend that the pineapple market picked up. Sales were a bit livelier, though this was detrimental to rates, which remained very low. It is true that availability on the storage batches wholesale markets at low prices did not help shift the incoming batches. While demand from Eastern Europe also seemed livelier, the operators had to agree to major price falls to sell off the volumes in their possession. Prices over this period fluctuated between 5.00 and 9.00/box, according to the size.

From weeks 2 to 17 2018, sale prices were apparently better despite demand remaining just as sluggish. The numerous shipping delays, due to storms, helped slightly ease the pressure on the markets. The Costa Rican supply was also smaller because of low temperatures in the production zones. Despite sales still being quiet on the wholesale markets, the pineapple market followed a rather positive trend, with rates strengthening slightly. The overall supply remained less than demand in February and March, and the shipping delays continued to disrupt the supply. In late March, the operators realised that the Costa Rican Sweet supply would remain low for Easter, despite its predicted rise. Hence we saw demand distinctly strengthen, especially for the more sought-after yet less available sizes 7, 8 and 9. In April, the situation started to tighten up again. Demand gradually slumped, though without causing rates to fall since the supply remained heavily disrupted by the numerous shipping delays. It was once again the operators with supermarket sector partnerships which came out on top. Those outside of these circuits had to make heavy use of the price lever to prevent stocks from forming, especially since the Costa Rican supply was predicted to increase for the end of the month because of early natural flowering ■

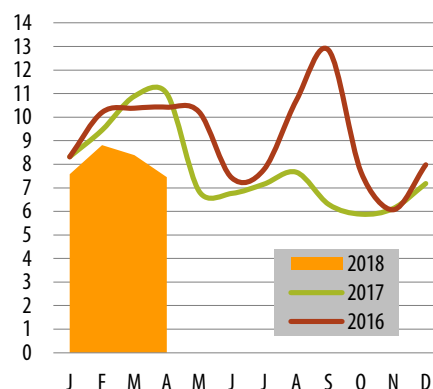
Thierry Paqui, consultant
paqui@club-internet.fr



Sea-freight Costa Rican Sweet - Belgium
Import price (in euro/box / source: Thierry Paqui)



Sea-freight Costa Rican Sweet pineapple - Holland
Import price (in euro/box / source: Thierry Paqui)



Air-freight pineapple

Is the reign of Cayenne on the air-freight market over?



It would seem that the many, excessively frequent quality concerns over the African Cayenne supply have ended up not only aggravating lack of purchaser interest in the fruit, but also ushering in air-freight Sweet exports. Operators are now no longer hesitating to promote air-freight MD-2, since it meets all the quality and reliability conditions that purchasers are entitled to expect from a niche product.

In view of the pineapple volumes taken in by the European market, the air-freight supply remains a fairly narrow niche market (less than 0.5 % of the sea-freight pineapple imports). This niche market was hitherto dominated by the Smooth Cayenne variety, mainly exported by African origins (Benin, Cameroon, Ghana and Guinea). It then had to get used to the increasingly strong presence of the Sugarloaf, the supply of which from Benin, Ghana and Togo gradually gnawed into the Cayenne market shares.

The reorganisation of the face of the air-freight pineapple market does not seem to be finished, since the Sweet supply, which hitherto made just a few incursions, now seems set to establish a more regular presence. The numerous quality concerns and lack of reliability of the African supply helped the Central American professionals (Costa Rica, Cuba, Panama, Dominican Republic) to promote well-packaged standardised products, which also gained market share at Cayenne's expense, with the latter variety seemingly suffering from growing disaffection among purchasers. Africa is not to be outdone in this niche, with Ghana also trying to take position.



A taste of the exotic

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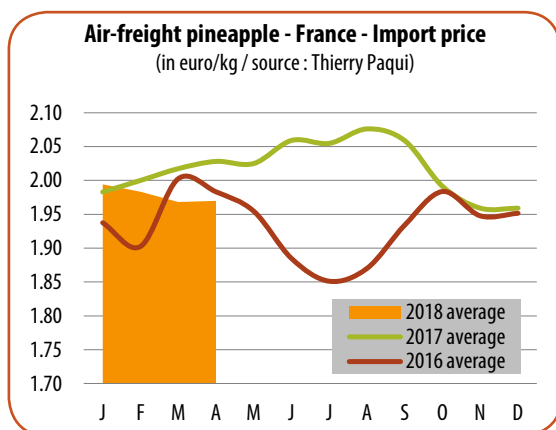
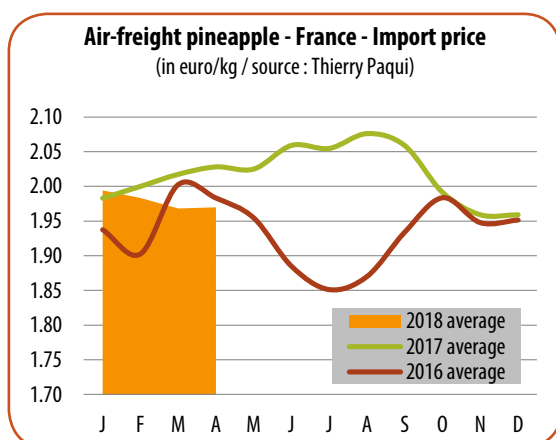
www.greenyardfresh.fr

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for a healthier future

It is their professionalism which has enabled the Central American operators to explore and profit from the air-freight supply despite the high freight costs. It remains fairly limited for the moment, representing a niche within the niche. Operators importing Central American Sweet are aware that the resale price of these fruits contributes to limiting mass access. African producers of Cayenne and Sugarloaf should seize this opportunity to reflect on the expectations of their customers in terms of quality, reliability and packaging, if they want to retain and safeguard their market share.

From week 40 2017 to week 17 2018, demand was often weak and the African supply fairly irregular in terms of quality. Throughout October and November, demand was lethargic, the autumn school holidays doing nothing to help improve market conditions. Faced with fairly irregular demand, operators often struggled to sell the fruits in their possession. Several batches sold on a post-sale price (PSP) footing. To relieve the market, several operators opted to considerably scale back their pineapple imports. Unfortunately, despite these falling volumes, sales remained poor. It is true that the heterogeneity of quality provided by certain brands from Benin and Cameroon did not help improve demand.



Despite demand remaining flat in December, operators nonetheless managed to sell their stocks, thanks in particular to the promotions in place. The usual increase in the supply two weeks prior to Christmas however very nearly went wrong. It was only just before Christmas that demand manifested itself. Although it came late, it was nonetheless highly dynamic and was able to absorb nearly all the fruits available, and at fairly high rates. For the operators, the increasingly late start of festive purchasing makes management of these fruit influxes at Christmas a little more complicated, since they cannot take the risk of scaling back their imports during this period.

During the end-of-year holidays, demand for Sugarloaf was higher. The supply remains split between yellow-orangey fruits and green fruits. The coloured supply from Ghana and Togo was able to take advantage of the paucity of the overall Beninese supply to earn better value. The simultaneous presence of these two supplies (coloured and green) is continuing to foster confusion among customers, who seem to prefer coloured fruits.

In anticipation of a fall in demand after the holidays, the operators considerably scaled back their imports over the first month of 2018. Despite that, sales remained fairly quiet

From the beginning of the year, progressive disaffection was observed among purchasers for Cayenne, which often exhibited quality flaws (rapid development, internal spots). So demand switched to the Sugarloaf and Sweet supply. Primarily, it was Sugarloaf sales which benefitted most. Given the growing lack of interest in Cayenne, several wholesale market operators questioned the point of continuing to import this fruit, or at least importing such large volumes.

At Easter, demand was not as high as the operators hoped, the lack of fruit coloration not helping to improve demand either. Conversely, Sugarloaf sales were steadier, earning better value for coloured fruits than green fruits across the three origins supplying the market.

The Sweet supply topping up Cayenne and Sugarloaf remained limited, but sold at stable prices, which fluctuated between 2.20 and 2.40 euros/kg, with some occasional peaks at 2.50 euros/kg when the supply was smaller than usual. The quality and presentation of the Central American Sweet supply is increasingly tending to foster purchaser loyalty, with an apparent readiness to pay extra for products of reliable quality ■

Thierry Paqui, consultant
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Beninese pineapple

Not such a winning return...

Given the difficulty of Beninese pineapple producers in meeting the ethephon residue rates for Sugarloaf, the Beninese authorities took the decision to ban all exports of coloured pineapples. This ban, which lasted nearly nine months, ended in August 2017. Unfortunately, while the residue problems were resolved, the procedures in place for export controls now seem to be creating new problems, which bit by bit seem to be side-lining the Beninese pineapple. The decision by the Beninese authorities to ban coloured pineapple exports no doubt caught the operators short. As laudable as it might have been, this decision has remained for many incomprehensible in more than one sense, making no distinction between exports of Cayenne and Sugarloaf. Yet while for Cayenne there is a procedure enabling risk-free ethephon applications, this was not the case for Sugarloaf at this point. On the other hand, this unilateral decision neglected the highly competitive environment of a highly competitive niche market such as the air-freight pineapple. Nor did it take into account that certain Beninese operators were supported by their importers, who also carried out tests prior to marketing the fruits.

True, the export ban on coloured pineapples will have had some positive impacts on the organisation and structuring of the Beninese pineapple industry, on fund allocations for industry development and for professional enhancement of the operators. Certain operators were able to obtain certifications (GlobalGap, organic).

The Beninese industry took advantage of the 2018 Fruit Logistica show, to communicate and explained all the work that it had accomplished within nine months to ensure that its pineapple exports no longer exceeded the ethephon rates set by European legislation. The central system set up in Benin to monitor ethephon residue relies on the Beninese Food Safety Agency (ABSSA). The official release ending the export ban for coloured pineapples specified that "all batches aimed at export must be accompanied by an official ABSSA validation stamp".

While upon the resumption of exports, ABSSA had seemed able to keep up with the tempo, it now



seems to have been left well behind by the number of exports and exporters to check, to the point that Cayenne which are not coloured or overly mature cannot be exported. Hence several batches were rejected by European purchasers due to overmaturity, which in recent months has increased the mistrust of the Beninese Cayenne. Today the Beninese supply is no longer prone to breaching the MRL, but is experiencing serious quality flaws. Indeed the analyses conducted by ABSSA are taking too long, and once the batches have been validated, they are already at an advanced stage of development. Beninese pineapple producers really seem to be caught between Scylla and Charybdis.

This situation certainly complicates winning back market share, already compromised by the presence of Sweet batches from various origins and by the increasingly strong attraction exerted by Sugarloaf.

We are reaching the limits of what the public authorities can do to help private companies. The ABSSA's controls are a god thing, but it is primarily up to the professionals to realise that it is in their interest to work their products better. More than ever it seems necessary today for the Beninese pineapple industry to really professionalise and better apply the procedures in order to ease the strain on ABSSA, otherwise its objective of winning back lost market share and even increasing it will remain a vain wish.

Southern Hemisphere kiwi

Good vibes about the summer



The momentum created in recent years with the arrival of yellow kiwis is starting to bear fruit, boosted by big marketing campaigns at the initiative of New Zealand's producers, who should support the expected development over the coming years.

Food to China, Tastes from the World 链接全球·美味中国



FOOD hospitality WORLD
THE 7TH INTERNATIONAL FOOD AND BEVERAGE EXHIBITION
7-9 SEPT, 2018
China Import & Export Fair Complex Area A,
Guangzhou, China



Here comes the Sun!

2017 confirmed the positive trend, although the potential, especially for New Zealand, was a bit undermined by climate conditions. Psa is still present, in both Chile and New Zealand, though the measures taken are considerably reducing the impact on yields. Hence after a 2016 yellow kiwi campaign already exhibiting strong growth, 2017 was the second biggest season in terms of volumes in the history of the NZ kiwi. Zespri Sungold volumes have doubled since 2010, reaching 52 million boxes in 2017. And the trend should continue. Zespri is actually announcing a 36 % increase in Sungold tonnages by 2020. However there was a modest overall potential last year, with a major production shortfall in Green (- 25 % on 2016), despite stable surface areas.

The market should continue to diversify. The research plan conducted by Zespri, in collaboration with Plant & Food Research, is one the world's biggest, with 70 000 varieties tested, including in particular red-fleshed kiwis. This growth will need to be accompanied by expansion of the customer portfolio. Shipments are already increasing to South-East Asia, in particular to Japan (more than 100 000 t) and China (93 000 t), but are still stagnant to other countries in the zone, including Taiwan (39 000 t). Nor has there been any real rise to the USA (less than 20 000 t), the Middle East (3 700 t) or Russia (less than 1 000 t). It is above all Europe that is absorbing a large part of export volumes. Growth potential to this destination is still high, especially for Sungold, although last year the Green shortfall masked the good performance on this segment (155 500 t across all varieties, i.e. - 14 % on 2016). Demand is highly receptive to Sungold, supported by Zespri's big promotional campaigns and by a now year-round presence thanks to plantations in Europe, especially in Italy and France (11 million boxes of Sungold and 6.5 million boxes of Green in 2017-18).

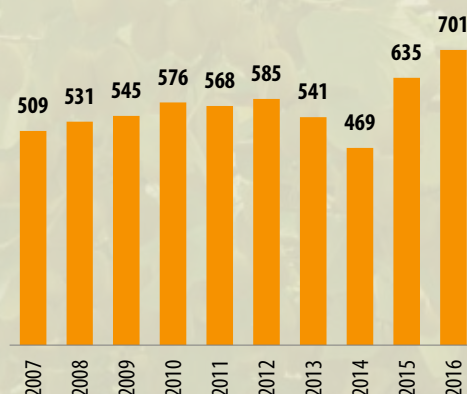
Kiwi – Southern Hemisphere – Exports in 2016

in tonnes	Total	New Zealand	Chile
EU-28	232 925	181 768	51 078
Asia	306 266	267 054	39 212
Pacific	15 334	15 334	-
Latin America	46 255	4 139	42 116
USA	46 872	19 046	27 826
Russia	13 673	927	12 746
Middle East	10 685	3 647	7 038
Others	29 006	29 085	-
Total	701 016	521 000	180 016

Sources : STAT NZ, ODEPA/ASOEX, Eurostat

Kiwi - Southern Hemisphere - Total exports

(in 000 tonnes / sources: STAT NZ, ODEPA)



Something Sweet!

Chilean operators also obtained some positive results in 2017, with the campaign around two weeks ahead of schedule which ended in a good overall exports level (175 000 t, i.e. - 2 % on 2016) and provided fine remuneration on the European market due to the NZ shortfall (55 000 t, i.e. + 7 %). Results were more mixed to the other destinations, especially South-East Asia (33 500 t, i.e. - 13 %) where prices were lower than in previous years. Volumes were also down to Latin America (36 500 t, i.e. - 13 %) and the Middle East (6 500 t, i.e. - 7 %).

The Chilean assortment has diversified in recent years with the varieties Soreli, Jintao and Summerkiwi. However, export volumes remain modest and Hayward is still dominating (97 %). The Chilean Kiwi Committee is for the moment committed primarily to raising the profile of the origin on the export markets. This year operators decided to revise the standards in order to survey and harmonise the production quality level. In particular, it defined stricter rules for exporting Chilean kiwis, which from this campaign will need to meet an average sugar rate of 5.8°Brix, with a minimum of 5°Brix, plus a dry matter content of 16 %, with at least 14.5 %.

And some fun!

The 2018 campaign has very good omens. The season kicked off rather well with the market particularly clear due to an early end to the European season, leaving Chile a small window of opportunity in late April before the arrival of the NZ kiwi. The first NZ Sungold arrived in early May, followed toward mid-May by the first Green batches. Both these origins also did their bit in terms of volumes: Zespri announced a production record this year for both Green and Sungold, with orchards reaching full maturity and yield. Similarly, the campaign forecasts of the Chilean Kiwi Committee were optimistic, reckoning on a total of approximately 174 000 tonnes of green kiwi (+ 2 % on 2017) and 6 000 t of other varieties (+ 49 %). Sales of Zespri kiwis should be supported by a big marketing campaign based on the theme "Please Yourself", and featuring various special events ■

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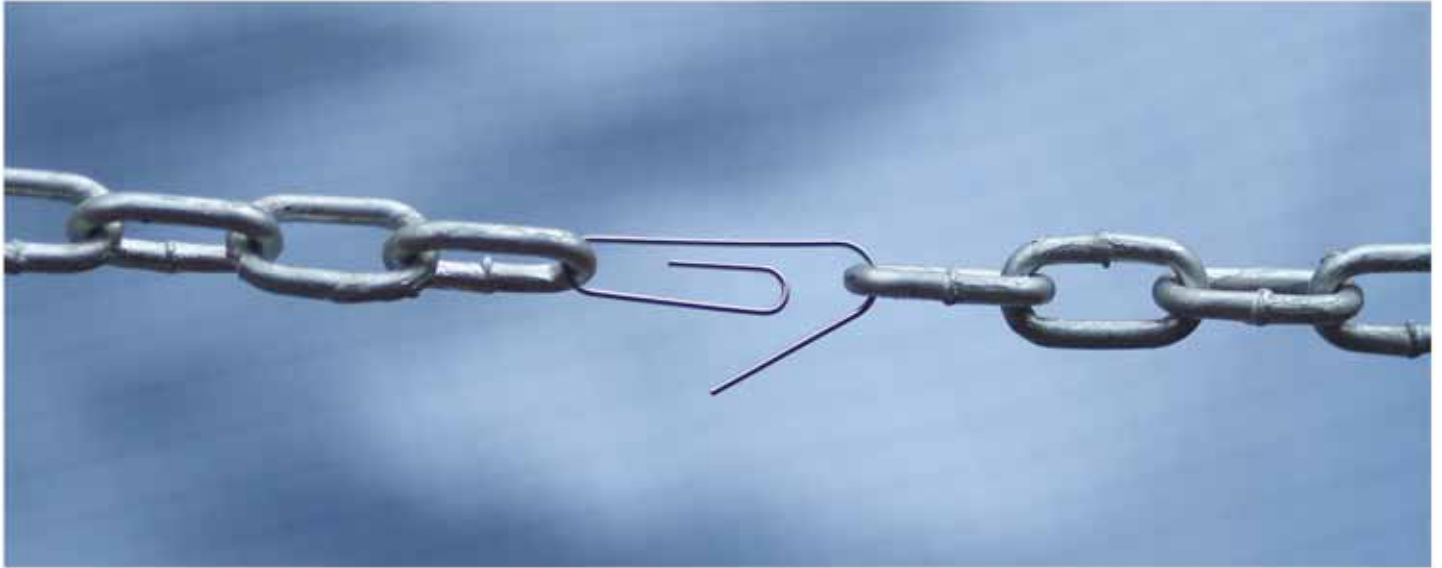
European stone fruits

Initial info on the 2018 harvest

Forecasts for the European stone fruits harvest were unveiled at the recent EuroMéditerranée show (Medfel), held in Perpignan from 24 to 26 April, as well as at the one-day event on 24 May organised in Lérida by Afrucat. The initial info confirmed the production losses among early varieties, for the peach, nectarine and apricot alike. Hence apricot production by late April was already set for a lower level than the record year 2017, with a total of 558 000 t (- 18 % on 2017), though around average for previous years, with the young orchards progressing. Similarly, the harvest should be around average for the peach and nectarine (3.67 million tonnes, i.e. - 8 % on 2017 and 1 % above the 3-year average), there too with losses, especially among early varieties. They will nonetheless be offset by a good production level in Greece, which did not suffer any real climate incidents, unlike the other European countries.



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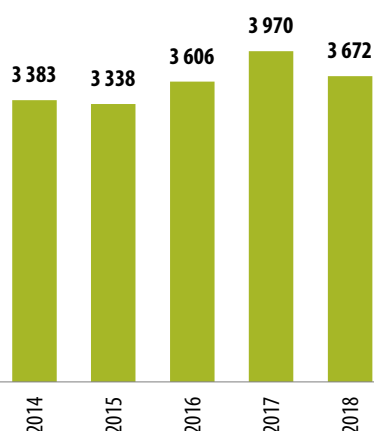
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Peach - Europe - Production
(in 000 tonnes / source: Medfel)



Peach: early variety losses revealed late

Like last year, the publication of the figures was deferred, with several countries including Spain and Italy taking the view that they still had too little info in late April for a realistic campaign forecast for the peach and nectarine. So these were officially announced in late May at a meeting of the European Committee, which moreover confirmed the deferral in the forecasts for the peach to after 15 May as of 2019, in the same country that will host the annual meeting. Conversely, the forecast for the apricot will still be presented in late April at the Medfel show in Perpignan.

Peach and nectarine – European Union
Evolution of production in main producer countries

in tonnes	2018 production	2018 production compared to	
		2017	Last 3-year average
Spain	1 514 618	- 11 %	+ 16 %
Italy	1 146 844	- 16 %	- 11 %
Greece	810 000	+ 19 %	- 1 %
France	200 166	- 10 %	- 5 %
Total	3 671 628	- 8 %	+ 1 %

Source: Medfel / Processed by Infofruit

The late May meeting made it possible to more precisely evaluate the fall in production due to the frosts in late February/early March, which affected the early varieties in Spain, Italy and France. The shortfall is apparently particularly considerable in Italy, with volumes down overall by 16 % (1.14 million tonnes), with a slightly more marked impact for the Southern regions (- 17 %) or even the central regions, including Emilia-Romagna (- 15 to - 16 %), than for the northern regions (- 10 %). Note that surface areas are tending to expand in the southern half of the country, and to decline in the northern half with the fall in exports. There is also a notable downturn in Spain (- 11 %, i.e. 1.51 million tonnes) because of considerable losses in the Valencia region (- 28 %) and above all Catalonia (- 17 %). In France, the damage is fairly evenly distributed across all the regions (- 10 %, i.e. 200 166 t), with surface areas still shrinking steadily given the European competition. Only Greece should register a bumper harvest this year, which while not historic, is set to be the country's second biggest (810 000 t, i.e. + 19 %, as opposed to 1.10 million tonnes in 2016), in the absence of climate incidents.

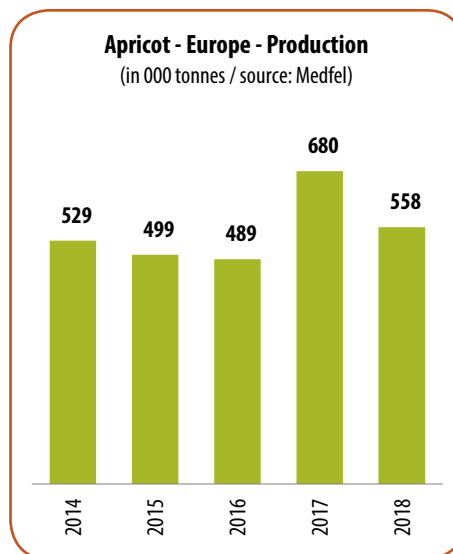
So the season could be fairly competitive at European level, with losses primarily at the beginning of the season in the early varieties and strong supply pressure in Eastern and Central Europe, especially since Russia is still maintaining its import veto on Europe. The fall in Catalonian production could however slightly ease the market in July/August.



Apricot: a small cyclical downturn

The apricot harvest should be around the three-year average (558 000 t), after a record 2017 (680 000 t). It will be characterised by losses primarily on the early season varieties, although certain zones such as Murcia and others have, since the forecasts in late April, suffered hail storms cutting the potential even more. Italy is by far the hardest hit country, with volumes falling by 33 % from 2017 due to frosts in late February/early March. We should highlight the progress made by Italian apricot production in recent years thanks to converted cultivation area, mainly in the south of the country, with modern rather coloured varieties which extend the production calendar. France will also have a fairly marked fall (- 14 %) with losses in all regions, such as in peaches. Similarly, Greece is set for a downturn for this species, unlike for the peach (- 12 %). For their part, Spanish producers predicted a good harvest level in late April, in spite of the losses due to the cold (+ 9 % on 2017) and due to conversions, especially in Murcia, from the peach to the apricot in recent years ■

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Apricot – European Union
Evolution of production in main producer countries

in tonnes	2018 production	2018 production compared to	
		2017	Last 3-year average
Italy	201 138	- 33 %	- 14%
France	134 448	- 14 %	- 4 %
Spain	142 709	+ 9 %	+ 18 %
Greece	79 800	- 12 %	+ 36 %
Total	558 095	- 18 %	0 %

Source: Medfel / Processed by Infofruit



Producer country file

The cherry in Turkey

by Cécilia Céleyrette

Although Turkey is highly renowned for its citrus production, the cherry is also one of its iconic fruits. Cultivated in this country since Roman times at least, the cherry has spread to a number of zones, making this origin the number one producer country ahead of the United States. And although this fruit has long been aimed at the local market, Turkish exporters have hoisted up their country to be the world number two exporter, behind Chile. Planting now seems to be slowing down, though shipments should step up with the gradual improvement in agricultural practices (increased yields, improved quality level, reduction in post-harvest losses), and thanks to trade agreements signed, which should open up new outlets for the Turkish cherry.



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Cherry – Turkey

Location

In Turkey, the cherry orchards are situated mainly in the Aegean region (Izmir), the Marmara region (Bursa) and as far as Central Anatolia (Konya). Hence Izmir province packs in approximately 10 % of production, ahead of Afyon (9 %), Manisa (7 %) and Konya (7 %). Next come the Isparta, Amasya and Bursa zones, each with 5 % of the harvest. They are finally followed by the produce from Mersin and Denizli (4 % each). Trials are also being conducted in various regions, especially on the coast (seeking early harvest/ high prices), but the lack of chilling hours does not always enable the usual cultivars to be exploited, especially Ziraat.

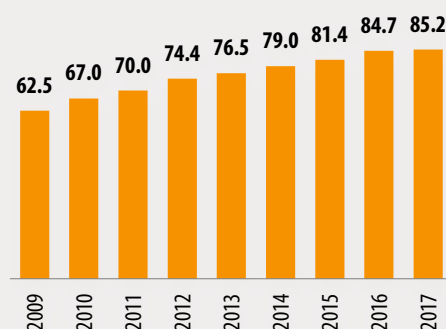


Cherry – Turkey

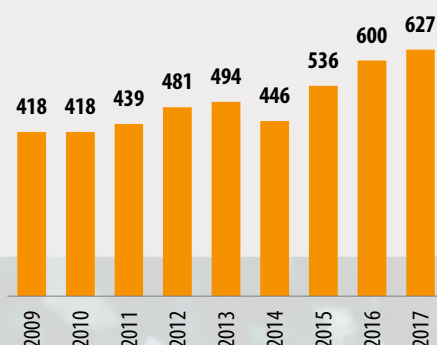
Production

After rising in the early 2000s (approximately + 10 % per year), the annual planting rate slowed down (to between + 5 and + 6 % until 2012), reportedly reaching less than 3 % or even practically zero in recent years. Since the cherry is highly sensitive to bad weather, progress in production has been haphazard, especially so perhaps in this country of high losses due to its agriculture still being in transition. Since although these cropping techniques are evolving, with in particular an increased planting density and planting smaller trees (up to 10 m high before) to facilitate harvesting, production is still highly traditional, and small producers often lack installations for cooling the product, and knowledge and skills to implement good practices. The big facilities can call on modern irrigation and orchard protection equipment (hail cannons, protective films, etc.), contribute toward training the producers and have GlobalGap certified stations. So yields are on an upwards trend. The prospects for a potential of 520 000 t in 2020 have been exceeded. However, as in many European countries, the country's production is facing invasion by the *Drosophila suzukii* fly, which appeared in 2016 on strawberries in the east of the country, and which seems to be gaining ground, especially in the southern regions and into Central Anatolia. Dimethoate, the treatment initially applied, was banned in 2018 by the Turkish authorities following the import veto exercised by certain European countries at France's initiative. So producers are being encouraged to step up trapping.

Cherry - Turkey - Evolution of planted areas
(in 000 ha / sources: Turkstat, USDA / processed by Infofruit)



Cherry - Turkey - Evolution of production
(in 000 tonnes / sources: Turkstat, FAO / processed by Infofruit)



Cherry – Turkey

Production calendar and varieties

The most typical varieties in Turkey are Karabodur, Dalbasti and Napolyon (Napoleon). This latter variety is the most iconic in Turkish production, since it is aimed at the export sector. The 0900 Ziraat variety (Napoleon) remains by far the main variety planted, reportedly representing 70 % of surface areas, ahead of Lambert (6 %) and Stark Gold (6 %), with the other varieties representing 18 % of the cultivation area. While it provides many assets, whether in terms of taste, sizing or keeping, it has the disadvantage of middling productivity. Hybridisation trials on this variety are in progress, through the big facilities have also planted other varieties, especially early and late ones to spread out the calendar. This now begins in May and extends until July or even August in the late regions, whereas it was concentrated in June/July a few years ago. The Regina cherry seems to be one of the most promising varieties at present.



Cherry — Turkey — Production calendar

Varieties	M	J	J
Early Lory, Early Burlat			
Bing, Star Giant, Georgia, Big Lory, Sumburst			
Lapins, Stella, Van			
Selesta, 0900 Ziraat, Lambert			
Regina, Stark Gold, Sweet Heart			

Professional sources

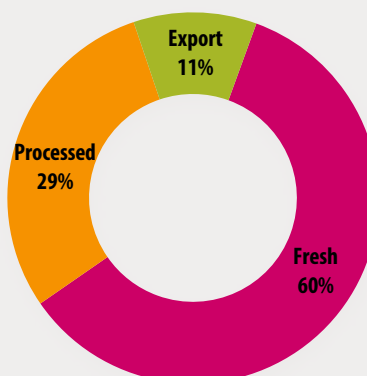


Outlets

Turkish cherry production is primarily aimed at the local market (50 to 60 % depending on the sources), with a high tonnage for the industrial sector of around 165 000 t. Exports are seeing growth, currently fluctuating between 60 000 and 80 000 t according to figures supplied by the USDA.

Cherry - Turkey - Outlets in 2017

(source: USDA / processed by Infofruit)



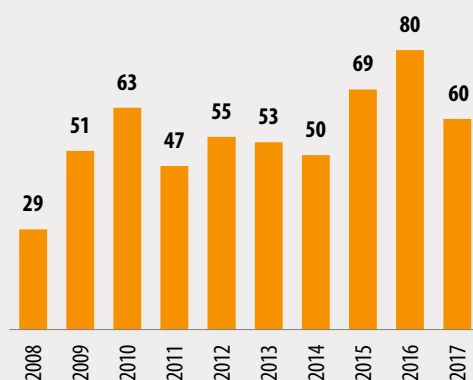
Cherry – Turkey

Exports

Turkish operators have big ambitions in terms of cherry exports over the coming years. These are still struggling to make headway, although all the production sector has made all the necessary efforts to improve the harvesting, storage and shipment conditions. The majority of big exporters are GlobalGap certified, though the bad weather, more difficult relations in recent years with Russia and European competition (Spain and to a lesser degree Italy) have curbed this progress. The objective remains to achieve a potential of 100 000 t, with for the moment a maximum of 80 000 t. The European market remains the main outlet, with more than 50 % of tonnages, of which 42 % aimed at the German market either directly or via Austria. Volumes shipped to the United Kingdom have fallen steeply given Spain's strong presence there. Volumes to France have also fallen with the ban on dimethoate treatments against the *Drosophila suzukii* fly. Furthermore, there has been little progress in the Middle East. Volumes are primarily focused on Iraq (16 %). Shipments to Asia should progress, though they were still modest in 2017 (620 t for Hong Kong/Singapore). The protocol signed with China, as of late 2017, has helped nine companies to export to this country. Protocols are also due to be opened with Malaysia and Vietnam.

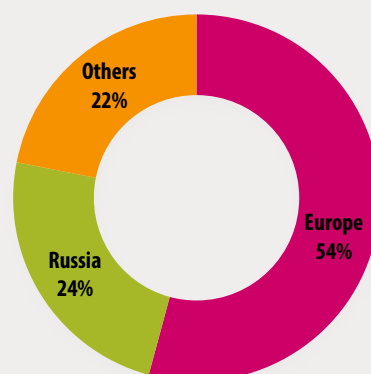
Cherry - Turkey - Evolution of fresh exports

(in 000 tonnes / source: Turkstat / processed by Infofruit)



Cherry - Turkey - Breakdown of exports in 2017

(sources: Turkstat, Comext / processed by Infofruit)



Logistics

The bulk of volumes is exported by road freight, to both Russia and Europe. The transport time is approximately six days to Russia or via Central Europe. Exporters want to expand their long-haul export shipments, especially to the Asian markets. To this end, an agreement was signed with Turkish Airlines to reinforce air freight.



© Guy Brehinier

A report by
Pierre Gerbaud

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Litchi



The litchi market remained stable in 2017-18, with approximately 25 000 tonnes sold in Europe. The supply is focused on the period from November to February, with Indian Ocean litchis representing nearly 90 % of total shipments. This concentration of volumes is confirmed year on year, and we can even observe a decline in market activity around the end-of-year festivities. Interest in the litchi wanes greatly in January, with prices generally falling and a distinct slowdown in sales. Outside of this period of promotions by the supermarket sector, when it is a loss leader, the litchi reverts to being a rare and expensive exotic. Mexico, Vietnam and China, which renew their aspirations of progress with every passing year, are coming up against competition from berries available in parallel at more attractive prices. Thailand, which used to cover the period from April to August, is narrowing its shipment calendar and reducing its volumes. Finally, Israel, the traditional supplier during the summer months, has also been scaling back its supply for several years, and is consolidating in a more high-end niche.



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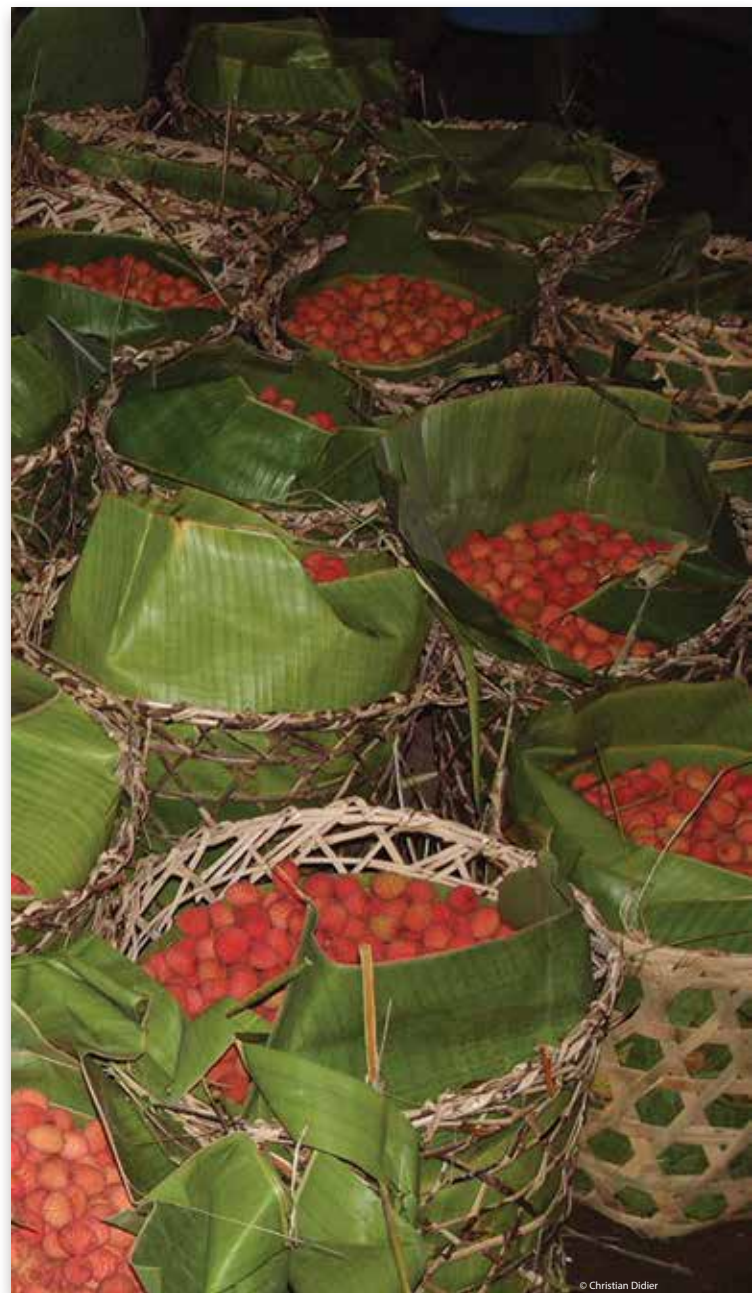
Litchi

Madagascar

Caught between plague and cyclone

Madagascar, the number one litchi supplier to the European market, registered a fairly similar 2017-18 campaign to the previous one in terms of volume. The estimated total for this last campaign was 18 220 tonnes, as opposed to 17 970 tonnes in 2016-17. This marginal difference highlights the great stability of the markets' absorption capacities of this product for the past six years, the overall rise being barely 2 000 tonnes, with slight fluctuations between campaigns. While the 2017-18 season seems to be a near-facsimile of the previous one, both in terms of volume and economic results, it is considerably different in terms of how it unfolded.

With 18 220 tonnes of exports as opposed to 17 970 tonnes in 2016-17, the 2017-18 Madagascan litchi campaign was similar to the previous one in terms of volume. The breakdown by transport was as follows: 420 tonnes by air-freight, 15 600 tonnes by conventional sea-freight and 2 200 tonnes by containers, which equates to an additional hundred or so tonnes for sea-freight and fifty or so tonnes for air-freight. These small variations from the previous year nonetheless provide some indications on the market orientations over the last campaign. Hence we can note a slight comeback by air-freight litchis due to the shortfall from competing origins on this niche, mainly Mauritius and Reunion. The great stability in conventional sea-freight volumes confirms the concentration of sales over the end-of-year festivities, a trend which has constantly strengthened for nearly a decade. As for container exports, also stable, they attest to the difficulty of extending the campaign at the beginning of the year, a period of more intense confrontation with the South African competition.



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Will the litchi campaign take place?

It all started so poorly last season that this really was a reasonable question. Despite the Madagascan industry having consolidated with a proven organisation, major external factors have disrupted the campaign. In September and October, the plague flared up again in Madagascar. This endemic disease regularly reappears in this country where every year there are hundreds of cases. And in 2017, it was particularly virulent, with nearly 2 400 cases identified, and more than 200 dead within a few months. Unlike in previous years when the infection sites were mainly located on the high plateaux and in urban centres, the disease spread rapidly beyond there. While the suburbs of Antananarivo were very rapidly affected, the presence of proven cases in the Toamasina zone intensified fears relating to this scourge. Moreover, this year brought pulmonary plague, the most contagious form of the disease. The Madagascan authorities, supported by the WHO and Institut Pasteur, reacted rapidly, keeping a close eye on the extension of the disease, while masks and doses of antibiotics were shipped to the country in an attempt to contain the epidemic. Numerous sanitary measures were also taken to protect establishments receiving large numbers of people (schools, universities, markets, etc.). These actions were able to prevent the need to take more drastic safety measures in early November, which would have gone as far as population containment, preventing any travel by litchi industry players and therefore making harvesting, treatment and shipments impossible. Fortunately, the disease was contained in time, and did not impede the start of the litchi campaign, socially and economically important for the country.

At the end of the campaign, Madagascar was beset with misfortune once more: on 5 and 6 January, Cyclone Ava devastated the East Coast in the Toamasina region. 190 km/h winds, accompanied by tempestuous rains, caused the death of 50 people and injured tens of thousands. The damage caused by the rains and landslides proved particularly heavy (infrastructures destroyed, trees uprooted, etc.). As recently as March 2017, Cyclone Enawo had caused plenty of damage, extending the list of 45 cyclones and tropical storms that had hit the territory over the past decade. For the moment it is hard to determine the impact that Cyclone Ava will have on forthcoming litchi production.

Litchi – Madagascar Campaign opening date

Campaign	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Opening date	17 Nov.	18 Nov.	17 Nov.	19 Nov.	12 Nov.	22 Nov.

Professional sources



Limited production

Another disrupting factor was this year's mild Southern Winter in the Indian Ocean, which resulted in smaller and later production. The lack of a cool period, essential for litchi orchard flowering, and the uneven rainfall pattern delayed fruit bearing on the trees and fruit growth. This production delay of course had an impact on sea-freight exports, since the shiploads require homogeneous and massive maturity of the fruits. It was less crucial for air-freight shipments, with volumes much smaller. It is always possible to find a few hundred tonnes of fruits that have reached maturity even at the beginning of the harvest, but more difficult to find several thousand to feed the European supermarket sector in the run-up to the end-of-year festivities. In addition, this production offset varied between the main production regions (north and south of Toamasina), making it hard to set the official campaign opening date to provide the flows required to load the two scheduled conventional ships.

The campaign opening date indicated how the sea-freight litchis would perform on the European markets. Provided of course the volume and quality of the fruits are right, the merchandise reaches its destination at the best time for marketing. For several years, the opening date was set at between 17 and 18 November. In 2016-17, the quicker fruit maturation enabled a particularly early opening: on 12 November. During the last campaign, the less favourable meteorological conditions considerably delayed the setting. The opening date is important, yet its situation in the calendar is particularly so: this determines the arrival of the litchis on the shelves and governs sales during the weekends preceding the end-of-year festivities, which are consumption and promotion peaks for the product, and during which the supermarkets are generally open. The earliness of the 2016-17 campaign had helped sales extend over three weeks encompassing three weekends before the end-of-year festivities. In 2017-18, fruit sales extended over only two weeks and two weekends.

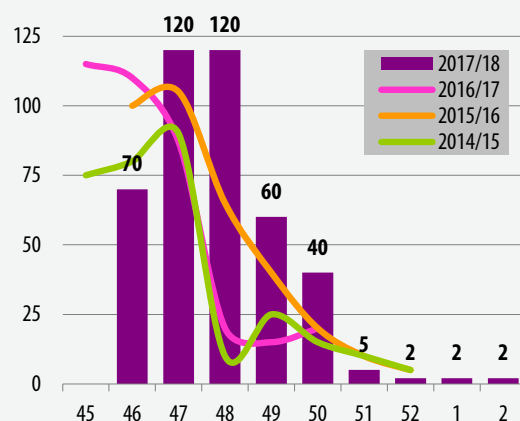
Last campaign's smaller production also had repercussions on conventional shiploads. True, Madagascar's production potential meant that the planned volumes were sent, yet the supply from the packing stations was distinctly disrupted. For the first ship, shipments to the stations were made from the zones closest to Toamasina, and loading was completed within the usual time frame (three days). Conversely, the supply for the second conventional ship was much slower, the harvest zones closest to Toamasina having been exhausted by the first ship, the collectors were forced to greatly extend their scope of operations, delaying the supply to the packing stations accordingly. The increased transport times to the stations considerably extended the loading operations for the second ship, to nearly six days. Although it hit this ship's arrival date in Europe, this delay was beneficial in resulting in a more leisurely timeframe for fruit treatment and packing at the station.

A decent air-freight campaign

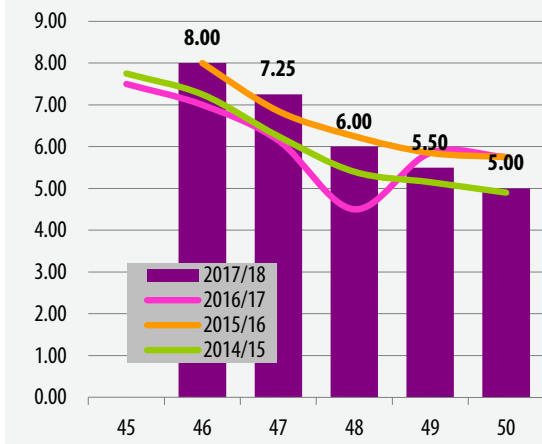
The first air-freight Madagascan litchi batches appeared on the European market in week 46, i.e. one week later than in 2016-17. Volumes quickly reached substantial levels, and the novelty effect of the product enabled high prices to be set. Given the smaller production, Madagascan exporters shipped destalked/treated fruits, but also larger quantities of on-stem fruits. The overall smaller production in the Indian Ocean zone, and therefore of its competitors too, benefitted Madagascar at the start of this campaign. Good fluidity of the merchandise could be observed, with moderate overall tonnages on a European scale.



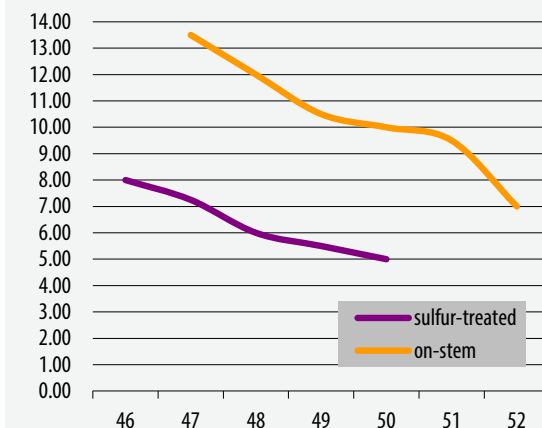
Air-freight Madagascan litchi
Evolution of incoming shipments in France
(in tonnes per week / source: Pierre Gerbaud)



Air-freight Madagascan litchi
Evolution of average import price in France
 (in euro/kg per week / source: Pierre Gerbaud)



Air-freight Madagascan litchi
Average import price in France in 2017-18
 (in euro/kg per week / source: Pierre Gerbaud)



The campaign launch of the competing origins in week 47 swelled the supply, with Madagascar remaining the main player. This caused rates to dip, though they remained distinctly higher than the same time the previous year. While treated fruits sold steadily, fresh fruits had more difficulty selling. The very high retail prices put off a great many consumers. In week 48, the slump in prices continued for the same reasons. The wide range of products available (destalked/treated, on-stem, trussed) and the multiple origins dimmed the market's profile. On-stem litchis from Madagascar, despite unanimous recognition of their taste quality, increasingly struggled to sell. Their presentation and packing did not manage to match the quality management of Reunion and Mauritius. Out of favour, certain batches sold from 6.00 to 8.00 euros/kg, whereas competing produce did not trade at below 10.00 euros/kg. The ongoing high prices, although now on a downward trend, curbed sales in week 49. Fresh fruit of deteriorated quality sold on an individual basis. Prices of treated fruits, which kept better, dipped though they still remained higher than in the previous campaign.

This air-freight campaign earned a satisfactory balance if we consider the les volumes shipped, which were bigger than in previous years, when there was a downward trend. The more limited production was doubtless the cause. The rise in exports of fresh/on-stem fruit is undeniably a novelty for Madagascar. Besides the relative general quantitative shortfall which helped the rise of fresh fruit shipments, the good reception for these products represented a useful potential diversification for Madagascar, practically absent from this niche in the past. Exports of organic label destalked/fresh fruit also illustrate the quest for new outlets, although these products struggled to find their place on this specific market.

A concentrated sea-freight campaign

Tight logistics

The sea-freight campaign proved particularly tight this year for the reasons already mentioned, of smaller production and the late start to the harvest, not to mention the pre-campaign stress due to the pest epidemic flaring up. The opening of the campaign on 22 November resulted in a logistical adjustment to ensure the best possible market conditions in Europe. For the past seven years, operators favoured the Southern route, via the Cape of Good Hope, especially because of the security problems encountered in going via the Suez Canal. Acts of piracy, on the rise in recent years in the Gulf of Aden, increased transport times. Ships had to stop over before entering to Gulf to take on security personnel, and let them off after crossing this zone. These stopovers increased the sailing time by two to three days, i.e. the equivalent of transporting via the Southern route.

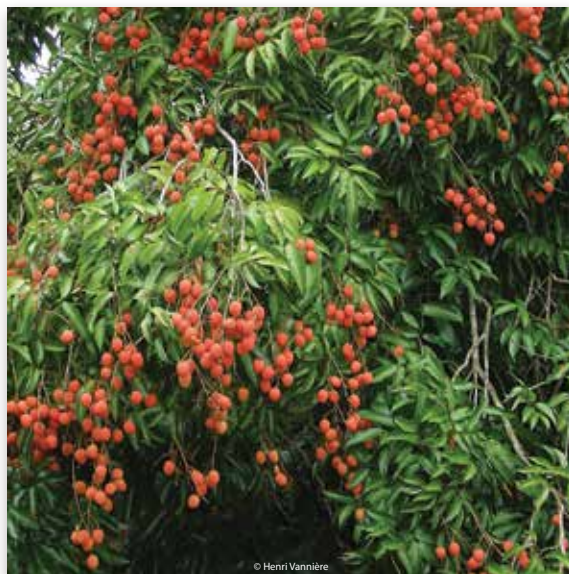
The additional cost due to additional stopovers and the premiums demanded by insurers convinced operators to abandon the Suez Canal route. This option seemed more appropriate in the absence of Mediterranean ports able to handle the litchi ships at this time of year, in a context of an early start to the harvest

In 2017-18, the circumstances seemed different. The insecurity of the northern route has greatly eased since military ships have been regularly monitoring the shipping lanes. Hence the saving of three days at sea was a major factor for this late campaign. Furthermore, the port of Sète was able to receive and handle the first litchi ship under good conditions. Hurried due to the trading deadlines, the operators routed the first ship to Sète, while the second, whose arrival was less urgent, was able to take the usual shipping route to Zeebrugge.

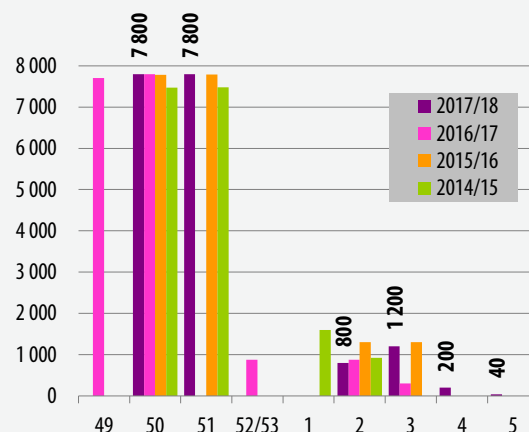
The Sète option

The unloading of the first ship at Sète was a logical necessity based on the decision to take the Suez route to reduce the transport time between Toamasina and Europe. Sète represented a good opportunity in the Mediterranean because of the presence of infrastructures suited to handling a conventional ship, and their availability at this time of year. The 23 000 m² cold storage warehouse was appropriate for housing 8 000 pallets of litchi received on 10 December. This warehouse, recently taken over by a company specialised in handling fresh produce from Dunkirk, had not been in operation for six years. The merchandise was unloaded by the port of Sète handling services, and then the merchandise was taken over by the forwarding agent /stevedore teams from Dunkirk.

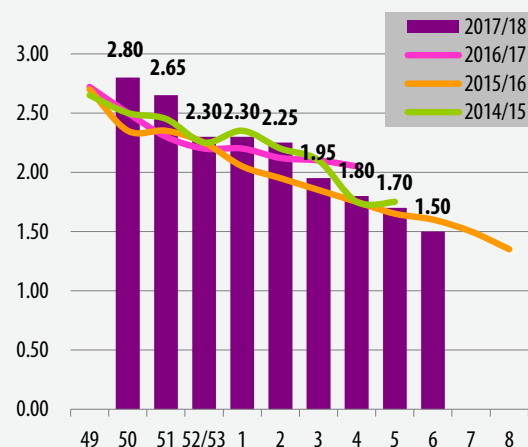
Yet while the handling of the merchandise by the forwarding agent proceeded smoothly, the unloading of the ship's pallets was more complicated. The lack of experience among the dockers at the port of Sète in handling this type of ship (after six years out of service) greatly extended the unloading operations. The using of disproportionate lifting machinery slowed the unloading tempo, not because of the containers on-deck, but the pallets in the hold. The time from picking up the pallets from the hold to putting them down on the quay was doubled, or even trebled, compared to the same operation in other ports. The pallet trucks used in the hold were also unsuitable, too cumbersome and slippery on the grating in the ship's holds. In addition, poor weather conditions disrupted unloading: it started under a constant light rain which did not impede unloading of the containers, but did for the pallets. After a half-day's work (Sunday 10 December afternoon), a strong winds and flooding warning was issued for Monday morning, leading to the suspension of unloading. So it resumed on Monday afternoon, once again slowing down the handover of the merchandise



Sea-freight Madagascan litchi
Evolution of incoming shipments in Europe
(in tonnes per week / source: Pierre Gerbaud)



Sea-freight Madagascan litchi
Evolution of average import price in France
(in euro/kg per week / source: Pierre Gerbaud)



to the recipients. The unloading of the litchis was finally completed on Thursday 14 December. This year the litchi loading and unloading has been direct opposites between Madagascar and Europe. The first ship, loaded in three days, was unloaded in five days. The second ship, loaded in five days, was unloaded in two days!

In spite of these complications, the ease of unloading the containers on Sunday 10 December enabled the first lorries to be loaded in the evening, for delivery of the fruits on Monday to the markets closes to the receiving port. Subsequent shipments were made as unloading proceeded.

The slowness of unloading also caused fruit availability problems. Since loading in Madagascar is carried out in order of arrival at the port, the litchis are progressively stowed in the ship, with no separation of brands or packaging types. This system, proven in the case of rapid unloading, was problematic in the port of Sète. The arrangement of the pallets did not necessarily match the sales programmes of the importers to their supermarket sector customers. These problems were resolved in the course of unloading. The last major point of unloading at Sète was the post-forwarding mobilisation capacity to the supermarket sites. Clearly, for shipments to Spain, Italy and a large part of the French market, the geographic location of Sète is an asset. Conversely, for the shipment of merchandise to Northern Europe, the transport times have got somewhat longer. Nonetheless, the good motorway connections from Sète enabled the Madagascan litchis to be cleared satisfactorily.

The stopover at Sète fuelled a great many positive and negative comments given the pressure inherent in the arrival of the first litchi ship. The fact remains that this option, provided that easily achievable technical improvements are made, represents a genuine alternative to the usual routes, more particularly in case of a late harvest.

A contracted trading window

In spite of the unloading delays at Sète, the European market retained a decent supply thanks to intense work by the various operatives. The one less trading week than in the 2016-17 campaign concentrated sales over a short period, but with equivalent volumes. The merchandise from the first ship enjoyed good uptake by European demand. From 2.75 to 2.85 euros/kg for the first shipments, prices then settled at 2.50 to 2.80 euros/kg, a higher level than in the previous campaign, especially because of re-evaluation of cost prices. The good reception of the product by consumers favoured fluid sales of the volumes available. After offering Madagascan litchis at around 5.00 euros/kg in the first trading week, many supermarket chains lowered the price to around 3.00 euros/kg in week 51. Consumers naturally switched to the attractive sea-freight litchi supply in the run-up to the end-of-year holidays, given the high retail price of air-freight litchis. Merchandise from the first ship sold especially quickly since the fruits exhibited satisfactory quality (good coloration and decent taste quality). In week 52, the trade continued with fairly fluid sales accompanied by a slight dip in rates (2.20-2.40 euros/kg), logical after the efferves-

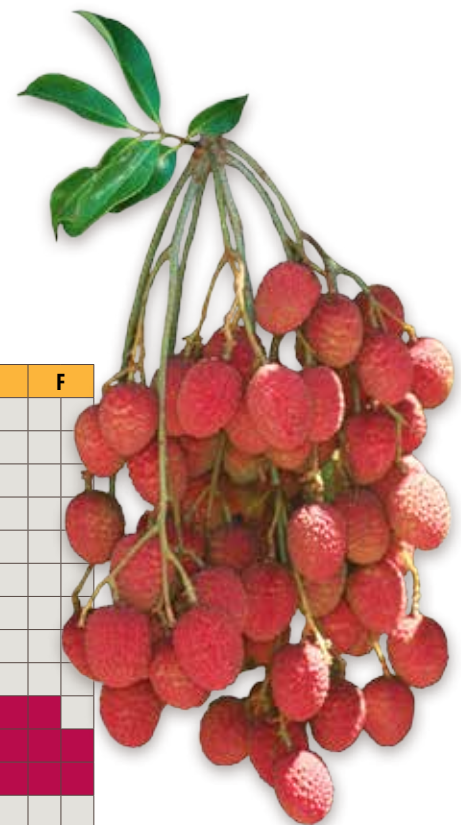


cence of the end-of-year festivities which generally mark the campaign consumption peak.

The cargo of the second ship received in Zeebrugge on 19 December, well underway at the end of the year, provided a fluid overlap with the container sea-freight litchis in the middle of January. In early January, the market, although distinctly less lively, held up in terms of price. In the middle of the month, prices took a more marked downturn, because of lack of interest from supermarkets and consumers and the greater qualitative fragility of the fruits. The second half of January, which marked the end of procurement and sales, saw more mixed conditions, with more distinct price falls than in previous years. Numerous batches had to be sorted before marketing, and the lack of public interest was confirmed more strongly than before. This downward trend was not unique to Madagascan fruits, with the South African litchis simultaneously present following the same trajectory.

This campaign will be remembered for the Madagascan litchi industry, despite the many obstacles which arose, once again managing to obtain good overall results, a sign of its vitality and efficiency. However, the many problems encountered revealed the fragility of a system constantly facing new or recurrent trials. In terms of the product, the standard quality of the fruits held up and the increasing emergence of new niches (Fairtrade and organic label fruits, fresh on-stem fruits, diversification of outlets) provides room for relative optimism for the coming campaigns, albeit still marginal avenues ■

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Litchi — European Union — Import calendar

Sources	M	A	M	J	J	A	S	O	N	D	J	F
Asia	China											
	India											
	Taiwan											
	Thailand											
	Vietnam											
	Nepal											
	Bangladesh											
Indian Ocean	Reunion											
	Mauritius											
	Madagascar											
	South Africa											
Others	Australia*											
	United States											
	Mexico											
	Israel											

* Australia: Queensland: from the beginning of November to the end of January / New South Wales: from the beginning of January to the end of February

Litchi — Indian Ocean — European Union estimated imports

Tonnes	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Total	23 445	20 955	16 350	20 510	20 560	20 480	22 020	20 666	21 570
Madagascar	19 750	17 715	14 040	16 220	17 430	17 790	18 475	17 970	18 220
South Africa	3 340	2 660	2 000	3 600	2 450	2 030	2 900	4 200	3 000
Reunion	240	400	200	420	540	460	440	885	150
Mauritius	115	180	110	270	140	160	150	250	100
Mozambique						40	55	106	100

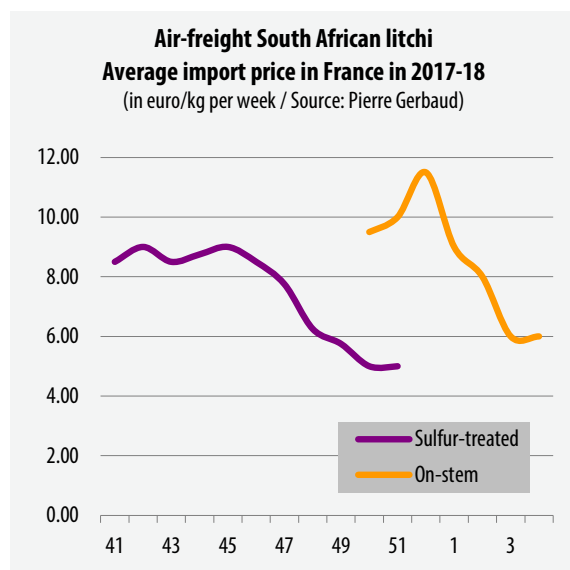
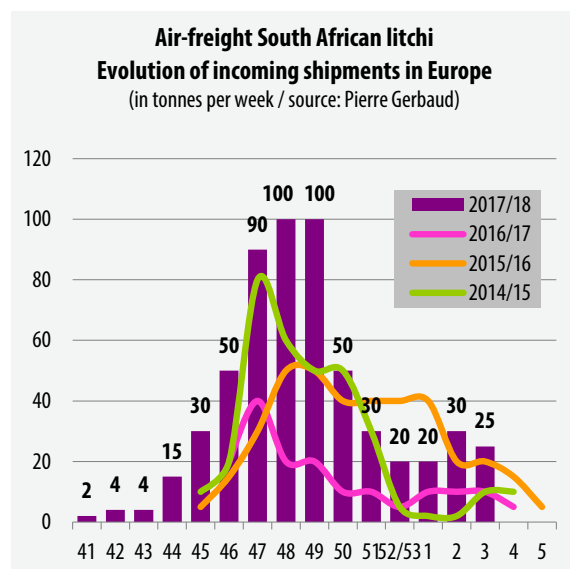
Professional sources, data collected and processed by P. Gerbaud

Litchi

South Africa

An uneven campaign

by **Pierre Gerbaud**



In 2016-17, South Africa exported approximately 4 200 tonnes of litchi to Europe. In 2017-18, exports probably subsided the same as with the other Indian Ocean origins (except for Madagascar). They amounted to around 3 000 tonnes, of which approximately 20 % by air-freight.

A long air-freight campaign

The South African campaign was particularly long this year, especially for air-freight fruits, the first shipments of which were received in week 41, i.e. in mid-October. This unusual earliness was due to the market launch of a new variety from a specific region, hitherto underexploited. This variety, known as Third Month Red, sold at high prices in the absence of competition and in spite of its taste quality not proving popular on the markets. The quantities on the market remained marginal over the first three weeks of the campaign. These fruits were then replaced by the Early Delight variety, which provided the transition from week 45 along with the Mauritius variety, better suited to European demand. Air-freight treated and destalked fruits continued to be sold until week 51, slightly overrunning the arrival of the first ship from Madagascar. Prices gradually dropped from week 47 to more or less align with those of the Madagascan litchis. Given the expansion of the supply over weeks 47 to 50 and the predominance of shipments from Madagascar, this year the better sized South African litchis did not achieve the higher value usually observed.

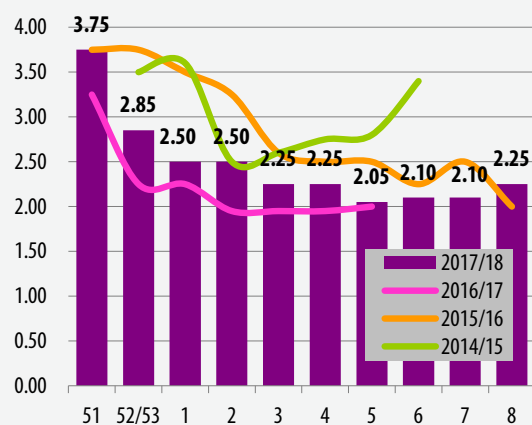
From week 50, South African exporters modified their supply, offering on-stem fresh fruits, in particular taking advantage of the scarcity of produce from Reunion and Mauritius, which specialise in this niche. Well received until the end of the year and selling at 10.00 euros/kg or more, these products saw their prices decline thereafter between 8.00 and 10.00 euros/kg. The transition to the Red McLean variety in mid-January aggravated the fall in prices down to 4.00-8.00 euros/kg. This price deterioration, due in part to the varietal changeover, also coincided with a great lack of consumer interest in the litchi and the greater qualitative fragility of the fruits.

A mediocre sea-freight litchi campaign

The South African sea-freight litchi campaign began in week 52 with modest shipments. Their sale price was at a higher level than for Madagascan litchis, especially because of their more standardised sizing. However, big coloration variations compared to competing produce occasionally complicated sales. The predominance of small fruits weighed down on sales, and rates rapidly aligned with the price ranges for Madagascan litchis. From the middle third of January, the South African litchi rate gradually declined because of lack of interest from supermarkets in the product, while shipments expanded. Despite prices being slightly higher than for Madagascan litchis, the South African supply did not manage to really stand out from the pack. In addition, the produce suffered qualitative deterioration, with mould appearing on certain batches tarnishing the origin's brand image. In the second half of January, the drop in process picked up pace, to stabilise at around 2.00 euros/kg for large and good quality fruits. Volumes waned in late January/early February, with produce of fragile quality struggling to find takers. Despite a slight jump in the run-up to the Chinese New Year holidays, the South African campaign finished on a particularly gloomy note.

Faced with the Madagascan competition and the concentration of market activity around the end-of-year festivities, the South African litchi, with its fragile quality, saw its footing shaken. With efforts apparently concentrated on air-freight shipments, more substantial this year, could this point to a new positioning of the South African industry? ■

Sea-freight South African litchi
Evolution of average import price in France
 (in euro/kg per week / source: Pierre Gerbaud)



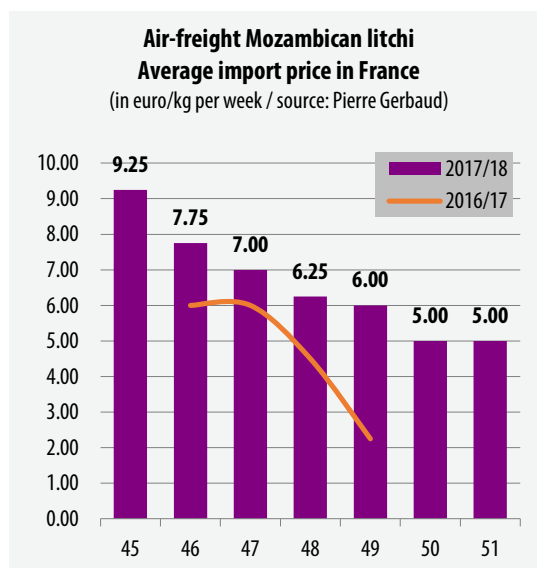
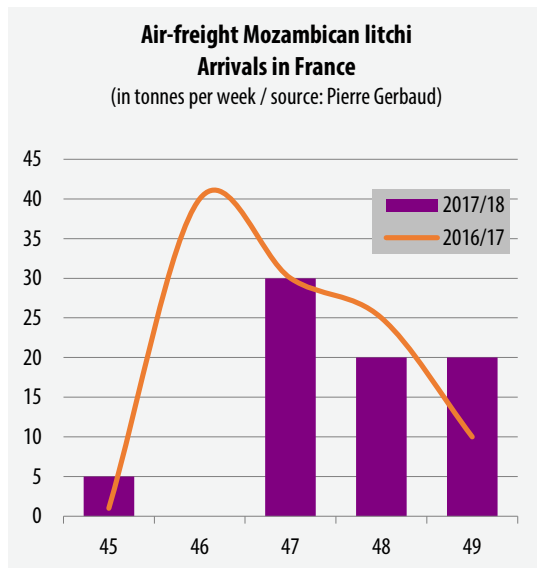
© Henri Vannière

Litchi

Mozambique

Logistical diversification

by **Pierre Gerbaud**



With a hundred or so tonnes of air-freight exports this year, Mozambique confirmed its presence on the European market. Received from week 45, these good quality fruits sold at high prices. After a temporary absence in week 46, the flow resumed in week 47 when the combined supply from the various Indian Ocean origins weighed down prices further. They rapidly took a downturn to fall into line with rates of the South African and Madagascan fruits. Air-freight exports finished in week 49, though the fruits received continued to be sold until week 51.

The origin's great innovation was shipping litchis by sea-freight for the first time. These fruits were received in week 52 and on the market for a fortnight or so. Only a few containers were involved, yet this trial doubtless marks a turning point in litchi exports from Mozambique to Europe. This opening illustrates a larger shipment potential than the modest air-freight tonnages for the past three or four years. Carving out a market niche in the context of the Indian Ocean campaigns seems difficult yet feasible, with good quality produce ■



Litchi

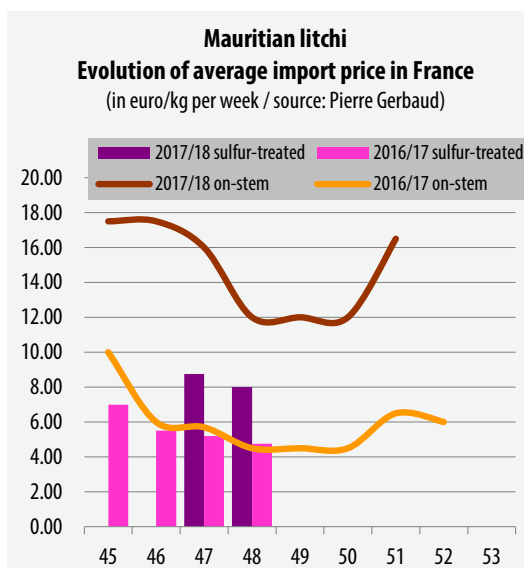
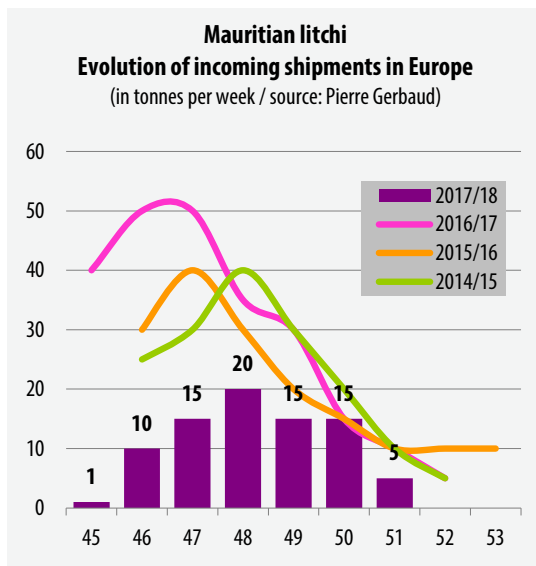
Mauritius

Practically unnoticed

by **Pierre Gerbaud**



© Christian Lavigne

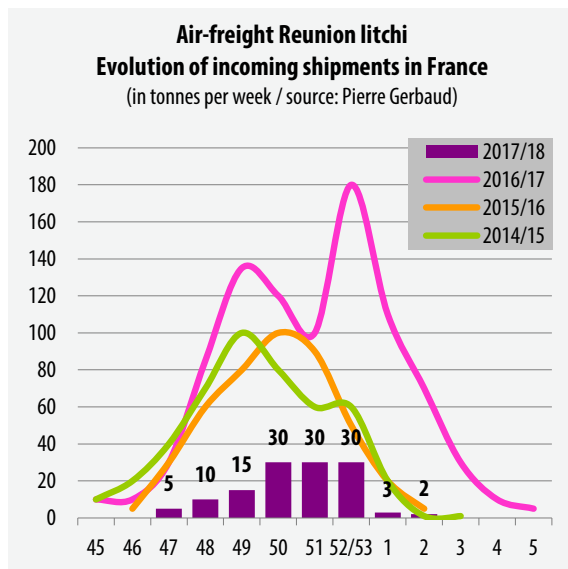


As with Reunion, this year Mauritius saw a considerable downturn in its litchi production, and therefore its export capacities. Estimated at around 80 to 100 tonnes, exports registered a distinct downturn from the previous year, which registered a total of nearly 250 tonnes. The 2016-17 campaign was particularly auspicious in terms of tonnages. The context in which the litchi marketing campaign unfolded on European markets did not favour Mauritius. The low export possibilities at the beginning of the campaign put a strain on the overall results for the season. Usually, Mauritius has a quick start to its campaign, with substantial volumes. This year, it took at least two weeks to reach the exports peak, which was at a very moderate level. Mauritius did not take advantage of the opening weeks of trading when the novelty of the product and its limited availability favoured good sales at high prices. Furthermore, the relative rarity of the product on the markets led to particularly high pricing. At the retail stage, prices put off many consumers, who preferred to defer their purchases in favour of sea-freight fruits. From week 47, marketing of fresh litchis proved more difficult, leading to poor sales and storage. From weeks 48 to 50, sales were observed at lower prices for fresh on-stem litchis or trussed litchis of deteriorated quality (6.00-8.00 euros/kg as opposed to 12.00-15.00 euros/kg). Mauritius mainly exported on-stem or trussed fruits. Exports of treated destalked fruits were limited to weeks 47 and 48. Competition from Madagascan, South African and Mozambique litchis in this niche meant that Mauritian fruits went practically unnoticed. Prices of fresh fruits remained higher than for destalked fruits, which probably led Mauritian exporters to favour this type of product. While destalked Mauritian fruits were deemed of decent quality, on-stem and trussed fruits were highly rated in the main, with the inspectors highlighting the size of the seeds, their coloration, presentation and taste quality. With every passing campaign, Mauritian exporters are improving the presentation of their produce. The systematic adoption of effective packing bags, but also trussed presentation, imitated by Reunion's professionals, are earning value for the export fruits, by meeting the changing demands of European supermarkets. In the competition between the Indian Ocean origins, Mauritius is hot on Reunion's heels in the fresh fruits niche, yet remains more discreet in terms of volume. The extension of the orchards is limited and the logistics complex, given the competition from other products, in food and other sectors, exported by Mauritius, restricts the freight capacities assigned to litchis at the end of the year ■

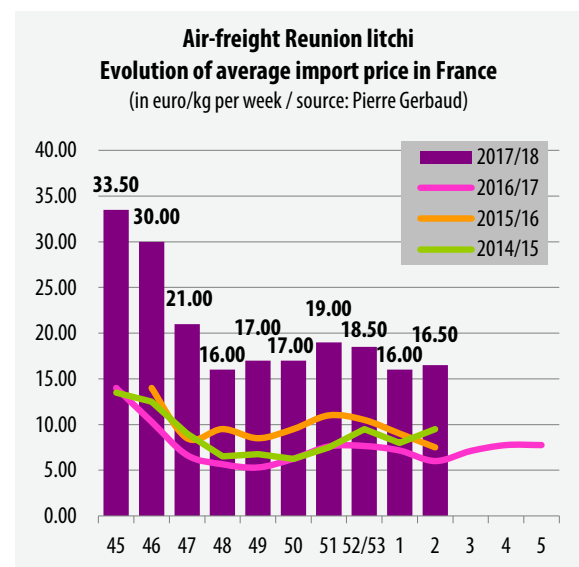
Litchi Reunion

In freefall

by **Pierre Gerbaud**

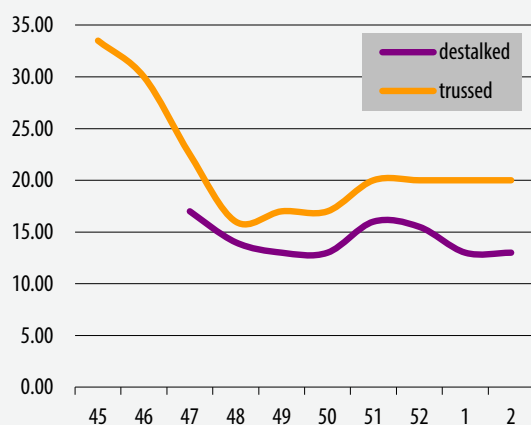


In 2016-17, Reunion caused a real surprise with the magnitude and suddenness of its litchi exports. The 400 to 500 tonnes usually shipped were easily exceeded, with 885 tonnes earmarked for Mainland France. Thus Reunion hoisted itself up to be the number one air-freight litchi supplier, doubling its volumes in the space of one campaign. This quantitative rise was accompanied by a slump in prices, but did not cause any real fall in rates. The 2017-18 was as lean as the 2016-17 campaign was abundant. With 125 to 150 tonnes of exports, Reunion recorded its most modest campaign. The main cause was the poor weather conditions during the fruit production cycle. The mild Southern winter and irregular precipitation led to lean and fragile production. The first batches were forwarded to local markets. The first shipments went onto the European market during week 45, the usual start of campaign period. The difference from previous years was illustrated by the paucity of shipments, which did not exceed tens of boxes. These unrepresentative fruits for such a rare product sold at stratospheric prices (up to 35.00 euros/kg). From around 30.00 euros/kg in week

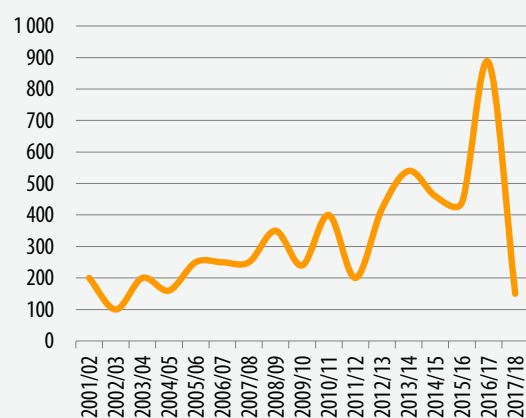


46, the Reunion litchi rate dipped thereafter given the higher overall availability on the market. However, it remained particularly high throughout the campaign, with levels of 13.00 to 16.00 euros/kg for destalked fruits, and 16.00 to 20.00 euros/kg for trussed fruits. This year, on top of Reunion's top-end image acquired over the campaigns, came the notion of rarity boosting the product value. The small quantities were mainly sold in the last three weeks of December, corresponding to the period of strongest demand during the end-of-year festivities. Sales prices remained very high. They dipped thereafter while volumes collapsed. Still very expensive after the end-of-year holidays, Reunion's litchis had more difficulty selling due to greater qualitative fragility, which did not justify such price levels. Purchasers rapidly lost interest in the product for these last marginal batches. The majority of Reunion's litchis sold this year came in destalked form (loose or in trays) and trussed form, with a minimal proportion of on-stem litchis. The abundance of on-stem fruits provided by competing origins doubtless steered this choice by Reunion's shippers to stand out in the particular context of this 2017-18 season. In any event, this season was unfavourable for exports from Reunion, going against the surge in recent years. While Reunion remains a benchmark in terms of the litchi, the 2017-18 campaign certainly did not obtain satisfactory results. True, prices were high, yet the drastic lack of merchandise consigned this campaign to obscurity for the litchi industry. The good results of a campaign can of course be illustrated by the sale prices achieved, as well as by volumes corresponding to the potential of an origin. Yet in the particular case of Reunion, the exceptional limitation of the supply this year hampered the expected returns ■

Air-freight Reunion litchi - Average import price in France by presentation in 2017/18
(in euro/kg per week / source: Pierre Gerbaud)



Reunion litchi Evolution of exports to Europe
(in tonnes / source: Pierre Gerbaud)



Litchi quality defects



Ageing fruits – dull appearance – shell browning and drying



Puffy fruits



Fruits picked too early



Ageing fruits – too long a gap between harvesting and sale



Puffy fruits



Unattractive colour resulting from lack of sorting



Oxidation of the shells of non-treated fresh litchis



Aborted and double fruits



Satisfactory colour (for reference)



Uneven colouring resulting from sulfur treatment



Different sizes in the same packaging



Stalk torn off



Moulds (*Penicillium*)



Black rot (*Aspergillus* spp. and *Pestalotiopsis*) and mould



Mould spots (*Penicillium*)



Heavy mould attack (*Penicillium*)



Sulfur dioxide burn damage and double fruit



Spread of mould spots (*Penicillium*)



Black rot (*Aspergillus* spp.) and mould



Sulfur burns as the fruits were wet before treatment



Rots and isolated moulds (*Penicillium*)



Black rot (*Aspergillus* spp.)



Burn caused by sulfur treatment and moisture

Litchi

Cultivation

by Christian Didier

Requirements of the litchi

Specific climatic conditions are required for litchi growing but the tree is not very fussy about soils. It also has low susceptibility to viral diseases.

Cultivation zones

The litchi requires a warm, humid climate. In order to flower, it needs a vegetative resting period induced by a cool, dry season. A slight fall in temperature and relative humidity may induce flowering in some humid zones. A good supply of moisture is essential from the appearance of the flower spikes until harvesting.

Windbreaks

The position of the land must allow good lighting. Poorly drained low-lying land should be avoided, as should steep slopes that hinder the mechanisation of maintenance work. The land must be sheltered from the prevailing winds and from sea spray near the coast. If there is no natural protection (relief, vegetation), windbreaks are installed around the field and even inside if it is large or very exposed. Wind breaks consist of fast-growing trees with good anchorage in the ground (filao, shisham, acacia and others) planted in dense rows and require maintenance (fertilisation, irrigation and pruning). They must be allowed sufficient space.

As far as possible, wind breaks should be installed a year before the litchis are planted to give protection from planting onwards. A wind break provides protection for a distance equal to ten times its height. They should be planted closer together on sloping land. They sometimes do not have any effect in extreme cases.

Soils

The litchi can adapt to numerous types of soil but prefers slightly acid soils (pH 5.5 to 6.5 and 8 or higher in some parts of India) that are rich in organic matter, deep and well drained. Although it can stand having 'wet feet' temporarily near rivers, prolonged submersion can be harmful. Drainage is all the more important as the litchi is grown in zones with high rainfall and often in low-lying areas protected from wind.

Orchard creation

Soil preparation

Planting in recently cleared land in which stump and root debris enhance the development of root rots should be avoided. If necessary, surface drainage is ensured by levelling and subsoil drainage by a network of ditches. If cultivation can be mechanised, deep subsoiling is followed by ploughing, possibly after the application of manure and phosphate and potassium fertiliser (in light of the results of soil analysis). When the trees are planted in holes, inputs are applied at this stage.

Plants

Propagation is usually by air layering using trees noted for the quality of their production. The layers obtained during the hot, humid season from branches 10 to 15 mm in diameter and 0.50 to 0.70 m long have a small necrotic root point at the cut that heals quickly. The root system is also better balanced with the aerial part. After separation, the marcots are cultivated in pots in a nursery for 3 or 4 months before being transplanted to the orchard.

Planting density

The litchi tree displays considerable growth. Today, planting distances are 10 x 10 m or 8 x 10 m, that is to say a density of 100 or 125 trees per hectare. Nevertheless, planting at 8 x 6 m (208 trees per ha) or 8 x 5 m (250 trees per ha) can be envisaged in more intensive cultivation. Annual pruning is necessary in this case. The orchard can be thinned by gradually cutting back the trees when they begin to hinder each other and then, in the absence of an effective pruning method, by felling one tree in two along the row.

Planting

Planting must be performed with a strict layout and perfectly aligned in each direction. If cultivation is not mechanised, a 0.8 x 0.8 x 0.8 m (500 litres) hole must be dug at the position of each seedling. The soil removed is then mixed with about 2 kg potassium sulphate + 2 kg natural phosphate + 25 to 30 kg well-rotted manure. The hole is then refilled with this mixture. A slight mound is formed as a result of the manure application and the expansion of the soil. The plants are installed in the mound and staked.

Marcots are planted inclined in the opposite direction to the wind and staked. They are thus less exposed to the wind and root better. The plants must always be watered abundantly after planting. In cool zones, they must be sheltered during the winter following planting.

Orchard maintenance

Training pruning

As for other fruit species, it is sought to train the tree on a single trunk with horizontally spaced, regularly distributed main branches. Care must be taken in the early years to prevent formation of shoots on the trunk or the main branches that have a very closed angle, following the natural tendency of litchi. These shoots are extremely weak points in strong wind.

Soil maintenance

The soil must be bare along the rows or under the foliage in the early years. Spontaneous inter-row vegetation must be kept down. Short-cycle, small growth intercrops can possibly be grown during the first three years and managed in such a way as not hinder the trees.

Irrigation

Litchi is very susceptible to water stress throughout the fruit growth period and the vegetative growth period that follows

the harvest. Irrigation is necessary in case of shortage of water. Stress during fruit setting causes substantial fruit drop. Different irrigation systems can be envisaged. Microjet irrigation is satisfactory. At least 200 mm water per month must be applied (according to soil type, the age of the trees, the climate, etc.).

Maintenance pruning

The fruits are clustered at the extremities of the branches. The latter are broken at harvesting. However, this practice does not control the tree volumes. The removal of dead wood, of small inner branches and branches that prevent sunshine from entering the tree is recommended.

Litchi growth is fast and soon becomes exuberant. The trees must therefore be controlled. For this, annual pruning is performed just after the harvest. The trees are usually too dense. The aim is to aerate them by allowing as much light as possible on the foliage and to keep them at a suitable

height to facilitate harvesting. The final result of pruning should be dome-shaped trees.

Fertilisation

Fertilisation is an important factor. It promotes good vegetative growth after the harvest and makes up for mineral loss to the fruits. After the active vegetative growth period of about four months, the litchi needs a short period of stress (nutritional, water, heat or other) to induce flowering.

Doses are modulated according to the date of application:

- after the harvest: 1/2 of the dose;
- at panicle emergence: 1/4 of the dose;
- after 'June drop': 1/4 of the dose.

Fertiliser is applied to the ground beneath and at the limit of the foliage. Trace elements are applied by leaf spraying at fruit setting (boron, calcium).



Harvesting

Traditional harvesting is performed by hand with 'bunches' of fruits of the branch stored in bales or crates containing 10 to 15 kg only so that the fruits at the bottom are not crushed. These hand-made bales conserve good moisture around the fruits, preventing them from drying out. It is better to use slightly ventilated plastic crates to avoid crushing the fruits. The fruits are rapidly treated and taken to market to avoid the peel discoloration resulting from drying. Litchi is not a climacteric fruit and its biochemical characteristics change little after harvesting, except for gradual deterioration. Fruit maturity is generally appraised on the basis of colour, peel texture and tasting. It is considered that a soluble dry matter/acidity ratio of 2.1 to 2.7 corresponds to optimum quality.

Litchi - Applications recommended Grams per tree				
Years	N	P	K	MgO
1	50	10	40	15
2	80	10	60	20
3	140	30	105	40
4	210	45	160	55
5	230	65	265	80
6	380	85	345	105
7	470	105	430	125
8	570	125	520	155
9	670	150	610	180
10 years and above	920	210	840	240

Pests and diseases

Warning: treatment must be applied in compliance with the regulations in force in the producer country and in the destination country.

Main fruit pests

- *Cryptophlebia peltastica* and fruitfly

Cryptophlebia lays eggs on immature fruits. The small caterpillars bore into the fruit to the seed for the nymph stage. The wound opens the way for other pests, especially fungi and fruit flies.

Main foliage pests

- Scales

Scales can infest fruits, leaves, stems, branches and the trunk. When numerous, they cause the withering of leaves and shoots. Leaves often display yellow spots where they have been pricked. Scale infestation is often accompanied by sooty mould.

- Mites: *Aceria litchi* (Erinose mite)

A major pest in India and China, which attacks the flowers and leaves. The leaves wither, and their bottom side is covered with a brown film.

Trunk and branch pests

- Bark-borer caterpillars (*Indarbela quadrinotata* and *I. tetroanis*)

Very common in India. Damage is caused by the larvae that bore into bark and trunk, reducing sap movement and affecting growth.

- Bark borer: *Salagena* spp.

The larvae feed on the bark and wood of the tree. The tree does not die but the branches wither. Treatment: these larvae can be controlled by stopping the holes with cotton wool soaked in systemic insecticide.

- Thrips

Dolicothrips indicus and *Magalurothrips usitatus* cause damage to flowers. *Selenothrips rubrocinctus*, *Heliothrips haemovoidalis* and *Franklinella cephalica* cause the withering of flowers and leaves.

Diseases

- Root rot

This is caused by the fungus *Clitocybe tulescens*. Much damage is reported in Florida. *Botryodiplodia theobromae* can cause sudden death of the tree (Australia).

- Aerial system

Leaf necrosis caused by *Gloeosporium* spp. This is observed in certain poorly managed orchards.

C. peltastica



Fruitfly



Leaf-borer caterpillar



Bark borers



Anthraxnose



Post-harvest and sulfur treatment

A feature of litchi is that it does not ripen after picking and so it is essential to harvest the fruit when it is fully ripe. However, it deteriorates very rapidly at ambient temperature. The shell browns, dries and becomes brittle in two or three days. Loss of colour results from the oxidation of anthocyanin pigments, an irreversible reaction. The fruit is then more subject to bursting and secondary contamination by fungi.

To prevent senescence before the fruit is sold, litchi can be fumigated with sulfur dioxide; this inhibits respiration and thus conserves texture and organoleptic qualities for several weeks. Sulfur has a fungicidal, anti-oxidant effect that keeps the shell flexible. This treatment can be applied to destemmed fruits or bunches that are sound, ripe, free from spotting, insect pricking and traces of damp on the shell. Sulfur is burned in a closed chamber containing the fruits. It causes the shells to turn yellow, whereas they are naturally pinkish red when the fruits are ripe. The fruits are then sorted again and packed. They remain yellow for as long as they are kept chilled. The colour gradually changes to pink ochre or purplish red when under warmer, moist, ventilated conditions to eliminate the sulfur.

Sulfur treatment is the cornerstone of litchi marketing insofar as it lengthens conservation time, providing access to sea transport and hence large-scale exports. The procedure is used for several other fruits such as table grapes and dried fruits and it is also used for wines. The main difference is that litchi shells are not edible. Sulfur treatment is permitted in Europe under certain conditions. Consumer health protection regulations stipulate that the residual sulfur content must not exceed 250 mg/kg in the shell and 10 mg/kg in the fruit pulp. Numerous experiments have been conducted to define treatment procedures so that these limits are respected. Both professionals and the European authorities pay close attention to the issue. Numerous control operations are performed throughout the life of the fruit in order to ensure that the regulations are respected. The gradual implementation of certification by operators should enhance product traceability and the mastery of treatment operations.

The continued use of sulfur is questioned from time to time. Indeed, with the regulations generally moving towards the protection of consumer health, there is a great risk of heading towards a reduction in residue levels at best and at the worst banning treatment. One of the roles of the sector is therefore to pay great attention to changes in the regulations concerning this point. A search for new conservation methods can also be an important approach. Unfortunately, litchi does not have sufficient economic weight to mobilise the resources required for such research, as is the case for other fruits.

Temperature during storage and transport is another key component in maintaining fruit quality over time. Indeed, chilling after harvesting, treatment and packing is performed by the transport facilities used. Here, it will be noted that litchi is one of the few tropical fruits that can withstand low temperatures ($1^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$). The combination of sulfur treatment and chilling allows good conservation of litchi. Fast chilling to the heart of the fruit is important for maintaining quality. Chilling must then be maintained to ensure as long a life as possible for the fruits. Any change in temperature may cause fruit deterioration and senescence.

Before sulfur treatment



After sulfur treatment



Photos © Christian Didier

Litchi

Varieties

by Christian Didier

Litchi sinensis Sonn.

Sapindaceae

Origin: Southern China (Canton region)

A great number of varieties exist around the world. Only those seen on export markets are mentioned here.

Shahi

(Muzaffarpur)

The fruits are medium-sized (20 to 25 g), bright pink and in clusters. The pulp is sweet. This is the most common variety in Bihar State in India. It is of very good export quality but susceptible to cracking and sun-scorch. The trees are vigorous with steady production (80 to 100 kg per tree).



Haak Yip

(Black leaf)

The fruits are medium-sized (20 g), dark red and in clusters of 15 to 25. The peel is smooth and hard. The stones are medium to large. The flesh is good to excellent, sweet and aromatic and forms 70 percent of the fruit. The trees are of medium vigour, compact, straight and bear well.



Chakrapad

(Emperor)

A large heart-shaped fruit (32 g). The skin is thin and flexible, dark red with yellow patches. Moderately juicy, the pulp may remain slightly acid. Fairly large stone. The trees are of average vigour with an erect habit, long branches and dense foliage.



Kwai mi

(Mauritius, Tai So)

The fruits are medium-sized (22 to 25 g) and bright red in clusters of 12 to 30. Fruit quality is good. This is the most widespread variety in the Indian Ocean. Production is steady with little alternate bearing. The trees are of medium vigour and slender.



Rose scented

The fruits are medium-sized (16 g), globular and heart-shaped. The pulp is very sweet with an aroma of roses, whence its name. The variety is grown mainly in Uttaranchal in India.



Photos © CIRAD Réunion

Wholesale market prices in Europe

April 2018

					EUROPEAN UNION - IN EUROS				
					France	Holland	UK	Germany	Belgium
AVOCADO	Air	TROPICAL FUERTE	BRAZIL	Box	21.00				
			PERU	Box	6.50	7.50			
			SOUTH AFRICA	Box	6.50	8.50			
	Sea	HASS	KENYA	Box		5.50	6.71		
			COLOMBIA	Box				15.00	
			MEXICO	Box	12.42				
			PERU	Box	12.50	9.00	9.45	15.00	13.70
			SOUTH AFRICA	Box	12.67		8.65	15.00	
			KENYA	Box	12.33				
			TANZANIA	Box	12.00				
	Truck	ETTINGER	PERU	Box	6.50				
			SOUTH AFRICA	Box		8.50			
			PERU	Box	6.50	8.50			
			ZUTANO	Box					
			HASS	Box	19.38			17.00	
BANANA	Air	RED	COSTA RICA	kg		2.94			
			ECUADOR	kg		2.94			
		SMALL	COLOMBIA	kg	6.00				
			ECUADOR	kg		5.83			
CARAMBOLA	Air		MALAYSIA	kg		4.71			
CHAYOTE	Sea		COSTA RICA	kg		1.63			
COCONUT	Sea	NOT DETERMINED YOUNG GREEN	COTE D'IVOIRE	Bag		12.83			
			THAILAND	Bag		11.00			
			COSTA RICA	Bag		17.50			
DATE	Sea	DEGLET MEDJOOL NOT DETERMINED MOZAFATI BAHRI	ALGERIA	kg		2.19			
			ISRAEL	kg		5.70	3.70		
			ALGERIA	kg		3.10			
			IRAN	kg		3.60			
			PERU	kg		8.00			
EDDOE	Sea		COSTA RICA	kg		2.00			
GINGER	Sea		CHINA	kg		1.24			
			THAILAND	kg		1.28			
GUAVA	Air		BRAZIL	kg			3.70		
KUMQUAT	Air		ISRAEL	kg		4.50			
LIME	Air		BRAZIL	kg					3.99
	Sea		BRAZIL	kg		2.06	1.43		2.33
			MEXICO	kg		2.46	1.84		
LITCHI	Air		THAILAND	kg		9.88			
MANGO	Air	NAM DOK MAI KEITT KENT AMELIE VALENCIA	THAILAND	kg		7.80			
			PERU	kg	5.09				
			COTE D'IVOIRE	kg	4.77				
			BURKINA FASO	kg	2.48				
			MALI	kg	3.18				
	Sea	ATKINS KEITT PALMER KENT	BRAZIL	kg		1.25	2.06		
			COSTA RICA	kg		1.13			
			BRAZIL	kg		1.13			1.24
			BRAZIL	kg		1.38			
			BRAZIL	kg					1.24
			COTE D'IVOIRE	kg	1.58	1.50			1.27
			PERU	kg	1.82	3.19	1.36		
MANGOSTEEN	Air		INDONESIA	kg		8.25			

					EUROPEAN UNION - IN EUROS				
					France	Holland	UK	Germany	Belgium
MANIOC	Sea		COSTA RICA	kg		1.25			
MELON	Sea	CANTALOUPE	BRAZIL	kg			1.74		
			HONDURAS	kg			1.83		
			BRAZIL	kg			1.74		
		GALIA	COSTA RICA	kg		1.80			
			HONDURAS	kg			2.06		
			COSTA RICA	kg		1.15	0.88		
		HONEY DEW	PANAMA	kg			0.91		
			COSTA RICA	kg			1.51		
			PANAMA	kg		1.10	1.51		
PAPAYA	Sea	FORMOSA	BRAZIL	kg	3.20	3.00	4.50		
		NOT DETERMINED	BRAZIL	kg	3.80	3.36			3.14
PASSION FRUIT	Air	NOT DETERMINED PURPLE	COLOMBIA	kg		5.00	5.43	5.00	5.75
			ISRAEL	kg		5.50			
			SOUTH AFRICA	kg					5.75
			VIETNAM	kg	7.50				5.75
			ZAMBIA	kg					5.75
			ZIMBABWE	kg					5.75
		YELLOW	COLOMBIA	kg		9.00			
			ECUADOR	kg		7.40			
PHYSALIS	Air	PREPACKED	COLOMBIA	kg		6.67	7.51		
	Sea		COLOMBIA	kg		5.63			
PINEAPPLE	Air	MD-2 VICTORIA	COSTA RICA	kg	2.78				
			MAURITIUS	Box		13.50			
			REUNION	kg	4.00				
		SMOOTH CAYENNE	BENIN	kg	2.19				
			CAMEROON	kg	1.85				
			BRAZIL	Piece			1.14		
		Sea MD-2	COLOMBIA	Piece			0.81		
			COSTA RICA	Box		8.22		7.25	10.50
			COSTA RICA	kg	1.00				
			COSTA RICA	Piece			0.97		
			COTE D'IVOIRE	kg	1.00				
PITAHAYA	Air	RED	VIETNAM	kg		6.83			
			INDONESIA	kg		8.00			
		YELLOW	COLOMBIA	kg		9.20			
			ECUADOR	kg		9.40			
PLANTAIN	Sea		COSTA RICA	kg		1.00			
			ECUADOR	kg		1.08			
			WINWARD ISL.	kg			1.28		
POMEGRANATE	Sea	NOT DETERMINED WONDERFUL	THAILAND	kg			2.30		
			PERU	kg		2.40	2.79		
RAMBUTAN	Air		VIETNAM	kg	8.00				
SWEET POTATO	Sea	PURPLE RED/RED WHITE	CHINA	kg		2.35			
			HONDURAS	kg		1.01			
			BRAZIL	kg		1.55			
TAMARILLO	Air		COLOMBIA	kg		7.20			
TAMARIND	Air		THAILAND	kg		3.50			
YAM	Sea		GHANA	kg		1.38			

Note: according to grade

These prices are based on monthly information from Guido Bernardi (consultant). Email: guidobernardi@libero.it

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