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FRUITROP

English edition



Close-up Avocado

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**European
apples & pears**

**2015
forecasts**

**Labelled
banana market
in the United
Kingdom**



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The Extra Sweet Pineapple from Ecuador



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Quality washing! Differentiation is the Holy Grail of any commercial operator. Certain companies make it their strategy, while others use it as a way to boost their market share, growth or even added value. It is often a way to avoid sinking without a trace into the depths of a commoditised core market. Throughout its history, the fruits and vegetables sector has constantly sought the elixir of differentiation. It is also true that it is among the first to suffer



from the lack thereof, and bears the scars to show it: low financial returns, negotiating power leaning toward the downstream, a consumption stagnant at best, etc. So it is quite legitimate for operators to be creative, and it often works a treat. Varietal diversity has revolutionised the musty, high-competition citrus market, ready-to-eat is one of the keys to the success of the avocado industry, while organic and/or Fairtrade certified products has long since spread beyond the realm of the neo-rural metropolitan chattering classes in Northern France. But there is such a thing as pushing things too far with the sensitivities of the wide-eyed consumer, even though some believe, perhaps rightly (?), that they will go crazy for these kinds of new products or concepts. Costa Rica however crossed a Rubicon when, with the complicit help of European regulations, it obtained an IGP for its banana, i.e. an official sign of quality recognition! We were led to believe that two Cavendish bananas produced in wet tropical zones, harvested green, in cold transport for days or even weeks, ripened within a few days close to the point of consumption, could only be cousins or even twins. Yet it seems that we were wrong, since the administration has

decided otherwise. True, the law is the law, but I beseech you, keep to the marketing side of the business and leave the quality side to the more distinguished instances where the real emphasis is on consumer real service! Following on from green washing and social washing, here we have quality washing. Welcome to crazy town!

Denis Loeillet



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E. Imbert, D. Loeillet, C. Dawson, P. Gerbaud, T. Paqui, C. Céleyrette, R. Bright

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Cover photograph: © Guy Bréhinier

Banana

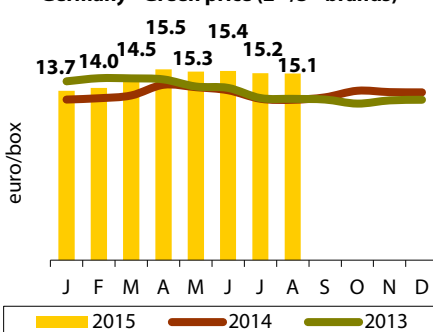
July-August 2015

Despite the supply remaining restricted, the markets swelled under the effect of the heatwave, which heavily reined back demand in Europe. Incoming shipments from Africa and the French West Indies, stable and near-average in July, began their rise early at the beginning of August, reaching levels 20 % above average. For their part, dollar banana imports were very limited thanks to the summer programmes, falling even in August: while Colombian volumes climbed back up to average after a long period of shortfall, volumes from Ecuador and Costa Rica declined due to smaller production and to poor market conditions. Conversely, demand, traditionally slow during the seasonal fruits production peak and the summer holidays, was hit hard by the scorching temperatures in July. Sales were at a standstill in Eastern Europe, where the markets collapsed under the pressure of stocks and competitive supplies from other markets. The pressure prevailed in Northern Europe too, though stocks were restricted thanks to the summer programmes. In Southern Europe, moderate stocks were available and green banana prices fell, though they did maintain near-average or slightly below-average levels. Only the Spanish market remained in great difficulty, with Canaries platano shipments excessive for demand. Finally, the Russian market collapsed completely, with prices reaching a very low level (3 USD/box in week 34), a consequence of devaluation of the rouble and very slow demand.

NORTHERN EUROPE — IMPORT PRICE

August 2015 euro/box	Comparison	
	previous month	average for last 2 years
15.14	0 %	+ 16 %

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

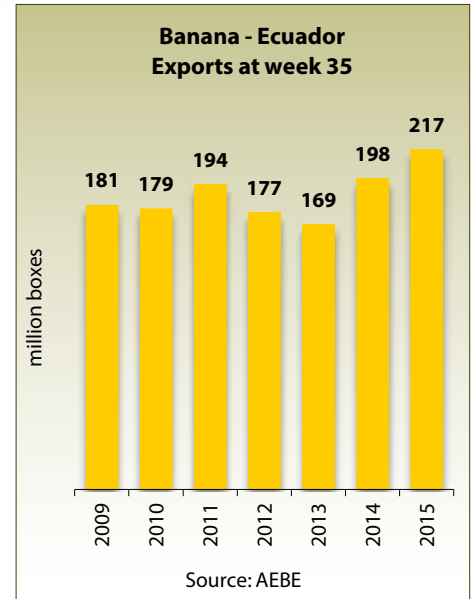


Banana: purée prices in Europe in June 2015.

Type	Price (USD/t)	Source	Comments
ss aseptic, 22°Brix	650-700 cfr Rotterdam	Ecuador	Market quiet, with prices even increasing slightly in recent months. Demand and supply seemingly balanced.

Note: cfr: cost and freight / Source: MNS-ITC Geneva

Toward another year of record Ecuadorian banana exports! Ecuador should once again assert its domination of the world banana market in 2015. The aggregate exports figure, as at the end of August, of 218 million boxes marks a rise of more than 10 % from last season, which was itself a record. Shipments to Europe registered an increase of 10 %, in part due to the distinct downturn in Colombian volumes. The United States too absorbed bigger volumes than in recent years, though without returning to the record figures of 2009 and 2010. Shipments to Russia rose too, despite the weakness of the rouble.



Source: AEBE



© Denis Loeillet

EUROPE - RETAIL PRICE

Country	August 2015		Comparison	
	type	euro/kg	July 2015	average for last 3 years
France	normal	1.68	+ 2 %	+ 5 %
	special offer	1.38	-	- 4 %
Germany	normal	1.40	+ 1 %	+ 11 %
	discount	1.26	0 %	+ 11 %
UK (£/kg)	packed	1.04	- 3 %	- 11 %
	loose	0.72	0 %	0 %
Spain	platano	1.91	0 %	- 3 %
	banano	1.29	- 1 %	- 3 %



Export of tropical fruit pulp from Madagascar

**Pineapple, soursop, passion fruit,
guava, lychee, mango
Frozen or pasteurized pulp
Organic/Conventional**

Export of fresh lychee from Madagascar

Girofle et Denrées de Madagascar

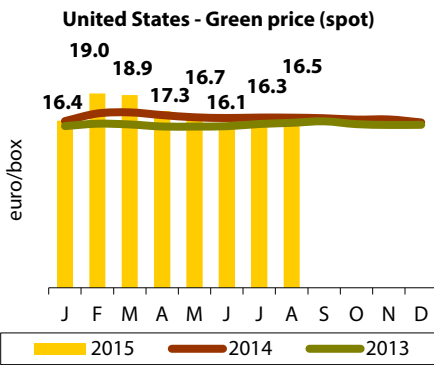
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Banana

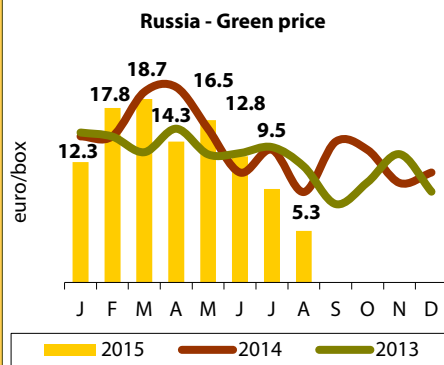
UNITED STATES



UNITED STATES - IMPORT PRICE

August 2015 USD/box	Comparison	
	previous month	average for last 2 years
16.50	+ 1 %	0 %

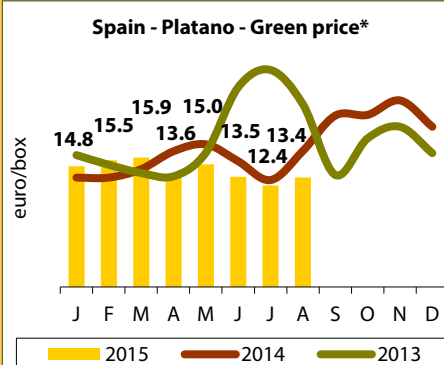
RUSSIA



RUSSIA - IMPORT PRICE

August 2015 USD/box	Comparison	
	previous month	average for last 2 years
5.26	- 45 %	- 50 %

CANARIES



CANARIES - IMPORT PRICE*

August 2015 euro/box	Comparison	
	previous month	average for last 2 years
12.80	+ 3 %	- 35 %

* 18.5-kg box equivalent

■ **High summer temperatures in no way hindering the march of European banana consumption.** The high summer temperatures did not hinder the growth potential of the European banana market. The consumption of the EU-28 increased by 6 % to 437 000 tonnes, an absolute record for July. This was the sixth consecutive month of growth. Over twelve months (August 2014 to July 2015), the net supply expanded by 4 %, reaching 5.7 million tonnes. In the space of four years, the EU's intake has increased by 588 000 tonnes, a fine performance for a supposedly "mature" market. In terms of sources, over the first seven months of 2015 the dollar sources took the lion's share, climbing by more than 3 %. Colombia beat all its previous records on the European market (+ 16 %), as did Costa Rica (+ 6 %). Conversely, Ecuador favoured the US market, cutting back its supply to the European market by 4 %. Finally, in a market winning strategy, Guatemala applied a massive expansion of its volumes, although its market share remains modest for the moment. The ACP group

dropped by 2 % due to Africa's performance (- 5 %). European production proved stable, though the situation varied greatly between suppliers: Guadeloupe slipped by 13 %, while Martinique stabilised its supply and the Canaries were up by nearly 3 %.

The US market saw the reverse of this trend, with consumption down by 1 % due to the strange scarcity of the Costa Rican (- 28 %) and Colombian (- 17 %) supplies. Guatemala, Ecuador, Honduras, Mexico and Peru recorded very pleasing performances.

Source: CIRAD



Banana - January to July 2015 (provisional)

000 tonnes	2013	2014	2015	2015/2014 difference
EU-27 — Supply	3 201	3 373	3 473	+ 3 %
Total imports, of which	2 841	3 000	3 101	+ 3 %
MFN	2 241	2 384	2 462	+ 3 %
ACP Africa	309	338	321	- 5 %
ACP others	291	294	298	+ 1 %
Total EU, of which	360	373	373	0 %
Martinique	112	112	111	- 1 %
Guadeloupe	39	41	36	- 13 %
Canaries	201	209	214	+ 3 %
USA — Imports	2 683	2 725	2 712	- 1 %
Re-exports	315	327	327	0 %
Net supply	2 368	2 398	2 385	- 1 %

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

EUROPE - IMPORTED VOLUMES - AUGUST 2015

Source	Comparison		
	July 2015	August 2014	2015 cumulative total compared to 2014
French West Indies	↗	+ 21 %	- 1 %
Cameroon/Ghana/Côte d'Ivoire	↗	+ 19 %	- 4 %
Surinam	↘	- 15 %	- 16 %
Canaries	↘	+ 16 %	+ 4 %
Dollar:			
Ecuador	↘	+ 2 %	+ 10 %
Colombia*	↗	+ 25 %	+ 11 %
Costa Rica	↘	+ 9 %	+ 17 %

Estimated thanks to professional sources / * total all destinations

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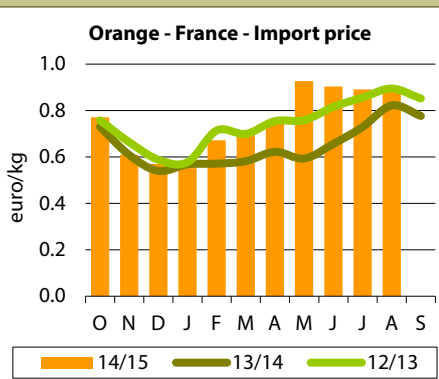
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Orange

July-August 2015

After a buoyant July, the orange market became swollen in August. The end of the Spanish Valencia Late campaign in early July, with exceptional prices for the season, opened the way for the South African Navel, which enjoyed dynamic sales. However, the peak in incoming shipments at the end of July, and most of all the big slowdown in demand due to the scorching temperatures, caused the market to swell. Hence stocks started to form and prices, above average in July (+ 11 %), returned to a merely average level in August. The rapid progress of the South African Valencia Late, with above-average volumes, also contributed to swelling the market. However, the fall in Navel volumes from mid-August (run-up to the end of the campaign) helped the market recover a better balance.



PRICE	Type	Average monthly price euro/15-kg box	Comparison with average for last 2 years
	Dessert orange	12.50	+ 6 %
Juice orange	13.30	+ 6 %	

VOLUMES	Type	Comparison	
		previous month	average for last 2 years
Dessert orange	↘	+ 2 %	
Juice orange	↗	+ 27 %	

VOLUMES	Varieties by source	Comparison		Observations	Cumulative total / cumulative average for last 2 years
		previous month	average for last 2 years		
	South African Navel	↘	+ 2 %	High-level peak of incoming shipments in July, followed by rapid fall in imports from mid-August.	+ 7 %
	South African Valencia Late	↗	+ 27 %	First shipments in July; rapid expansion of the supply, with high levels in August.	+ 18 %

■ **Floridian orange.** Sometimes news that is only bad can appear relatively good when you are expecting the worst. This was how Floridian professionals took the prospect of another season of decline in orange production — though a little more moderate than previous seasons. Pending the official USDA forecast in early October, the forecasts of the private operators are for between 87 million boxes for Louis Dreyfus Citrus, and 93.5 million boxes for Elisabeth Steger, i.e. a 3 to 10 % fall from last season. If this scenario comes to pass, Floridian production would be the lowest for more than 50 years! This would be a shot in the arm for the orange juice market, especially since Brazilian production should be even leaner than in 2015-16 (see **Fruitrop** 234), and juice yields are among the worst ever recorded. For the moment, the extremely heavy weight of stocks has prevented a rise in prices of in 65°B concentrate, which are maintaining a ceiling of 2 000 USD/tonne into Rotterdam.

Sources: Foodnews, Citrus BR, ultimate citrus

■ **Clemenson, the earliest of the clementines.** This natural mutation of Oronules has advantages in terms of taste and coloration over other early clementines. The season started in the last third of September, and the volumes available this season will be around 2 500 to 3 000 t. We will need to wait around a decade to see production exceed the 10 000

to 20 000-t mark. All the rights for this variety are held exclusively by Anecoop.

Source: Anecoop

■ **Floridian grapefruit campaign: trend unchanged.** The USDA harvest forecast, to be released in early October, should confirm another fall in production. Meanwhile, cost prices should see another increase, with production costs continuing to rise in an unfavourable euro/dollar exchange context. The first incoming shipments should be available in late October-early November.

Sources: The Packer, CIRAD





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Grapefruit

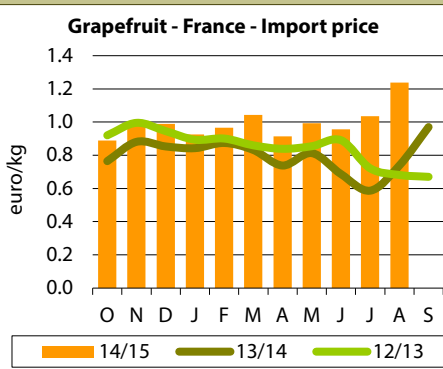
July-August 2015

The grapefruit scaled the heights! In spite of the seasonal slowdown in demand, sales were dynamic and the market supply remained lean (absence of stocks, imports well in shortfall at the beginning of the season). The seasonal fall in South African volumes began in early July. Hence despite the supply returning to average in July, and a more abundant August in terms of late varieties (+ 50 %), availability was insufficient in France due to lack of stocks and to very good sales on the northern markets. So the rates strengthened throughout the period, reaching historical heights (+ 60 %). The first shipments from Mexico, in late August (week 35), arrived under very good market conditions. Prices registered high levels for the early season.

■ Citruses: juice prices in Europe in June 2015.

Type	Price (USD/t)	Source	Comments
Grapefruit	Frozen concentrate, 58°Brix, red, ratio 9.5+	1 500-1 600 cfr Netherlands	Florida Prices on the white market stabilised in Q2. The pink market stabilised too. Widening price differential by ratio on the red market. Demand still falling.
	Frozen concentrate, 58°Brix, pink, ratio 9.0+	1 750-1 850 cfr Rotterdam	
	Frozen concentrate, 58°Brix, white, ratio 9.5+	2 400-2 600 cfr Rotterdam	
Orange	FCOJ, Pera, 66°Brix, bulk, ratio 14-16	1 950-2 050 fca Netherlands	Brazil Demand for FCOJ dropped worldwide. Brazilian and Floridian production should be down.
	FCOJ, blood orange, 55°Brix	2 600-2 700 EUR/t exw Italy	
Lemon	Frozen concentrate, cloudy, 500 gpl	4 250-4 500 cfr Rotterdam	Argentina The price falls of recent months eased off. Harvest significantly delayed in Argentina.
	Frozen concentrate, clear, 500 gpl	5 000-5 250 cfr Rotterdam	

Note: cfr: cost and freight / fca: free carrier / exw: ex-works / Source: MNS-ITC Geneva



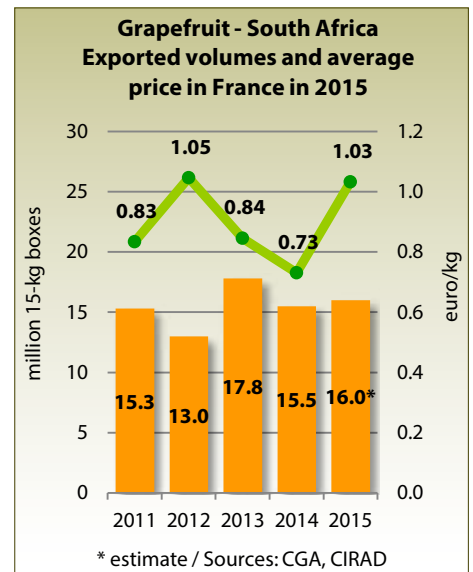
■ **2015 South African grapefruit export season: a wonderful surprise!** No-one would have believed it, after the extent of its struggles in recent seasons. Yet the 2015 South African grapefruit campaign recorded an extremely positive set of figures. In terms of volumes, exports, which should be around 16 million boxes, exceeded those of 2014 and the forecasts. On the price side, takings were satisfactory on all markets, with the average rate for the campaign even approaching the 2012 record for the EU. True, the opening up of the European market, due to the early end of the Floridian campaign, was an advantage. Yet on top of that, the South African exporters' strategy of better smoothing out volumes paid off, bringing down the early-season export peak and shifting the focus to later on. This is a difficult system to implement, since it encroaches on the packing of Valencia Lates, but has been very

rewarding! Another achievement is the confirmed breakthrough in China and South Korea, which offset a fall in shipments to Japan that has become more significant with every passing season.

Sources: CGA, Fresplaza, CIRAD

PRICE	Type	Average monthly price (euro/17-kg box equivalent)	Comparison with average for last 2 years
	Tropical	19.17	+ 60 %
Mediterranean	-	-	

VOLUMES	Type	Comparison	
		previous month	average for last 2 years
Tropical	↘	+ 50 %	
Mediterranean	-	-	

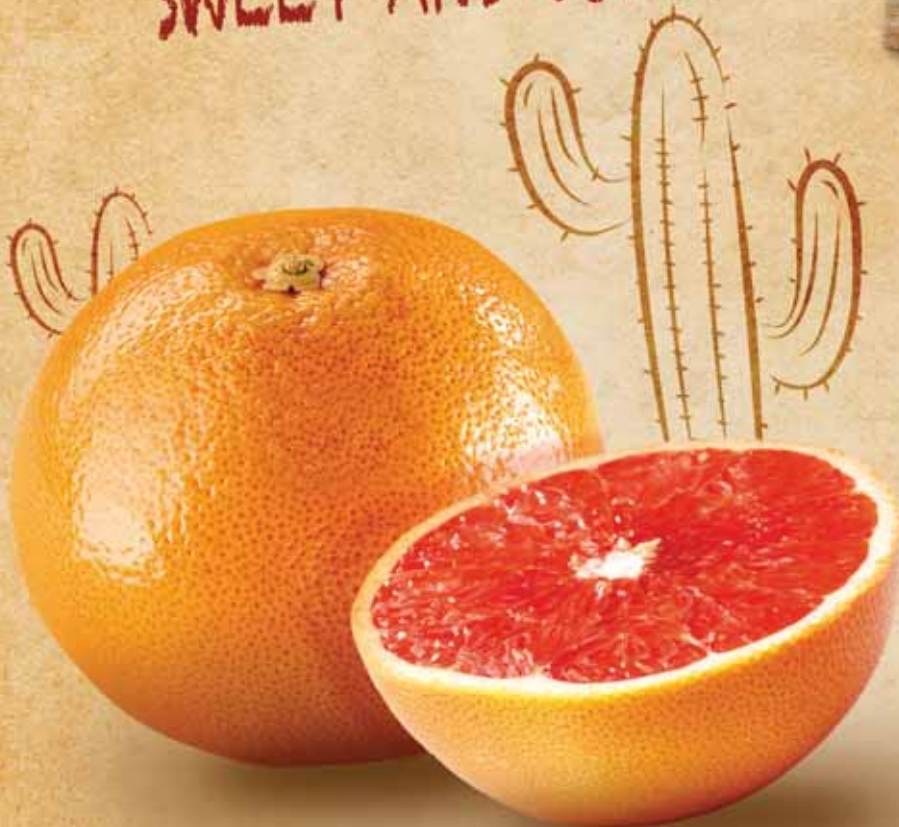


VOLUMES	Source	Comparison		Observations	Cumulative total / cumulative average for last 2 years
		previous month	average for last 2 years		
South Africa	↘	+ 50 %	Supply on the wane (run-up to the end of the season). Late grapefruit volumes greater than in previous years, though still very limited.	- 15 %	
Mexico	↗	-	First shipments in late August in still limited quantities.	-	

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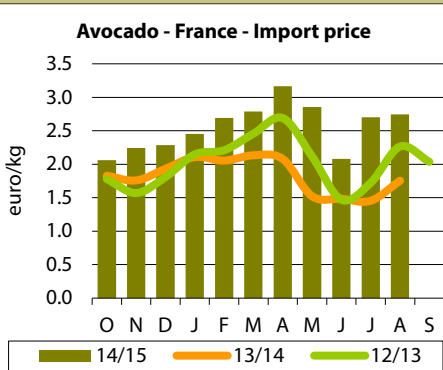
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Avocado

July-August 2015

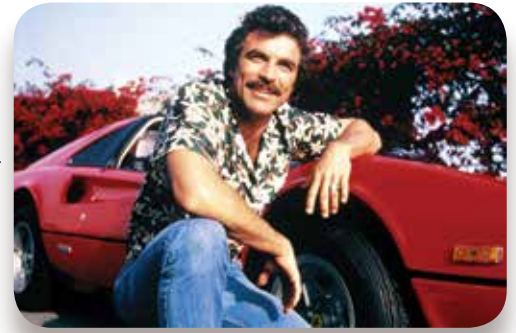
This was the finest summer campaign ever seen for the avocado! After a heavily laden start, causing a price slump in June, the avocado market rapidly pulled itself together. The fall in incoming shipments from Peru, which returned to average in July following historically high shipments in June, and the ongoing supply shortfall from South Africa, helped prices rapidly regain very high levels (73 % above average). In August however, the price increases ran out of steam due to idling demand (holidays in full swing, historically high retail and import prices), to a rise in Kenyan shipments and most of all to an unbalanced Peruvian supply (large fruits predominant, with sizes 18/20 reserved for the USA). Hence rates started to fall in August. Nonetheless, levels remained very high throughout the summer.



■ Californian avocado cultivation area hit hard by drought.

There has been a major shrinkage! The Californian avocado cultivation area, which had held up fairly well in recent years against the rapidly dwindling agricultural water resources, not to mention soaring water prices, lost more than 2 600 ha between 2013 and 2014, i.e. more than 10 %. There was a particularly big fall in the south of the State, where the water problem is most severe. The iconic San Diego county has lost nearly 4 000 ha in ten years, more than 1 300 ha of which last year. Today, only Ventura county, to the north of Los Angeles and better off in terms of water, is managing to resist: a drop of less than 300 ha last season, with a rise of approximately 300 ha over ten years. A study published in 2013 showed that the irrigation cost quadrupled between 1991 and 2011 in San Diego county, culminating at over 4 400 USD/acre, a level 5 times higher than in Ventura.

Sources: CAC, UC Davies, Redagricola.com



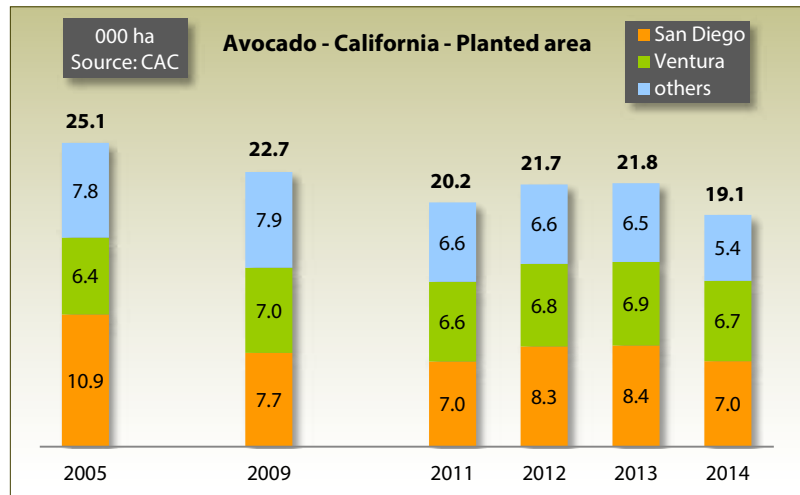
■ Magnum trades in his mythical Ferrari for a tanker.

This story has been a big deal in California. Tom Selleck, who has run an avocado orchard of around twenty hectares ever since hanging up his famous Hawaiian shirts, does not seem to be a gentleman farmer. The actor has been convicted of "water theft", after filling up a tanker more than ten times from the fire hydrant near his ranch. Which goes to show that the Californian water crisis is more than just a show...

Source: Los Angeles Times

PRICE	Varieties	Average monthly price euro/box	Comparison with the last 2 years
	Hass	11.10	+ 50 %

VOLUMES	Varieties	Comparison	
		previous month	average for last 2 years
	Green	↘	- 20 %
	Hass	↘	+ 3 %



VOLUMES	Source	Comparison		Observations	Cumulative total / cumulative average for last 2 years
		previous month	average for last 2 years		
	Peru	↘	+ 3 %	After very large shipments in June, there was a slight shortfall in July (- 3 %), followed by a return to average in August (+ 3 %), with large sizes plentiful. Some limited volumes of green varieties.	+ 20 %
	Kenya	↗	+ 30 %	Very late start to the campaign, in shortfall. Rise in supply in July followed by stabilisation in August, with volumes 24 % and 29 % above average, respectively.	- 7 %
	South Africa	=	- 16 %	Slight rise in Hass shipments in July, though at low levels (- 15 %). Hass and green variety campaigns winding down in early August, with imports still in shortfall (- 20 % and - 19 % respectively).	+ 3 %

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Mango

July-August 2015

July saw the European mango market in better shape. The campaigns of the West African sources, which had been supplying the market since April, drew to a difficult end in view of the large volumes available and the qualitative deterioration of the fruits. The market also suffered from the growing competition from seasonal produce, which enjoyed greater popularity among consumers. Still present in the first half of May in limited quantities, Ivorian and Malian fruits gradually disappeared. The dip in shipments from Brazil, but also Puerto Rico and the Dominican Republic, made a big contribution to slimming down the supply. The market, more balanced and better suited to demand, saw its rates recover considerably in the second half of the month. The progress of the Senegalese campaign made up for the quantitative shortfall, and enabled the continuity of Kent sales, with rates remaining strong and high.

The air-freight market managed to rebalance after the final batches from Mali and Burkina Faso had disappeared. Mexico, already in place in June, consolidated its market niche after a more difficult start to the campaign. Its good quality mangoes obtained steady prices despite frequent lack of uniformity in the coloration. Rates slumped at the end of the month with the final shipments. At a slightly cheaper price, Senegalese mangoes sold steadily, while the first Israeli shipments were received in late July.

In August, the market was supplied primarily by Israel, in smaller quantities than last year. The Dominican Republic and Puerto Rico gradually cut back their volumes. Senegal was the sole Kent supplier until the first Israeli shipments in the second half-month. The price of Senegalese mangoes, high in the first half-month, dropped because of their qualitative de-

terioration. After a high first half of August, the available mango rates strengthened in the second half-month, due to a shortage of volumes, while demand was on an upward trend. At the end of the month, the Spanish campaign began with some batches of Tommy Atkins and then Osteen, especially well-valued in view of the limited supply and the predictions of smaller production in Spain this year.

The reverse situation was seen on the air-freight market, with prices dipping in the middle of the month for the end of the Maya campaign, and for Shelly and Omer. It was only with the appearance of Kents at the end of the period that rates took an upturn. Meanwhile, Egypt shipped small batches of Kent in August, which sold at a steady rate of between 4.50 and 4.80 euros/kg.

■ Mango: juice and purée prices in Europe in June 2015.

Type	Price (USD/t)	Source	Comments
Aseptic purée, 17°Brix, Alphonso variety	1 650-1 750 cfr Rotterdam	India	The market for Alphonso was strong, with prices increasing in Q2. The harvest was particularly scarce for this variety. The quality of the Indian Totapuri harvest was apparently affected by high temperatures. Normal harvest and quality for the Mexican Tommy Atkins harvest.
Aseptic concentrate, 28°Brix, Totapuri variety	1 350-1 450 cfr Rotterdam		
Aseptic concentrate, 28°Brix, Tommy Atkins variety	1 300-1 400 fca Netherlands	Mexico	

Note: cfr: cost and freight / fca: free carrier / Source: MNS-ITC Geneva

■ Other fruits: juice and purée prices in Europe in June 2015.

Type	Price (USD/t)	Source	Comments
Acerola	ss frozen, 6-8°Brix	Brazil	Market well supplied and balanced.
	Frozen concentrate, 20-22°Brix, clear		
Passion fruit	Frozen concentrate, 52°Brix	Ecuador	In the 1st half, the limited volumes from Ecuador and Peru led to price increases. The next Ecuadorian production peak was predicted for August.
Guava	Concentrated purée, 19°Brix, pink	South Africa	South Africa past its harvest peak. Indian stocks reportedly low-quality and scarce. Overall price trend downward, though demand and supply balanced.
	Concentrated purée, 20°Brix, white	India	
Pomegranate	Clarified aseptic concentrate, 65°Brix	Turkey Iran	With demand on the increase, prices strengthened during Q2. Next harvests to be available in Q4.

Note: cfr: cost and freight / fob: free on board / fca: free carrier / Source: MNS-ITC Geneva

MANGO - INCOMING SHIPMENTS (estimates in tonnes)

Weeks 2015	Air-freight									
	27	28	29	30	31	32	33	34	35	
Senegal	40	40	30	30	20	-	-	-	-	-
Mexico	140	90	100	50	20	-	-	-	-	-
Sea-freight										
Brazil	1030	990	1120	1250	1300	1030	920	880	900	

MANGO - IMPORT PRICE ON THE FRENCH MARKET

Weeks 2015		27	28	29	30	31	32	33	34	35
Air-freight (euro/kg)										
Burkina	Kent	2.5-3.5	2.5-3.0	2.5-3.0	-	-	-	-	-	-
Mali	Kent	2.8-3.5	2.8-3.0	-	-	-	-	-	-	-
Mexico	Kent	4.0-4.5	4.0-4.5	3.8-4.5	4.0-4.5	3.6-4.0	-	-	-	-
Senegal	Kent	3.6-4.0	3.0-3.6	3.0-3.8	3.0-3.8	3.5-3.8	3.5-4.0	-	-	-
Israel	Maya/Aya	-	-	-	-	3.5-4.0	4.0-4.5	4.0-4.5	3.5-4.5	-
Israel	Others	-	-	-	-	-	-	-	3.5-4.0	3.5-4.0
Israel	Kent	-	-	-	-	-	-	-	3.5-4.0	3.8-4.5
Sea-freight (euro/box)										
Dom. Rep.	Keitt	5.0-6.0	5.0-6.5	6.0-7.0	6.0-7.0	5.5-6.5	5.5-6.5	6.0-6.5	7.0-8.0	7.0-8.0
Puerto R.	Keitt	5.0-6.0	5.0-6.0	7.0-8.0	7.0-7.5	5.5-6.5	5.5-6.5	6.0-6.5	6.0-7.0	7.0-8.0
C. Ivoire	Kent	2.0-4.0	2.0-3.0	-	-	-	-	-	-	-
Mali	Kent/Keitt	4.0-5.0	4.0-5.0	5.0-6.0	-	-	-	-	-	-
Senegal	Kent	6.0-6.5	6.5-7.0	6.5-7.0	6.5-7.0	6.0-7.0	5.0-6.0	5.0-6.0	4.0-7.0	4.0-8.0
Truck (euro/box)										
Spain	Osteen	-	-	-	-	-	-	-	12.0-13.0	10.0-13.0

Pineapple

July-August 2015

In early July, the market was still slightly struggling to manage the pineapple volumes received in June (natural flowering). Demand, increasingly captured by seasonal fruits, moved away from this product. However, from the end of the first half-month, we saw a shift in market conditions. Clearance sales and promotions helped restore some degree of sales fluidity. Thereafter, the supply was sharply cut back, under the impact of the floods affecting Costa Rica. At the end of the month, the steep reduction in the supply contributed to the improvement in prices charged.

In August, the market was under pressure, whereas the overall Sweet supply remained small. Once a significant number of the operators had gone on holiday, demand was lower and sales quieter. However, rates registered a rather stable level. Indeed with the supply well below demand, we saw prices strengthen for large sizes, due to their lower availability, whereas sales of small fruits (sizes 9 and 10) remained complicated. From the last half-month, a better spread of the supply in terms of size coincided with the gradual return of the operators. Demand, slightly higher and still focused on large sizes, helped get sales moving a little more, with the overall Sweet supply still outstripped by demand.

On the air-freight market, the import cut-backs initiated in June started to take effect in early July. The sales pressure was not as high, since those import volumes managed to find takers more readily on a market where demand was mainly seeking seasonal fruits. Although more fluid, sales were not however ex-

ceptional. Pesticide residue problems (ethephon) on pineapples from Benin, as well as several quality concerns (advanced maturity) on certain Cameroonian batches, hindered the fruit marketing process. In August, with the key air-freight market operators (specialised dealers and wholesalers) on holiday, came another slowdown in sales, with rates slumping. The absence of outlets for these fruits told on the rates range. Conversely, Sugarloaf sales were more fluid, mainly thanks to a very low supply. During the summer, the price ranges for Sugarloaf fluctuated between 1.80 and 2.00 euros/kg, depending on availability.

From the beginning of July, Victoria was no longer finding any takers. So the operators considerably cut back their imports, especially from Reunion, to bring supply into line with demand. In August, the supply, primarily comprising

Mauritian fruits, sold rather well, since the only imported batches were those earmarked for promotions. During the summer, interest in Victoria came primarily from the hard-core fruit devotees, prepared to pay a high price.



■ Pineapple: juice prices in Europe in June 2015.

Type	Price (USD/t)	Source	Comments
Frozen concentrate, 60°Brix, smooth Cayenne variety	2 550-2 650 fca Netherlands	Thailand	Harvests were particularly low and primarily aimed at the fresh and tinned markets. According to observers, this situation could last, though at these price levels, demand should drop.
Aseptic concentrate, 60°Brix, smooth Cayenne variety	2 550-2 650 cfr Rotterdam		
NFC, ss aseptic, 12°Brix, MD-2 variety	750-800 ddp London	Costa Rica	

Note: fca: free carrier / cfr: cost and freight / ddp: delivered duty paid / Source: MNS-ITC Geneva

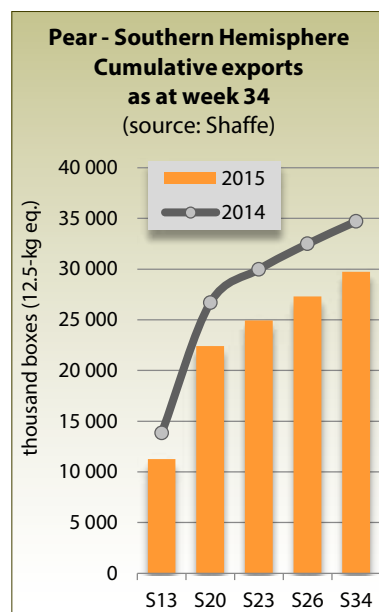
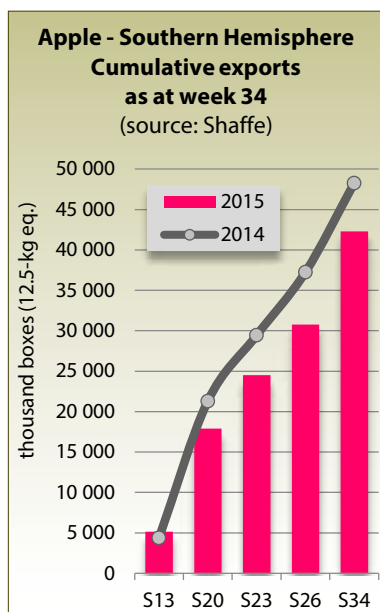
PINEAPPLE - IMPORT PRICE IN FRANCE - MAIN SOURCES

Weeks 2015		27	28	29	30	31	32	33	34	35	
Air-freight (euro/kg)											
FRANCE	Smooth Cayenne	Benin	1.80-1.90	1.80-1.90	1.80-1.90	1.80-1.95	1.80-1.95	1.80-1.95	1.80-1.95	1.80-2.00	
		Cameroon	1.80-1.90	1.75-1.95	1.80-1.90	1.80-1.90	1.75-1.90	1.75-1.90	1.75-1.90	1.80-2.00	
		Ghana	1.80-1.90	1.70-2.00	1.80-1.90	1.80-1.90	1.80-2.00	1.80-2.00	1.80-2.00	1.80-2.00	
		Côte d'Ivoire	1.80-1.95	1.90-1.95	1.85-1.90	1.90-1.95	1.80-1.95	1.80-1.95	1.80-1.95	1.85-1.95	
	Victoria	Reunion	3.50-3.80	3.00-3.80	3.00-3.80	3.00-3.80	3.50-3.60	3.80-4.00	3.80-4.00	3.80-4.00	3.60-3.80
		Mauritius	2.90-3.40	2.80-3.50	2.80-3.50	2.80-3.50	3.00-3.30	3.00-3.30	3.00-3.30	3.00-3.30	3.00-3.50
Sea-freight (euro/box)											
Sweet		Côte d'Ivoire	7.50-9.00	6.00-9.00	6.00-9.00	8.00-10.00	8.00-10.00	8.00-10.00	8.00-10.00	8.00-10.00	
		Ghana	7.50-9.00	6.00-9.00	6.00-9.00	8.00-10.00	8.00-10.00	8.00-10.00	8.00-10.00	8.00-10.00	
		Costa Rica	4.00-6.00	5.00-7.00	6.00-8.00	7.50-9.00	7.50-9.00	7.00-8.00	7.00-8.00	6.00-9.00	7.50-9.00

Temperate fruit & vegetables

■ **Light start to the Spanish vegetables season.** This year, the start of the Spanish vegetables season was slightly deferred, because of the summer climate conditions. The heat (above 40°C) had particularly adverse consequences on covered production. The transition period between the end of the Almeria harvests and the autumn production in Murcia was already very scarce, leading to a steep price increase right across the ratatouille range. The initial signs actually pointed to big losses for the autumn covered plantations in Mazzaron and Aguilas (- 60 % according to the Murcia-based union ASAJA). Yet the concern was mostly due to the high parasite pressure on the end of the spring-summer crops in the Almeria zone, which could affect the autumn-winter crops. In late August-early September a boom in whitefly was expected, which once more this year is resulting in the resurgence of damage due to several viruses, especially New Delhi virus, which particularly affects courgettes, aubergines and tomatoes. Furthermore, the heavy rain which struck the localities of Adra, Balanegra and El Ejido at the beginning of week 37 caused major flooding which carried away lorries, cars and containers, and flooded between 500 and 1 000 ha of covered plantations in these towns, raising fears among farmers of subsequent losses due to root asphyxiation of the young plants.

Sources: Infofruit, press



■ **Apple and pear export shortfall from the Southern Hemisphere.**

The delay in apple and pear exports remained significant throughout the season. And although they picked up a bit with the end of the Northern Hemisphere campaign, they were still 16 % down from 2014 in mid-August, according to the Shaffe tally (532 900 t in week 34). This was due to a substantial fall in demand in Europe (291 500 t, i.e. - 21 %) and Asia (148 900 t, - 27 %), although exports to the Middle East again increased slightly (93 000 t, + 4 %). Similarly, pear exports from the main Southern Hemisphere countries were down by 14 % on 2014 (371 000 t), with a considerable fall of 18 % in Europe (302 300 t) and a slight drop to Asia (27 000 t), whereas shipments to the Middle East were fairly high (42 200 t, + 15 %).

Source: Shaffe / Infofruit compilation

Apple — Southern Hemisphere Cumulative exports as at week 34 (excl. USA)		
tonnes	2015	Compared to 2014
Total EU (incl. Russia)	291 534	- 15 %
United Kingdom	112 426	0 %
Continental Europe (incl. Russia)	179 109	- 21 %
Middle East	93 211	+ 4 %
Asia	148 178	- 27 %
Total	532 923	- 16 %

Source: Shaffe

Pear — Southern Hemisphere Cumulative exports as at week 34 (excl. USA)		
tonnes	2015	Compared to 2014
Total EU (incl. Russia)	302 302	- 18 %
United Kingdom	21 068	- 20 %
Continental Europe (incl. Russia)	281 234	- 17 %
Middle East	42 232	+ 15 %
Asia	27 019	- 10 %
Total	371 553	- 14 %

Source: Shaffe

Sea freight

July-August 2015

While July and August may not have set the world alight from a charter market perspective, the summer was not without its highlights. Indeed it could be said that the impact of the nuclear programme deal with Iran and the financial crisis in China will likely be felt for some time, with the ripple effects both directly and indirectly shaping the short and medium term viability of the specialized reefer business.

On a macro scale, the ongoing weakness in the Eurozone caused in part by the Greek bailout crisis, the fears and uncertainty over the durability of Chinese economic growth and the decision by OPEC to maintain production levels on the one hand, and an agreement to drop sanctions and allow Iran to once again trade oil on the other, are all reasons behind what is expected to be a long bear run in oil pricing.

A low oil price means cheap bunkers, and therefore a life-extending blood transfusion for an ageing and thirsty reefer fleet. With low bunker costs, the reefer has demonstrated that it can not only compete, but also win back business from the container lines. For example, up to 50% more citrus has thus far been shipped from South Africa to Europe in reefers this year than last – given the choice between the two modes at the same price or even marginal premium, exporters have voted with their cargo.

But there is also a flipside to the low bunker cost story: two of the largest specialized reefer-serviced markets, Russia and Nigeria, have seen their heavy energy-based currencies under severe pressure against the US\$. Although Nigeria appears to have taken sufficient measures to protect the Naira, the Rouble fell

to a level close to RUR70 against the US\$ mid last month and is tipped by the Russian Finance Ministry to remain above RUR60 until mid 2016. A lower currency value means less buying power for the retail customers, and therefore lower import volumes and weaker demand for reefer capacity.

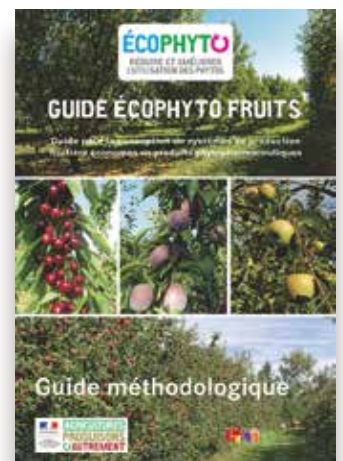
A weak Rouble is neither good for the Ecuadorian banana and Argentinean deciduous and citrus fruit industries, for which Russia is a vital export market. It is hard not to forecast anything other than a second successive disastrous year for Argentina's apple and pear growers. Late in August, South Africa's Citrus Growers' Association issued a strong warning to fruit exporters to be aware of default risks by Russian importers. It warned exporters not to ship fruit without 100% payment on the date of loading.

On the micro scale, the most significant development in July and August concerned the Canary Islands tomato contract for 2015/16, which is to be shared between Seatrade and Star Reefers. The 5-6 month seasonal fixture has traditionally been seen as the health barometer for the reefer charter market. But not so any longer!

Just as the spot element of the charter market dynamic has disappeared, so the relevance of the Canary Island fixture is diminished. The figure has become less a reflection of the strength or weakness of the market and more an indication of the tolerance levels of the charterer. It is no longer a figure against which operators or charterers will benchmark seasonal or period fixtures.

■ **Ecophyto Fruits guide.** The objective of this guide is to help design production systems saving on phytopharmaceutical products, while being economically and environmentally efficient, thanks to the combination of numerous alternative methods to chemical management. The aim is to encourage producers to preventively combine various modes of action, applied at different stages of development of bioaggressors. This promotes natural regulation processes of the "orchard" agro-ecosystem, while taking into account the production objectives and farming constraints.

It can be downloaded at <http://www.gis-fruits.org/Actions-du-GIS/Guide-Ecophyto>

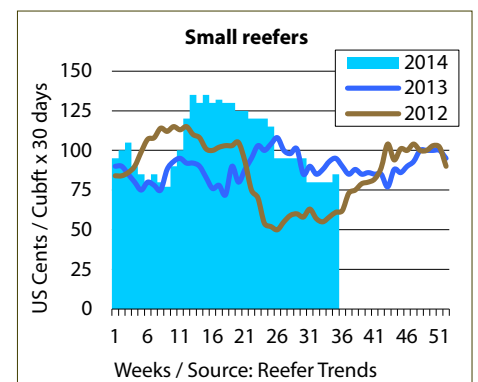
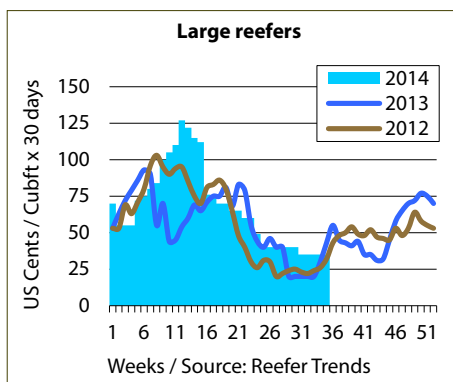


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EUROPE	MONTHLY SPOT AVERAGE		
	USD cents/cubic foot x 30 days	Large reefers	Small reefers
	July-August 2015	34	86
	July-August 2014	28	93
July-August 2013	24	58	



European apples and pears in 2015

Showing some potential, but less pressure

As is their annual custom, 300 representatives from the apple and pear sector met for the 39th Prognosfruit Conference, which was held at the beginning of August in Merano, Italy. The harvest forecasts unveiled at this event reflect this year's good potential expected for the apple, with a total of 11.9 million tonnes, i.e. the second biggest harvest of the decade, after last year's (- 5 % from 2014 and + 7 % on the 5-year average). Conversely, pear production should reach 2.34 million tonnes at most, i.e. only the 5th highest harvest level of the decade (- 4 % on 2014 and + 1 % on the 5-year average) due to several countries set for an average harvest. However, these figures could be revised downward slightly after the bad weather in August, and depending on size development, hard hit by drought.



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Poultry



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Fruits and vegetables
Flowers
Pork
Poultry
Ruminants
Dairy products
Fish products



RETAIL STAGE

Fruits and vegetables
Flowers
Pork
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A fine and dynamic year for the apple

The climate conditions were favourable overall for fruiting in most countries because of the mild winter and early spring, with a less marked swing effect than predicted in countries which had reaped a big harvest last year. So in early August abundant apple production was expected in Southern Europe (France, Spain and Portugal), with the exception of Italy, while a downward revision was expected in North European production, especially in Germany and Benelux. Indeed, certain zones such as Limbourg, Zeeland, Brabant and Betuwe suffered heavy hailstorms in late August. The French harvest might also be slightly short of the initial estimates after the storms which swept across the South-West in late August.

Production is apparently stable in Poland, the number one producer in the European Union, while Hungary should see a distinct dip after the bumper harvest registered last year. However, the harvest forecasts in Eastern Europe are positive overall, especially in Russia (1.77 million tonnes, + 4 % on 2014) and Ukraine (1.25 million tonnes, + 16 %). Belarus, for its part, is set for a slight shortfall (155 000 t, - 3 %).



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Apple - EU-28 - Harvest forecast

000 tonnes	2015	Variation on	
		2014	average for last 5 years
Total EU-28	11 974	- 5 %	+ 7 %
of which EU-15	6 845	- 5 %	+ 3 %
Italy	2 328	- 5 %	+ 6 %
France	1 594	+ 10 %	+ 7 %
Germany	885	- 21 %	- 5 %
Spain	486	- 4 %	+ 3 %
Netherlands	330	- 7 %	- 3 %
Portugal	291	+ 7 %	+ 13 %
Belgium	258	- 21 %	- 5 %
Greece	238	- 3 %	- 7 %
United Kingdom	211	- 6 %	+ 2 %
Austria	179	- 5 %	+ 3 %
Denmark	24	- 8 %	+ 11 %
Sweden	21	+ 31 %	+ 25 %
of which NMCs excl. Bulgaria	5 130	- 5 %	+ 23 %
Poland	3 750	0 %	+ 32 %
Hungary	618	- 33 %	+ 2 %
Romania	351	- 8 %	- 10 %
Czech Rep.	151	+ 15 %	+ 37 %
Croatia	101	+ 63 %	+ 30 %
Slovenia	72	+ 6 %	+ 17 %
Slovakia	41	- 11 %	+ 8 %
Lithuania	37	+ 37 %	- 8 %
Latvia	9	- 10 %	- 17 %

Source: WAPA



Apple - EU-28
Harvest forecast by variety

000 tonnes	2015	Variation on	
		2014	average for last 5 years
Golden Delicious	2 546	- 5 %	+ 2 %
Gala	1 331	0 %	+ 15 %
Idared	1 111	- 7 %	+ 22 %
Red Delicious	644	- 5 %	+ 2 %
Jonagold	575	- 11 %	+ 2 %
Shampion	494	0 %	+ 26 %
Club varieties	462	+ 1 %	+ 53 %
Jonagored	430	- 12 %	+ 37 %
Granny Smith	379	- 1 %	+ 5 %
Elstar	373	- 13 %	- 4 %
Fuji	333	+ 4 %	+ 23 %
Braeburn	295	- 8 %	- 2 %
Cripps Pink	236	- 5 %	+ 28 %
Gloster	177	- 12 %	+ 5 %
Jonathan	161	- 17 %	- 27 %
Reinette Grise	127	+ 1 %	+ 20 %
Pinova	90	+ 14 %	+ 81 %
Boskoop	86	+ 1 %	+ 29 %
Morgendurf/ Imperatore	71	- 4 %	+ 9 %
Cox Orange	31	- 3 %	- 47 %
Lobo	30	0 %	- 45 %

Source: WAPA

Exports to Russia will be a non-starter again this year, since the embargo was extended and expanded to four new countries in August, set to be joined by Ukraine in early 2016. Nonetheless, while the closure of the Russian market has directly affected European exports to this destination, which previously absorbed up to 600 000 t, the shortfall seems to have been made up by flow diversification. Hence extra-Community exports did not fall last campaign, and reportedly even increased by 15 % from 2013-14, according to the figures from European Customs taken between August and May. European operators are rather confident for this campaign in the absence of significant leftovers from the old harvest or Southern Hemisphere apples, and given the dynamic established last year.

The world market should be abundantly supplied. China could again see a record harvest of 37.6 million tonnes (+ 4 % on the 5-year average), while the US harvest, though not equalling last year's record level, nonetheless promises to be the 2nd biggest this decade, with a total of 4.9 million tonnes (- 4 % on 2014).

A slight fall in seasonal varieties, and uncertainty over size

There should not be any big variations in volume for the main European varieties, given the expected potentials. Hence the Gala harvest could reach 1.33 million tonnes, a figure equivalent to last year (+ 15 % on the 5-year average). However production should fall for core season two-tones and late varieties due to the negative swing in Northern Europe, although not to a great extent. Hence a decrease of 8 % from 2014 is expected for Braeburn (295 000 t), of 13 % for Elstar (373 000 t) and of 11 % for Jonagold/Jonagored (1 million tonnes). Pink Lady should fall slightly (236 000 t, - 5 %). The other club varieties (Ariane, Belgica, Cameo, Diwa, Greenstar, Honey, Crunch, Jazz, Junami, Kanzi, Mariac, Rubens, Tentation, Wellant, etc.) should attain a potential similar to last year (462 000 t, + 1 %). Nor are any major changes expected for Golden (2.54 million tonnes, - 5 %) or Granny (379 000 t, - 1 %). However, the effects of drought, mitigated by irrigation, are yet to be determined. The size of the first fruits was below normal; however it should still increase for the later varieties.

Pear - EU-28 - Harvest forecast

000 tonnes	2015	Variation on	
		2014	average for last 5 years
Total EU-28	2 343	- 4 %	+ 1 %
of which EU-15	2 193	- 6 %	0 %
Italy	723	- 2 %	- 3 %
Spain	377	- 6 %	- 9 %
Belgium	347	- 12 %	+ 14 %
Netherlands	327	- 6 %	+ 10 %
Portugal	151	- 26 %	- 12 %
France	149	+ 14 %	- 1 %
Germany	46	+ 2 %	+ 16 %
Greece	41	+ 11 %	+ 2 %
United Kingdom	25	+ 4 %	- 11 %
of which NMCs	151	+ 28 %	+ 28 %
Czech Rep.	10	+ 150 %	+ 117 %
Hungary	33	- 18 %	+ 4 %
Romania	20	+ 15 %	- 2 %

Source: WAPA

Heavy going for the pear

While the climate conditions were fairly favourable for pears during the winter and spring, this summer's hot weather could ultimately reduce the potential, putting the brakes on the growth of recent years. Production is reportedly down in Italy, due to average yields for two of the main varieties produced in this country (Abate and William) and greater parasite attacks this year, especially by the "stink bug" (*Halyomorpha halys*) which reached Emilia-Romagna in 2012, and which is set for exponential development this year. Similarly, Spanish production is reportedly below average because of the summer heat and sometimes violent winds which have disrupted the main production stages, and caused fruit droppage. Portuguese production was also hard hit by the drought, while Benelux production could be slightly reduced due to a negative swing, which could still be aggravated by the latest hailstorms. So only France, Germany, Greece and the United Kingdom are set for an increase in potential this year.



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Fall in production for seasonal varieties

While the summer pear harvest attained a good level, with 75 000 t of Guyot, 72 000 t of Coscia-Ercollini and 262 000 t of Williams, it is set to be somewhat lower for the autumn-winter varieties, especially Abate (334 000 t, - 7 % on 2014) and Conference (934 000 t, - 4 %). Similarly, volumes will definitely be short of excess for Comice (85 000 t, - 10 %), and distinctly smaller for Rocha with just 151 000 t (- 25 %), or even 100 000 t according to the very latest estimates. The closure of the Russian market, conversely, has had more impact on sales of European pear production than apple production, because of the less diversified customer portfolio. So these volumes are being diverted onto the Community market. The figures speak for themselves, with extra-Community imports down 14 % from 2013-14 in the last campaign, while intra-Community imports were up by 23 % ■

Cécilia Céleyrette, consultant
c.celeyrette@infofruit.fr

Pear - EU-28 Harvest forecast by variety			
000 tonnes	2015	Variation on	
		2014	average for last 5 years
Conference	934	- 4 %	+ 8 %
Abate Fetel	334	- 7 %	+ 8 %
Others	318	+ 3 %	+ 4 %
William BC	262	- 6 %	- 8 %
Rocha	151	- 26 %	- 12 %
Comice	85	- 10 %	- 3 %
Guyot/Limonera	75	+ 12 %	- 7 %
Coscia-Ercollini	72	+ 9 %	- 10 %
Blanquilla	48	- 2 %	- 25 %
Kaiser	44	+ 33 %	- 4 %
Passe-Crassane	15	+ 36 %	+ 1 %
Durondeau	5	- 17 %	- 17 %

Source: WAPA



Labelled banana market in the United Kingdom

A full-scale laboratory

The labelled banana market in the United Kingdom is in a sense an extreme model. This article will study it from a structural and functional perspective, and attempt to assess the development prospects for this benchmark, as well as the influence of the Fairtrade system (FLO) and civil society (NGOs, consumers) on distribution sector practices. Three benchmark labels are considered: the organic banana, Fairtrade and dual-certified banana (organic-Fairtrade).



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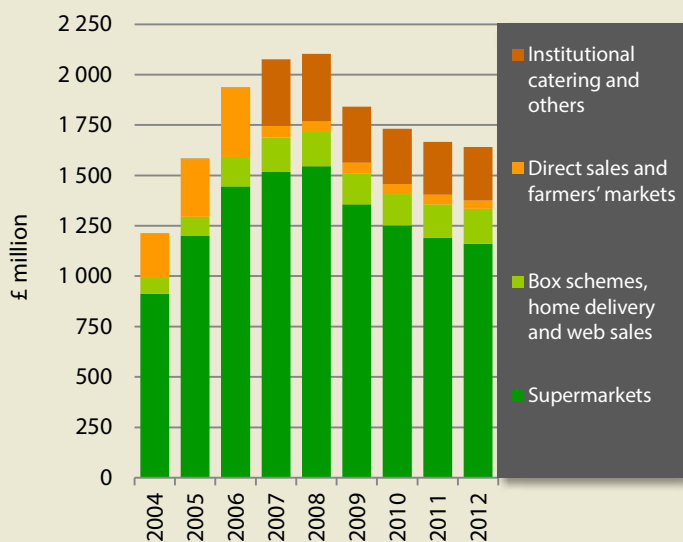
The banana is the most popular fruit in the United Kingdom, and its consumption per capita is number 3 in Europe. Furthermore, by volume the country is the number 2 banana importer in Europe behind Belgium, as well as the European and world leader in the Fairtrade banana, with 60 % of European sales. In 2014, the Fairtrade banana (including organic-Fairtrade) represented a quarter of the banana market volumes in the United Kingdom, i.e. nearly 225 000 t. It is the best-selling Fairtrade product in the country, ahead of coffee.

Unlike the other European markets (France and Germany), the Fairtrade banana sold in the United Kingdom is not necessarily organic, which reportedly represents at least 13 % of the Fairtrade banana market, i.e. 30 000 t (estimate).

Following years of very strong growth, the organic produce market saw a period of decline from 2008 because of the economic crisis. However, 2013 marked the beginning of the recovery for the sector in the United Kingdom. The organic banana reportedly enjoys a share of less than 10 % of the total market, a figure roughly similar to Germany, the European leader for this product (2014 data).

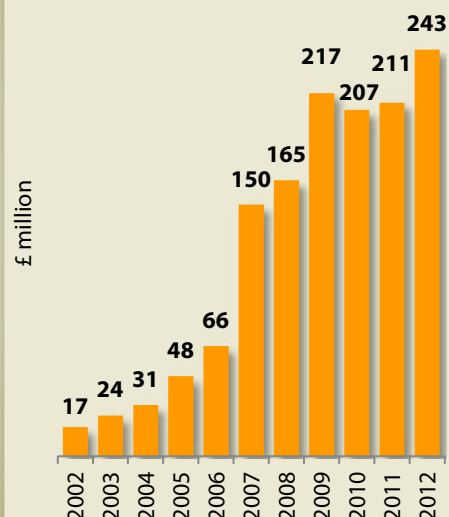


United Kingdom - Evolution of consumption of organic produce by distribution circuit



Source: Agence Bio, according to Soil Association 2013

United Kingdom Fairtrade bananas retail sales



Source: Fairtrade Foundation UK, 2014

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Côte d'Ivoire

The conversion to Fairtrade of practically all banana production on the Windward Islands made this former British colony in the Lesser Antilles the pioneering source, with the first imports in the 2000s. The deregulation of the European market following the reform of 2006 (elimination of the quota system), offering the big Latin American producers better access conditions, gradually eroded the competitiveness of Windward Islands production, which furthermore has often been affected by difficult climate conditions (cyclones) and diseases.

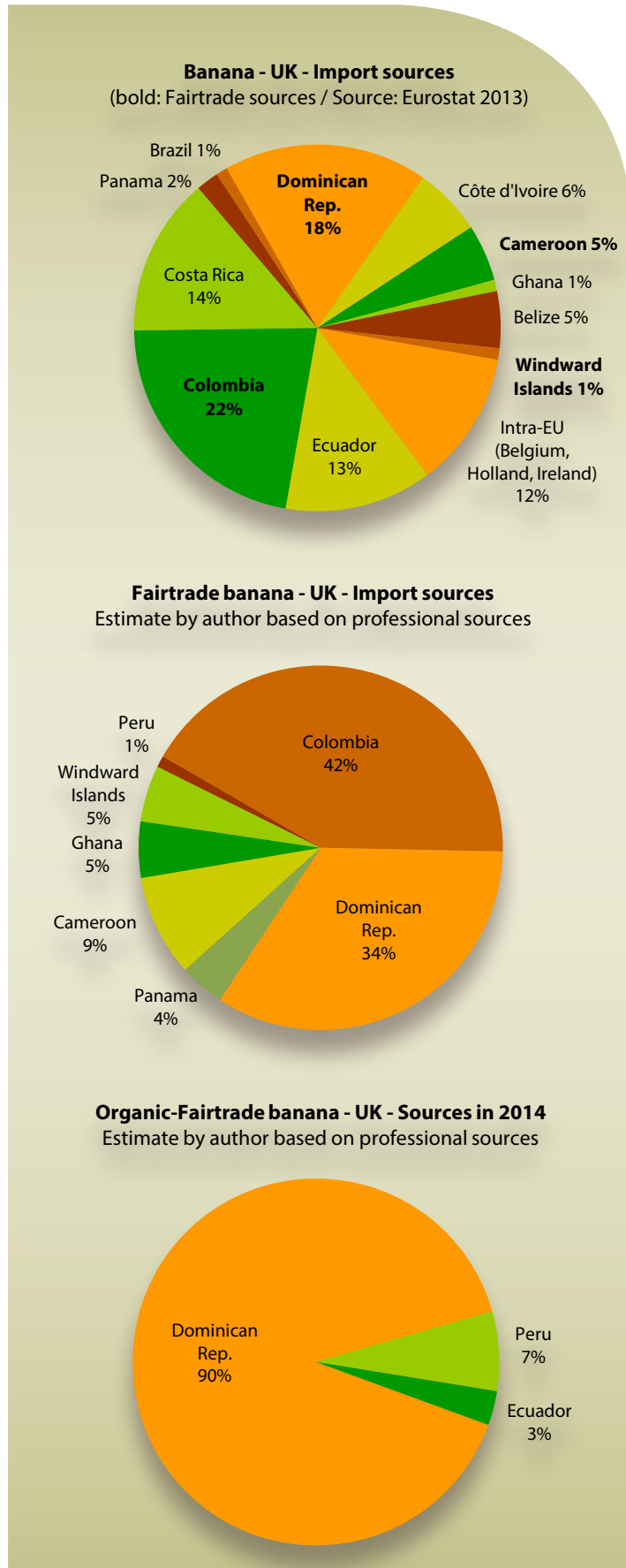
The biggest volumes currently come from Colombia or the Dominican Republic. These are followed by the Windward Islands, whose 90 % Fairtrade production is aimed entirely at the United Kingdom, then Panama, Peru, Ecuador, Cameroon and Ghana. The latter two sources represent a future potential, since some of the “Compagnie Fruitière” plantations in Africa have been Fairtrade certified. The Dominican organic banana is facing increasing competition from Peru.

A highly concentrated and integrated commercial organisation

The long-standing banana trade to the United Kingdom has helped establish a solid commercial organisation which has been able to ensure production supervision, while closely controlling transport and distribution via ripening. The result is a powerful and highly integrated system specific to this country, which simplifies fruit distribution. The trend of recent years has been toward cutting out the intermediaries, with distributors gradually taking over.



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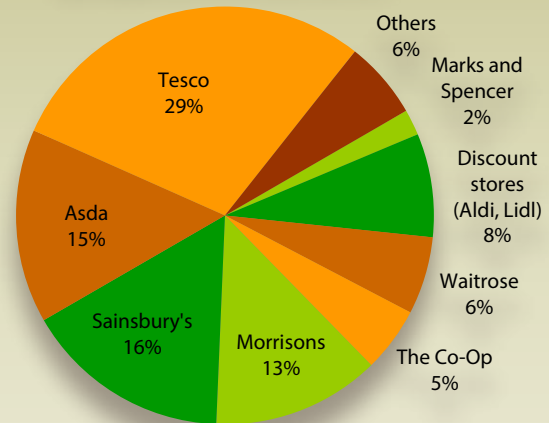




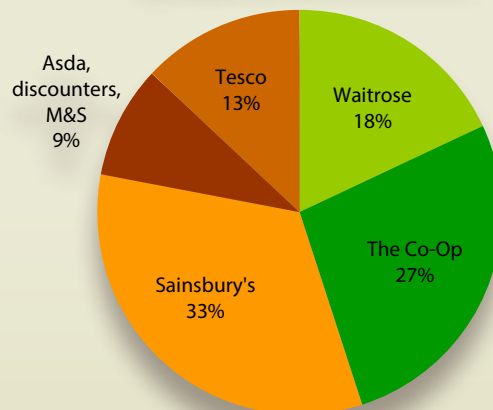
Traditionally, exporters' responsibility goes quite a long way down the chain, as far as delivery to the distribution sector. So it includes the entire land voyage, which is an original feature of the British system. Some have established a genuine monopoly, such as Winfresh (formerly Wibdeco), owned by the government of the three islands Saint Lucia, Dominica and Saint Vincent, and the producers. It is the sole exporter for the Windward Islands, a pioneer for Fairtrade banana exports in the 2000s with the independent importer Pratt's.

Another, even more traditional, circuit consists in importers purchasing at the British ports fruits which they ripen before selling them to the distributors. The Fyffes group, already a traditional operator and number one for the conventional banana in the United Kingdom, very quickly committed to Fairtrade banana imports, and with increasing demand, other multinationals perceiving the future potential followed suit. At present, banana imports and exports are highly concentrated, with six or seven operators sharing 98 % of the market; while it is known that re-exports make up only a very low figure. The multinationals are dominant, and while they do not own the land where the bananas are cultivated, they often have exclusivity contracts with the local producers. Hence, Fyffes accounts for 35 % of the total British banana market, and is the European leader in the certified banana, followed by Dole UK, and finally to a lesser extent, Chiquita and Del Monte. Two independent importers, Mack Multiple (12 %) and Pratt's (20 %), make up 30 % of the market. Winfresh is responsible for the imports from the Windward Islands. The labelled banana is handled by the same operators as the conventional banana.

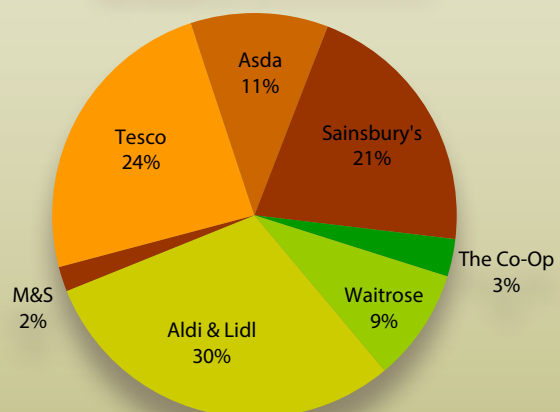
Banana - UK - Market share by value by retailer (professional sources)



Fairtrade banana - UK - Market share by volume by retailer (professional sources)



Organic-Fairtrade banana - UK - Market share by volume by retailer (professional sources)





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The United Kingdom has a highly concentrated food distribution model, dominated by six big supermarket and hypermarket chains, among which the four major players — the so-called “Big Four” — are Tesco, the national number one, Asda (a Walmart subsidiary), Sainsbury’s and Morrisons. Waitrose (specialising in top-end and quality produce) and The Co-operative are also a significant factor, given that specialist shops are practically out of the picture. The British market has held up best in Europe to the offensive by the discount stores; Aldi and Lidl in particular have come onto the scene late. While their market share doubled between 2008 and 2011, it still accounted for little on the British market in 2013-2014 (8 %) compared to France or Germany.

The banana represents the benchmark par excellence of the distribution sector: the number one food product in terms of volumes and value, a loss leader and anti-crisis product. The banana market is 90 % in the hands of multiple food retail, with the rest left to specialist shops. The Fairtrade and organic-Fairtrade banana use the same distribution circuit as the conventional banana. The distributors’ commitment policies are essential for the dynamic of these industries. In the discount stores, we find volumes disproportionate to the market shares of the chains; for example, ALDI, which since the introduction of the organic-Fairtrade benchmark, has been competing with the number one Sainsbury’s.

Certain distributors are investing in direct sourcing (purchasing directly from the producers), in order to cut costs and avoid the need for intermediate operators. This involves 40 to 50 % of volumes, and represents a major particularity of the sector in the United Kingdom. Morrisons was the first to try out this tactic, through its worldwide

sourcing company. Tesco has applied it for five years, for 90 % of its conventional banana volumes. Asda procures 100 % of its fresh produce from its own sourcing company IPL, though this excludes the Fairtrade banana, which represents just 3 % of its volumes. Direct sourcing is not yet involved in the British certified banana industry. However, developments are afoot, with the changes in Tesco’s policy in particular. While the massification of the market has not completely eliminated the operators, certain pioneers, which cannot keep going as fully-fledged economic players in their own right, have been cut out or used as service providers with the rise to prominence of multinationals and the power of the distribution sector. Hence independent importers & ripeners such as Pratt’s have lost their activity as an importer to become ripeners for big distributors (Tesco), with fruit purchased from Fyffes (Fairtrade, organic-Fairtrade).

The Fairtrade banana: a market driven since 2000 by the high profile of the movement in the United Kingdom, and the commitment of the distributors

The Fairtrade banana labelling system was originally set up to facilitate market access for small producers, including to the supermarket sector. The success of the launch of the Fairtrade banana on the Swiss market in 1997 consolidated the idea of the viability of marketing fresh, perishable fair trade produce in the supermarket sector.

The United Kingdom is a pioneer in terms of ethical and fair trade, where it developed after the Second World War thanks to the Oxfam foundation, the UK's biggest NGO. This trend has government support, and has strengthened year on year. Public opinion has become attuned to the values of fairer trade thanks to public campaigns organised by these NGOs. Companies and NGOs are forging closer links, in order to contribute to consumer satisfaction.

In the United Kingdom, the pressure from activist NGOs denouncing poor working conditions, especially in the banana sector, helped the launch and development of the Fairtrade banana. They drove its uptake by the supermarket sector in the 2000s, and contributed to the commitments by distributors to various ethical approaches, such as GSCP15 in which Tesco has been involved since its creation in 2006, or the "Code of conduct for ethical trade" in the case of Sainsbury's.

Fairtrade Foundation UK has also managed to promote its certification as a comprehensive "sustainable" label with socio-economic guarantees. It enjoys a high level of trust from consumers. Furthermore, distributors are committed to the World Banana Forum (WBF) in order to find solutions more in line with their concept of sustainable development.

While the start of the Fairtrade banana in the 2000s came later than in Germany, Belgium or Switzerland, it was in the United Kingdom that it saw a rapid, large-scale surge from 2006-2007, enabling the country to become the European number one.

Distributors involved in the labelled banana supply

In response to pressure from a society in favour of fair trade, certain distributors have made commitments to make a large proportion of their procurements from small producers. This is a particularity which seems unique to the United Kingdom, which can also be explained by the historical connection that the country maintains with its former colony the Windward Islands. Though Sainsbury's promises to make 40 % of its procurements from small producers, and the Co-op 50 %, it is impossible to verify whether these commitments are being maintained, especially since the small producers are limited in supplying large volumes, and certification of large plantations by the FLO could lead to an increase in this supply. Another particularity of the British system is the specific involvement of certain distributors upstream. They are establishing a genuine partnership with the producers, contributing to improving production thanks to their crop scientists and providing support in the case of climate damage.

In the United Kingdom, the norm is verbal (informal) contracts, most often annual, which work well though with fre-

quent adjustments. Written contracts are a recent introduction, which is helping make the supplies more secure. This improvement in commercial practices has just recently been adopted by Tesco, in the conventional banana and for a two-year period. For the other distributors, the contracts are annual, whether written or otherwise. In the case of written contracts, the adjustments are smaller (10 to 15 % per week), but they are still there. For the labelled banana, written contracts (obligatory in Fairtrade) are highly regarded: minimum price readily accepted, good compliance with distribution commitments (few readjustments), more direct relationships with the producers. Besides the price war problem, practices seem to follow a certain code of conduct in accordance with the values conveyed by fair trade, which contributes to the success of the Fairtrade banana in the United Kingdom.

From the banana, a loss leader, to the price war

The retail price war, which is having a knock-on effect on the import, export and production stages, has been raging since 2002, but it has intensified since 2011 to reach the whole distribution sector, especially for the loose banana industries, whether Fairtrade certified or otherwise. Over time, several negotiation sessions between importers and supermarket chains have led to a drastic fall in prices. This real fratricidal war between the giant supermarket chains originates from the fierce competition of the "Big Four", plus recently Waitrose and the discount stores (Aldi and Lidl), wherein they compare themselves with the rest via price matching. The Co-operative supermarket chain has managed to hold out. It was Asda, a Walmart subsidiary (USA), which initiated this process in 2002 under guidance



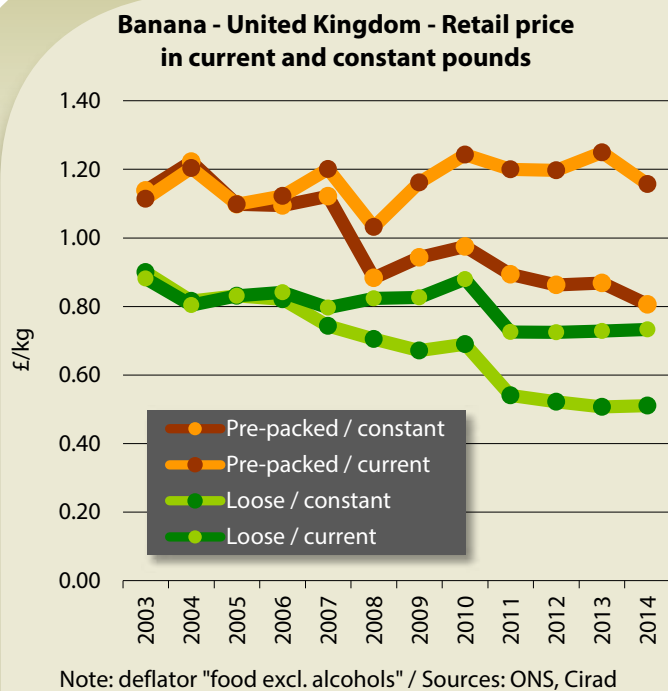


of American capital, by negotiating with its supplier Del Monte to bring down the retail price of the banana from £1.08 to £0.94/kg. The other distributors immediately followed suit. Retail prices continued to decline at Asda, reaching £0.79/kg in 2005 and £0.68/kg in 2014. At present, in all the chains, the price of the conventional banana is at a constantly low £0.68/kg.

Figure 4 illustrates this price war which has raged since 2002 for the loose banana, though also for the packaged banana. In terms of constant value, the loss is much more pronounced.

This all arises from a structural problem, with the intermediaries being increasingly cut out to reduce costs and be able to sell at low prices. In addition, the competition laws prohibit supermarkets from agreeing on a minimum price, and selling at a loss is permitted. The fact that Europe has opened up to new producers (Latin America) which can supply a less expensive banana, is another part of the equation.

This exacerbated competition has repercussions on the price of the Fairtrade banana. Using the banana as a loss leader in the British supermarkets price war has exerted a downward pressure on Fairtrade suppliers, by cutting overall banana price levels. The alignment of the loose Fairtrade banana price on that of the conventional banana is prevalent, despite the attempts of certain distributors in 2014 (Waitrose and Sainsbury's made a 100 % commitment to the Fairtrade banana) to offer a higher price (£0.79/kg loose). 2015 again has seen the Fairtrade banana price aligned across all the distributors, at £0.68/



kg. According to certain observers, at £0.79/kg the Fairtrade banana is selling with zero margin, whereas at £0.68/kg it is selling for a loss. The organic-Fairtrade banana is starting to enter the price war, while the organic banana still seems to be holding out.

The consequences are making themselves felt on both the downstream and upstream segments of the Fairtrade industry. This price war is nonsensical in economic terms: for the conventional banana, the margins are very low or non-existent, while for the Fairtrade banana they vary between distributors but are extremely fine. All of which hinders the commitment of the distributors to the Fairtrade benchmark. Certain marketing strategies help adjust the margins upward, such as segmentation (especially by number of fingers) and packaging (55 % of bananas sold in the United Kingdom are packaged). This is carried out in the producer countries in order to cut costs further. In the face of this extreme segmentation, the consumer becomes a bit lost in the price that they are paying, though they remain attached to the ecologically incompatible habit of using plastic packaging.

At the other end of the industry, the intermediaries and ultimately the producers are under pressure to lower their own prices. Small Colombian producers have sounded the alarm, as have those on the Windward Islands, because of the absence of a price increase proportional to the increase in production costs and compliance costs with Fairtrade standards. The decline in banana sales from the Windward Islands is concerning for the future of exports from these beautiful islands. Although the minimum price and producer premium are still guaranteed, operators have for the past two years, because of the price war, no longer been paying a price above the set minimum, as historically they used to do.

Prospects and future of the labelled industries

The ethical banana sector in the United Kingdom has stabilised, without any big growth prospects. While poor economic conditions and the price war have disrupted its dynamic, it remains resilient. After the mass conversion of the distributors, their ongoing commitment is playing a fundamental role in this stabilisation.

However, the future of the Fairtrade banana in the United Kingdom remains particularly uncertain, in spite of an unlimited supply (newly certified West African plantations). Indeed the organic-Fairtrade banana has been on the increase, with the recovery of the organic sector since 2013. This line has become essential for practically all the distributors, including Tesco. This suggests a possible evolution of the ethical banana sector, focusing more on the values of organic agriculture.



Furthermore, the distributors' purchase decisions are crucial for the growth of Fairtrade banana sales, as with the commitment by certain groups to sell Fairtrade bananas exclusively (Sainsbury's, Waitrose, The Co-op), which has considerably boosted sales volumes. However, the two biggest distributors have barely committed to the Fairtrade banana, with 3 % for Asda and 5 to 7 % for Tesco, with the latter banking instead on the organic-Fairtrade banana. For these distributors, certified bananas are essential lines for guaranteeing their place on the market, and satisfying a wide panel of consumers. Yet only a mass conversion or a commitment to bigger volumes would be likely to significantly change the market dynamic in the United Kingdom.

However, certain aspects represent major impediments for the distributors, such as the cost of Fairtrade certification or the lack of margins, a consequence of the price war disrupting the profitability of the industry. In addition, they fear that Fairtrade certification is losing credibility with the consumer, especially because of the certification of large plantations. Upscaling may seem nonsensical in view of the Fairtrade values, in view of the movement's commitment from the outset to favouring small producers.

In this context, Tesco, and to a lesser degree Asda, are focused on improving their conventional benchmark so as to adhere to sustainable development objectives. They argue that a conventional banana can be produced ethically without necessarily being Fairtrade labelled. Hence

they are trying to make conventional plantations as ethical and sustainable as Fairtrade certified plantations, while avoiding the certification costs.

Specifically, Tesco is behind the GSCP initiative, and is trying to ensure that its conventional banana complies with the labour standards. It has made a production commitment (direct sourcing and inspection of producers), set longer term contracts (two-year written contracts) and is determined to pay the producer a price level covering so-called "sustainable" production costs. This motivation has been expressed by its ethical commitments, set out in a programme known as "Tesco's trading responsibly report", and its active participation in the World Banana Forum.

Asda too favours an alternative sustainable banana, although it has abandoned its attempted shift to the Canarias banana in March 2013 to reduce the carbon footprint (80 % less transport time).

Fairtrade Labelling Organization (FLO): actions and influence

The FLO was in favour of development of certified industries within the supermarket sector's conventional system, to make Fairtrade products available for all consumers. Certification of large plantations is justified by improving the working conditions of the labourers, thanks to specific standards. It could also help cope with increased volumes while ensuring a uniformly acceptable quality. So the FLO is taking the risk of moving away from the fundamental values favouring small producers, and therefore losing credibility.

However, the very rapid upscaling has brought new operators onto the scene, and created complex relationships of power: the market governs regulation, while competition has the upper hand and the fratricidal price war in the United Kingdom is undermining the viability of the system.

Consequently, the distributors are now hesitating to commit, or are seeking sustainable alternatives. Nonetheless, according to Fairtrade International and Fairtrade Foundation UK, the main objective of offering producers a minimum price and a premium has not been abandoned. While they do not deny the existence of a situation of concern for the future, they have declared themselves powerless, maintaining that only government action could reverse the trend. In March 2014, they asked the government to undertake a survey on banana retail prices, and the knock-on effects on producers, in the hope that measures would be taken at the highest level.

A British NGO expressed its reservations regarding this declaration of powerlessness by the Fairtrade Foundation UK. It believes that the foundation does have the means to exert pressure on the distribution sector. It emphasises a development since 2014 in the realisation by the FLO of the defects in its own system, and in particular emphasises one of its biggest weaknesses: the lack of data at all levels, especially on the markets, on upstream production/exports and for the actual minimum price calculation (e.g. because of the diversity of the production systems and local situations upstream in the chain, as well as the lack of transparency in the sector). This is a real brake on innovation. Furthermore, as certain correspondents have emphasised, the FLO is tending to lose control of its own innovation in this context of upscaling.

In Europe, the extreme model represented by the United Kingdom shows that the viability of the FLO-Fairtrade system may be under threat. The genuine economic nonsense of the banana price war, in a highly competitive market, is affecting labelled products in mass distribution. The powerlessness of the FLO-Fairtrade Foundation UK is significant, in spite of its high profile in the country. Calling on the government to enact a change in price-setting policies in the competition laws seems to be an option. Nonetheless, it should be noted that State intervention is limited to situations of threats to food safety, which is not the case here.

One solution could come from the consumers and their awareness of the aberrations of the system. They could play a crucial role in changing the rules of competition.

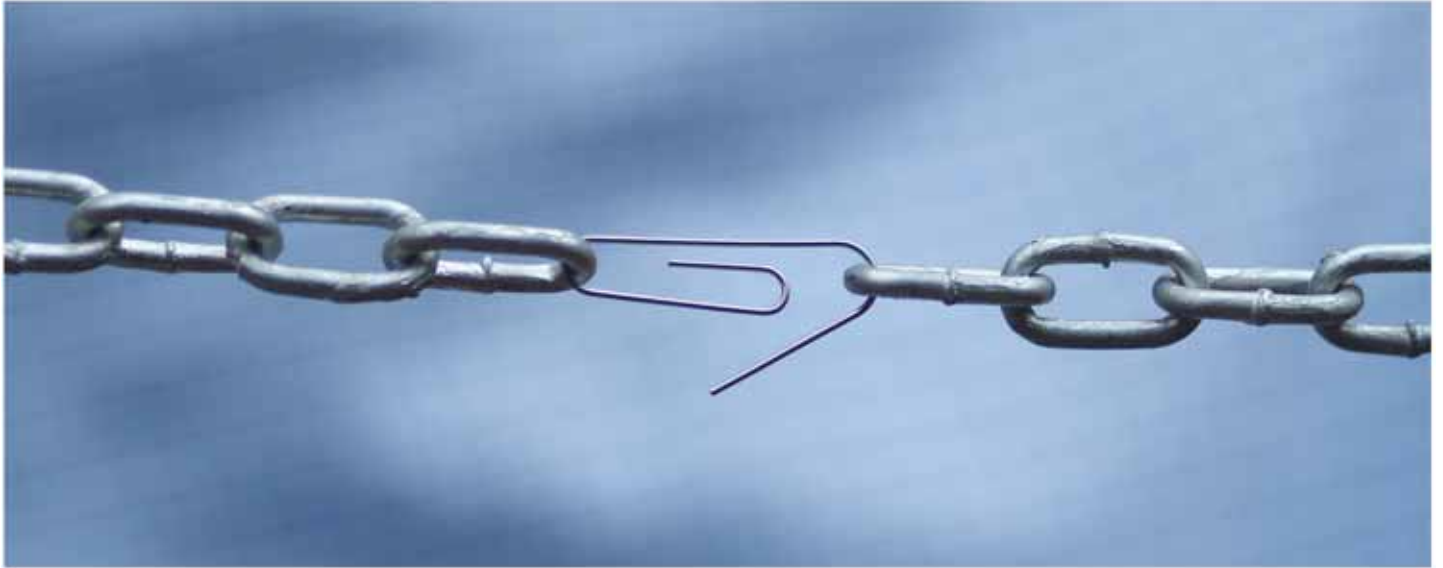
In view of the various problems mentioned, the question is to determine which agents will be decisive in unlocking this impasse ■

Anne-Charlotte Orefice



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reefer trends

A report by
Eric Imbert

Avocado

Avocado

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World avocado market in 2014-15

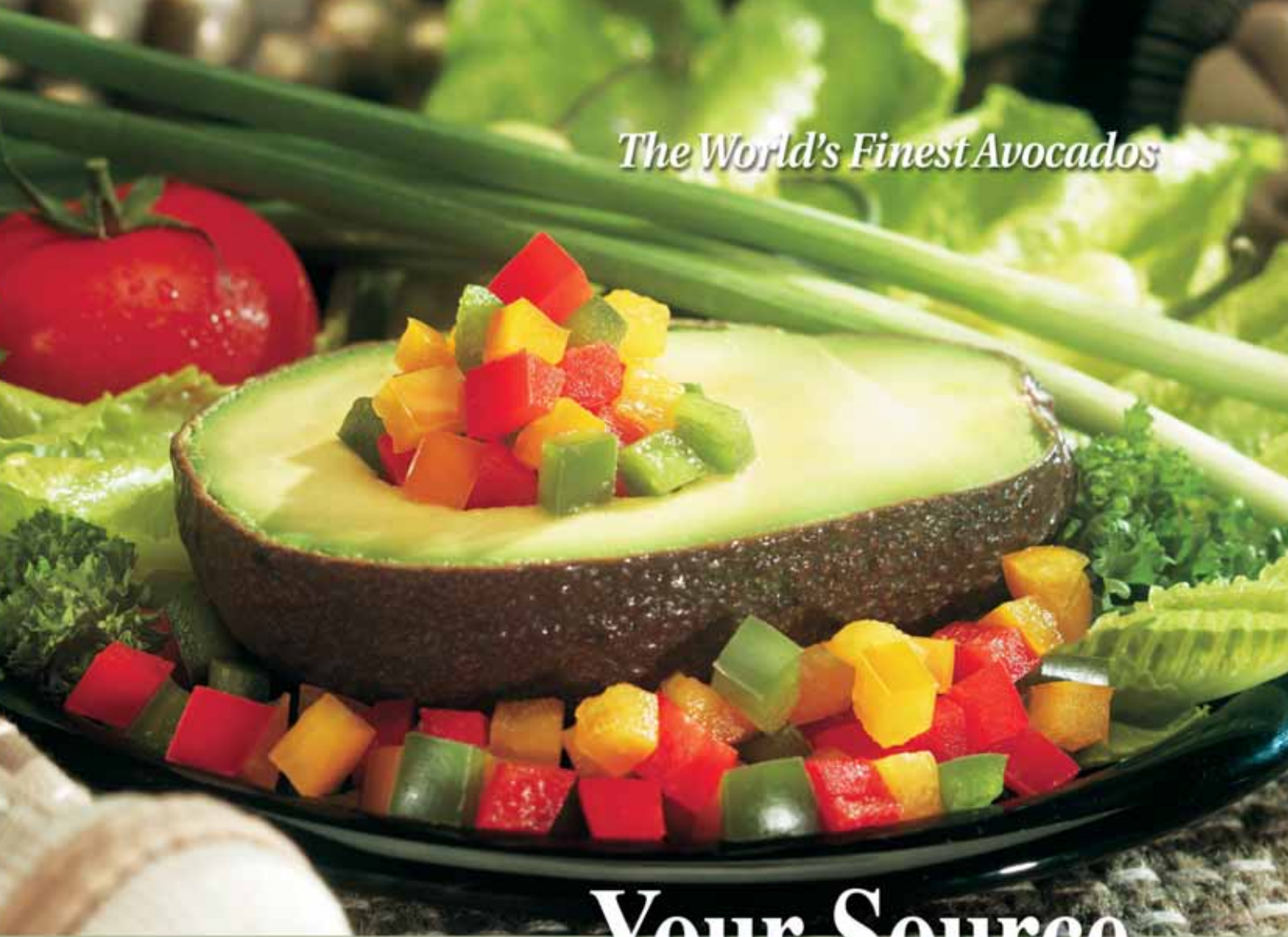
An exceptional vintage!



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Every year, analysts specialising in the avocado market are faced with the puzzle of finding a new superlative able to describe the force of the market growth. This problem was even more acute than usual for the 2014-15 season, with the fairly high world production level revealing even more than in previous seasons the extreme power of worldwide demand. With no other superlatives left in the bank besides “supersonic” — which is out of context — and “supercalifragilisticexpialidocious” — which is reserved for fans of musicals — let’s stick purely to the facts: according to the estimates of our Market News service, the worldwide market grew by more than 200 000 t from the previous season, culminating at 1.4 million tonnes. Growth, which is picking up, has enabled international trade to practically double in the space of six years. What other market, in the world of global fruit trade, can claim such a performance, which furthermore came without major price concessions despite a clearly depressed economic context across much of the globe?

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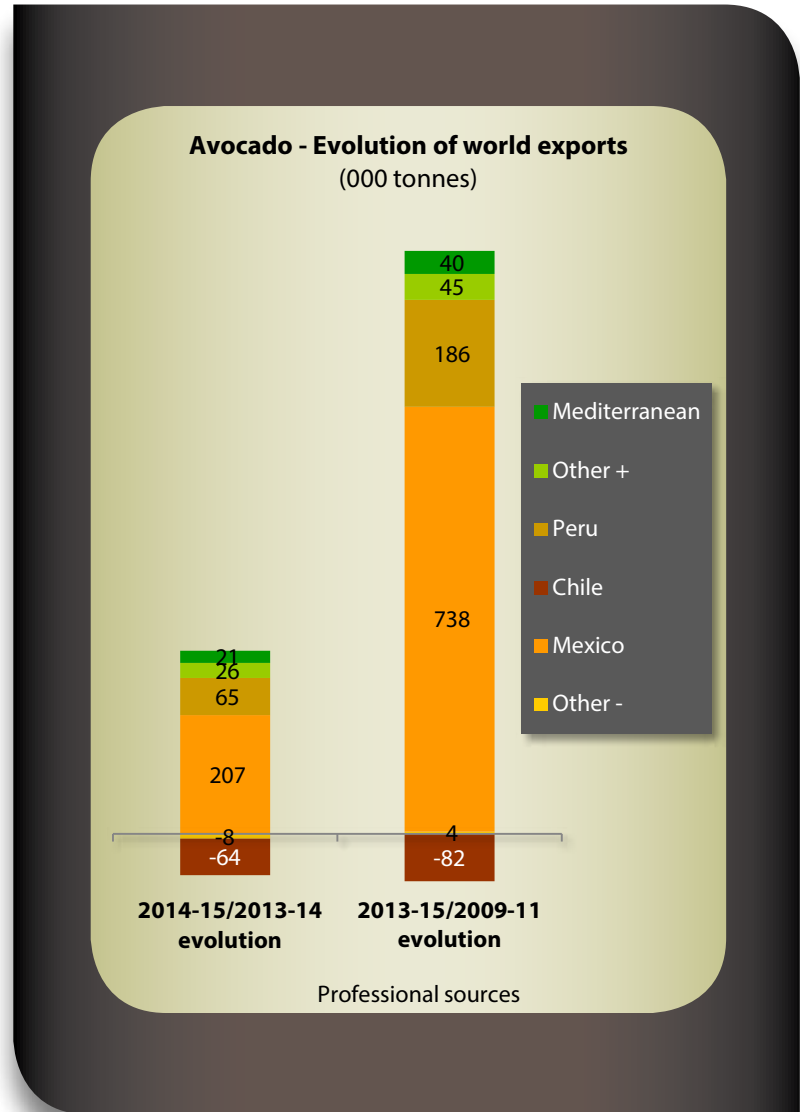
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Mexico and Peru continuing to fuel world growth

Once again this season, two Latin American countries provided the bulk of volumes which have helped satisfy the growing consumer appetite for the avocado around the world. Mexico alone put approximately 200 000 t more on the world market than in 2013-14, accounting for two-thirds of total growth in the international trade. The Mexican domination in the avocado industry was more dazzling than ever during this 2014-15 season, with production exceeding for the first time 1.5 million tonnes, and exports 850 000 t (over the period from July 2014 to June 2015), i.e. nearly two-thirds of the total world trade. Peru too continued to make giant strides forward. With approximately 180 000 t on the market in 2014 and volumes up by more than 60 000 t from last season, it consolidated its place as the world number two exporter.

The Mediterranean suppliers also played their part, though the aggregate rise of the countries in the zone was only 20 000 t despite record export levels (Spain, Morocco) or near-record levels (Israel). The South African industry also confirmed its good shape (+ 15 000 t), as did New Zealand, where the boom in the cultivation area has told on exports, for the first time nudging the 25 000-t mark.

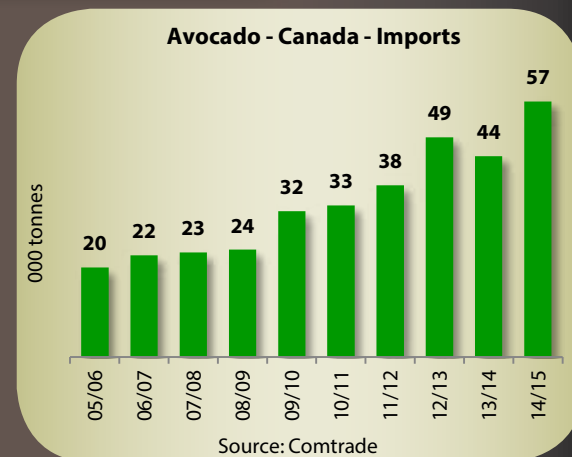
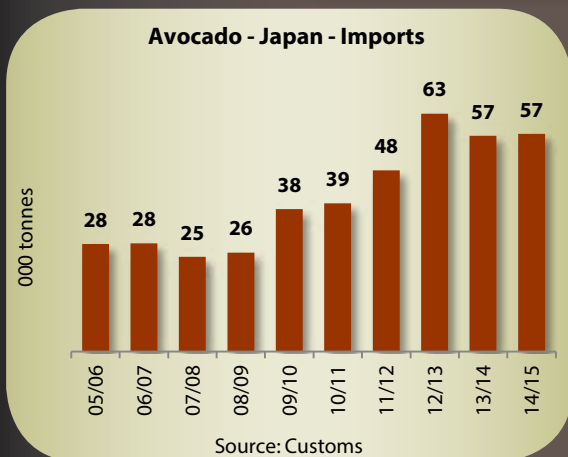
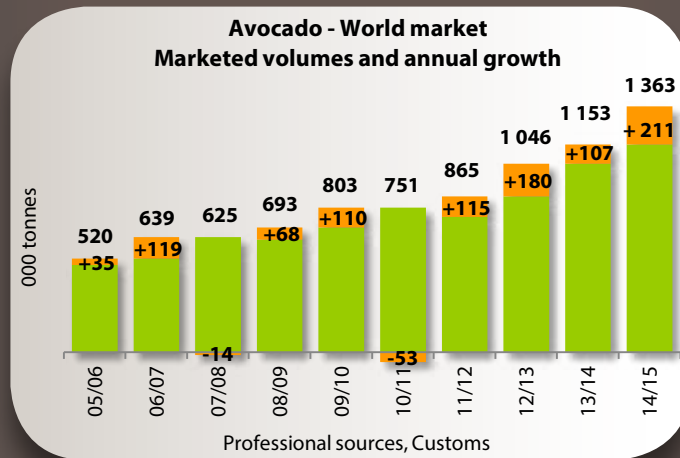
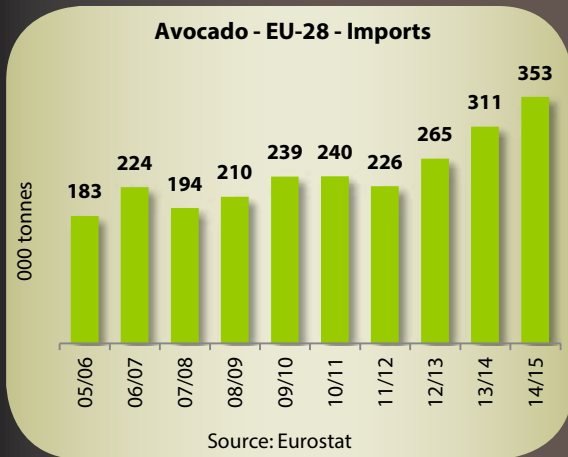
There were few under-performances, though they were occasionally on a massive scale. With exports of less than 70 000 t, Chile had one of its worst campaigns for the past ten seasons in terms of volume, with the production swing phenomenon accentuated by a persistent drought and shrinking surface areas. A combination of cyclical problems (drought) and structural problems (shrinking surface areas) was also behind California's meagre export season. An experienced eye will have noted when reading this brief overview that the driving forces behind the European and US markets during the winter season clearly do not have the same power...



WORLD AVOCADO MARKET

Citius, Altius, Fortius!

Summer season 2014, and winter season 2014-15





A record season in the United States, thanks in particular to the western markets rallying

The avocado market seems to have adopted a Swiftian motif, with Gulliver and the Lilliputians. The US market, more enormous every season, absorbed nearly 760 000 t of imported avocados in 2014-15, a record level up by more than 150 000 t from the previous season. The sway it holds over world trade is greater every year, as is illustrated by its market share, which in less than ten years has gone from 45% to 55% last season.

True, the excellent performance of 2014-15 includes a cyclical component, since the limited Californian volumes in both the second half of 2014 and in the first half of 2015 needed to be offset. However, it also shows that the consumption dynamic is still full of vigour. The slowdown in growth which came in 2013 and 2014 on the big western markets raised question marks. Ultimately, it does not seem to signal that they have reached maturity. Volumes sold in these two regions took an exceptional upturn from late 2014-early 2015, thanks to retail prices returning to a more attractive level. Furthermore, growth in sales remained in double figures in the east of the country, still well short of its consumption potential, while the market share there has climbed practically 10 points since 2010, now exceeding the market share in the west.

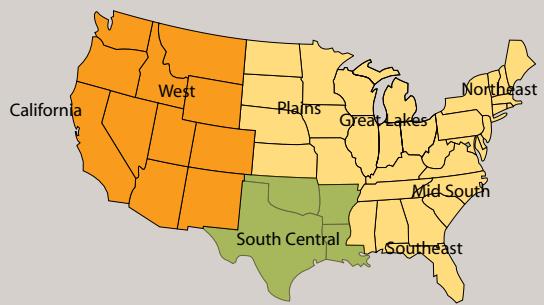
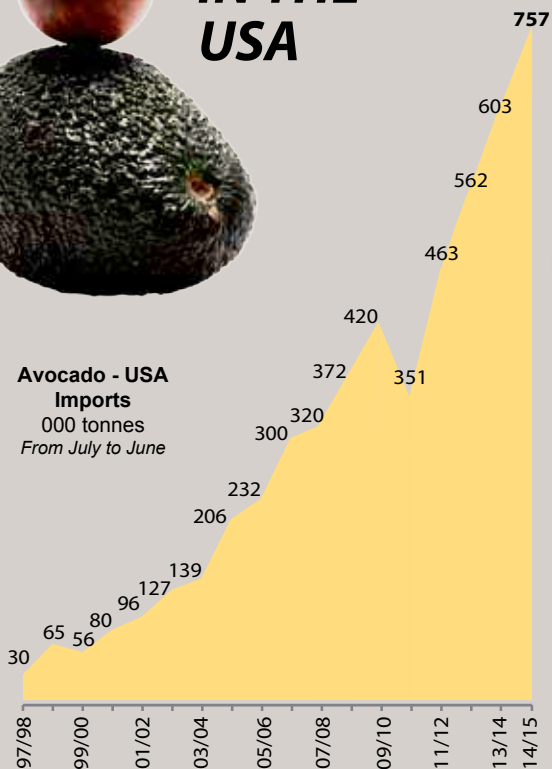
Combined, the good performances by these two big zones should enable the US market to register growth of approximately 20 % in the first half of 2015 from last season. Hence consumption during the 2014-15 season, which runs from November 2014 to October 2015, could approach 3 kg/capita, representing a rise of one kilo in the space of five years. Once again this season, this excellent dynamic in terms of volumes came without any major breakdown in terms of price (down just 4 % from the four-year average of our quayside price indicator). There is no magic at work there, only promotion efforts, promotion efforts and more promotion efforts. US professionals had ample resources for this task in 2014, with the Hass Avocado Board budget of 46 million USD employed almost entirely to this end.

© Eric Imbert

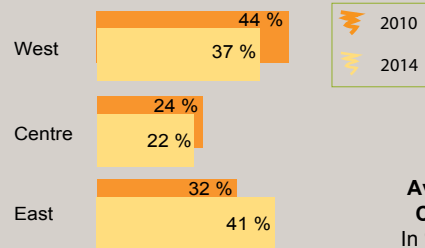


AVOCADO IN THE USA

Avocado - USA Imports
000 tonnes
From July to June



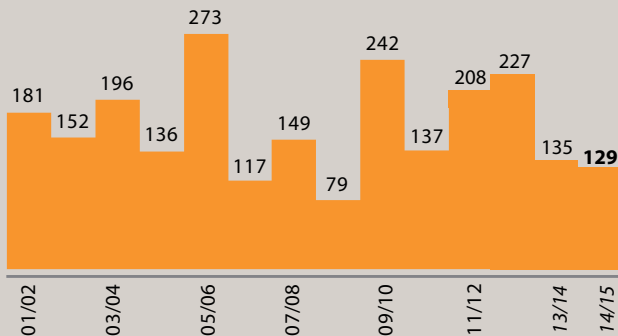
Avocado - United States Market shares by major regions



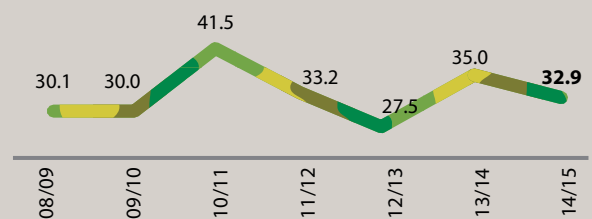
Avocado - USA Consumption
In % compared to previous period

	1st half year 2014	2nd half year 2014	1st half year 2015 estimate
West			
California	-6%	-4%	20%
West	2%	2%	14%
Centre			
Plains	5%	10%	24%
South Central	3%	0%	21%
East			
Great lakes	2%	17%	28%
Northeast	10%	14%	16%
Mid South	12%	15%	22%
Southeast	15%	20%	28%
United States	4%	6%	20%

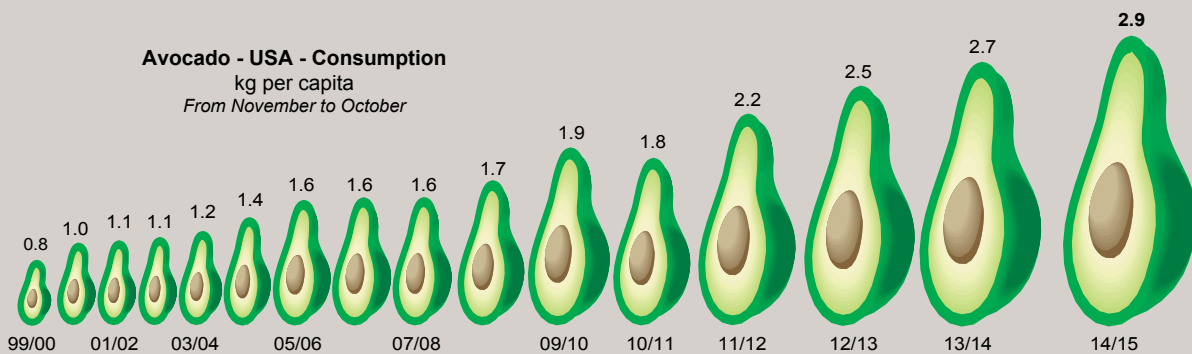
Avocado - California - Production
000 tonnes



Avocado Hass - Average price - USA
Average September to August all sources - Grade 40
USD/lug 11.1 kg net



Avocado - USA - Consumption
kg per capita
From November to October



Source: USDA, AMRIC, NASS, HAB, The Packer / Note : 14/15 provisional

Graphics: Citrad-Fruitrop

Gear change for the world's number two market confirmed

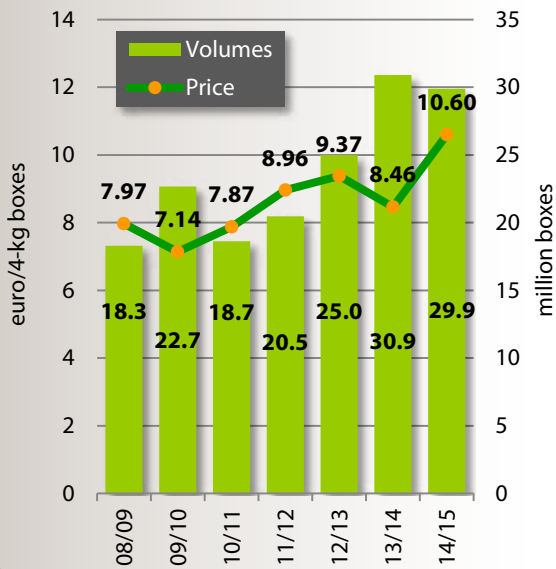
For the third consecutive year, volumes sold in the European Union rose very considerably (by more than 13 %), setting a new record of more than 350 000 t. The increase, which as in the past two seasons was approximately 40 000 t, could have been far more considerable. Volumes saw a distinct rise during the 2014 summer season, fuelled once again by the significant growth in incoming shipments from Peru (+ 20 000 t) and South Africa (+ 10 000 t). Conversely, the very restricted supply was unable to sustain such a high growth tempo during the winter season. The progress of Mediterranean imports and the return of Mexico above the symbolic 10 000-t mark were practically wiped away by the steep downturn in incoming Chilean shipments.



Avocado — EU-28 — Main supplier countries						
tonnes	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total	239 455	239 747	225 621	265 089	311 157	353 438
Total N. Hemis.	134 795	118 680	113 600	131 798	161 065	171 752
Chile	51 383	25 244	32 637	41 074	62 968	42 797
Israel	38 522	38 512	40 448	35 175	42 844	46 086
Spain	31 420	44 460	33 270	42 000	41 300	55 500
Mexico	9 326	3 371	2 909	9 085	6 293	12 918
Morocco	977	3 346	2 803	840	4 766	7 798
Dom. Rep.	3 016	3 621	1 312	2 451	1 749	2 910
Colombia	51	121	121	486	1 142	3 740
United States	101	5	100	687	3	3
Total S. Hemis.	104 307	120 954	111 942	132 985	149 792	181 239
Peru	45 661	56 345	66 155	62 618	86 260	101 971
Southern Africa*	38 821	47 800	27 375	49 083	45 165	56 713
Kenya	15 038	14 123	15 028	17 078	13 313	15 604
Brazil	2 797	2 665	3 006	3 959	3 928	5 265
Argentina	1 984	-	372	114	158	43
Tanzania	6	21	6	133	968	1 643
Others	353	113	79	306	300	447

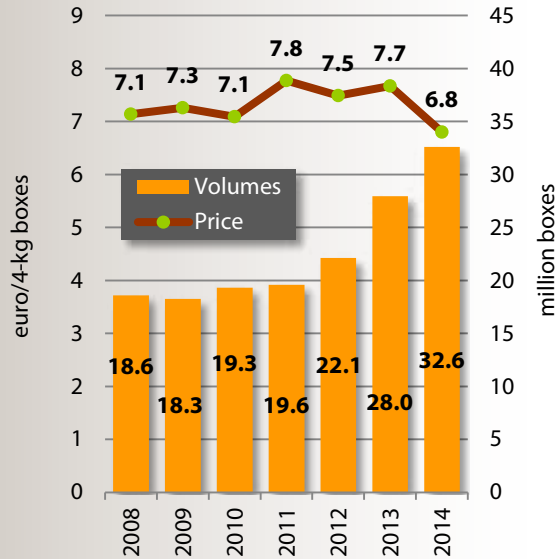
* Southern Africa: South Africa, Swaziland, Zimbabwe / Source: Eurostat

Avocado - EU-28 - Hass market during the winter season (October-April)



Professional sources, CIRAD

Avocado - EU-28 - Hass market during the summer season (May-September)



Professional sources, CIRAD

Measuring UP



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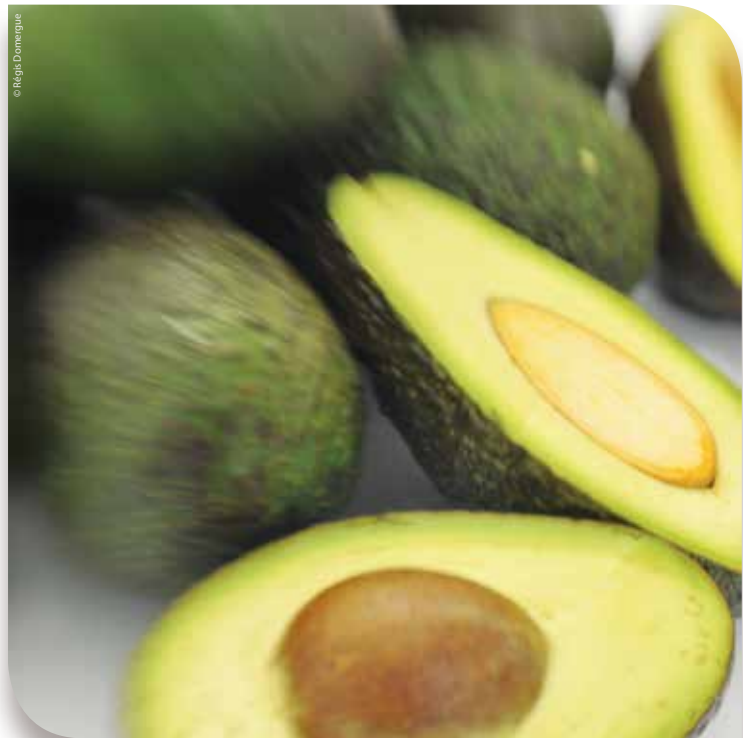
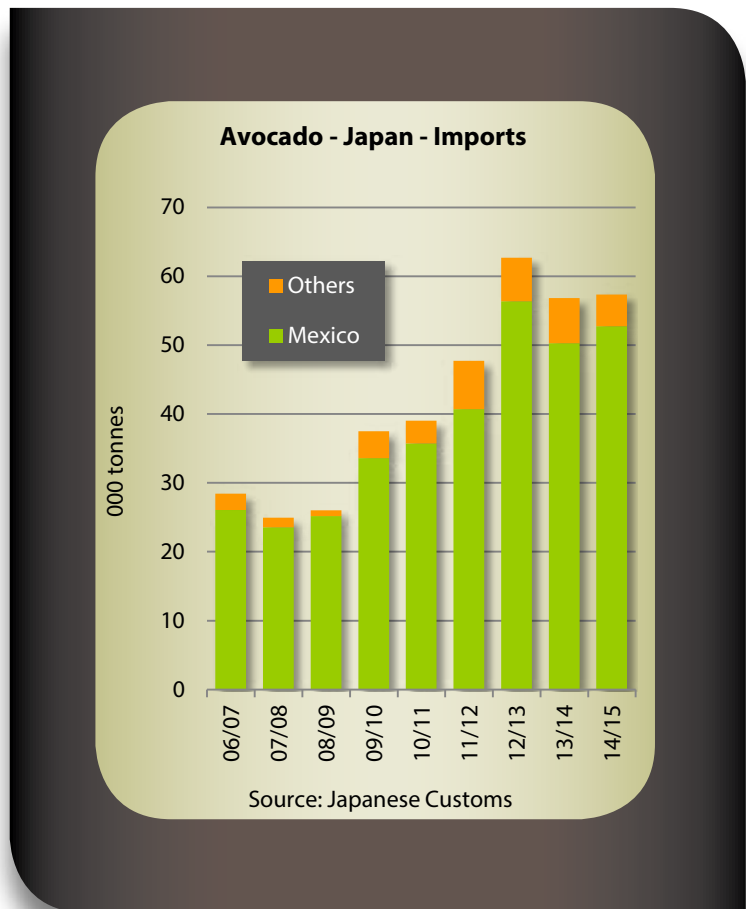


Unlike the United States, the rise in volumes was accompanied by an increase in rates, and an exceptional one at that! Our quayside price indicator for the first time exceeded 8.60 euros/4-kg box, representing a rise of 6 % from the four-year average. The lacklustre performance during the summer season because of a poor spread of volumes was largely offset by an exceptional winter season. Our price indicator for the period from October 2014 to April 2015 reached a record level of 10.60 euros/4-kg box, with the weekly rate spending 24 weeks out of 30 above the symbolic 10 euros/box mark (including 6 weeks at more than 12 euros). These unprecedented figures lead us to assume that 2015 should provide an exceptional performance, given the steadiness of rates during the 2015 summer season, and the limited supply level taking shape for the 2015-16 winter season.

More contrasting development on intermediate-sized markets

Canadian imports have developed in line with those of the two world giants. They exceeded 56 000 t in 2014-15, with the leap of 10 000 t registered from last season mainly attributable to Mexican volumes. Consumption rose by 300 g/capita, reaching 1.6 kg/capita. The major difference with the neighbouring US market, where the average volumes absorbed are practically twice as great, underlines the impact of the promotions undertaken there, although the presence of local production and a significant Hispanic population also plays a role.

The picture is completely different for Japan, which remains the world number three market, but is the only major country to have seen its imports stagnate at approximately 60 000 t, for the past three years. However, with 450 g/capita in 2014-15, the consumption level remains particularly low for one of the most developed countries. However, the increasingly marked weakness of the yen year-on-year since late 2012 has drastically reduced the attractiveness of this market, which also has operating difficulties. On the other hand, the economic crisis ravaging the country, leading certain economists to say that the problem of Japanese debt is the next time-bomb threatening the world economy, is also affecting household consumption.



China's emergence sparking ambitions

With the exception of the Central American markets, fuelled mainly by Mexico and which are seeing little change, all the other countries or big import zones on the planet remained at around 20 000 t or less. Nonetheless, while modest in size, some of them continued to demonstrate a fine dynamic in 2014-15. This is clearly the case with the Asian markets barring Japan, which climbed by more than 5 000 t, seeing their imports approach 14 000 t. While South Korea seems to be waking up to the avocado, this trend is primarily linked to growth of the Chinese market, where imports doubled in the space of one season to approach 8 500 t. There too Mexico has been the prime mover up till now. However, the export approval or extension of export approval recently granted to Chile and Peru could boost the growth tempo, insofar as logistics — which seem extremely complex — are sufficiently well managed.



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Neighbouring markets, seen as insignificant given the relatively modest population level, also continued to demonstrate a fine dynamic. This is the case for Norway and Switzerland, which were up by more than 3 000 t in 2014-15, with total combined imports of more than 20 000 t for the first time. These two markets have practically doubled in the space of five years, and now account for approximately 10 000 t each. Conversely, the collapse of the rouble and the political crisis in Ukraine caused a distinct slowdown in the growth of East European markets. Imports rose by approximately 500 t, to slightly in excess of 17 000 t (of which just over 14 000 t for Russia alone).

Avocado — China (+ Hong Kong and Macao) — Imports					
tonnes	2010	2011	2012	2013	2014
Total	1 978	2 393	2 783	4 095	8 377
Mexico	416	364	376	1 931	4 804
Chile	271	438	568	554	1 019
USA	258	24	375	711	972
Peru	-	149	316	643	1 164
South Africa	679	1 033	583	134	186
Others	354	385	565	122	232

Source: Trademap



A test campaign

This campaign is being viewed as a crash test, with the exportable supply causing a major shock by climbing nearly 20 %. We cannot fail to observe that nearly all the big world markets proved impressively sound. Not only did these additional volumes find takers, but the economic returns were satisfactory, or even exceptional, for all the links in the industry.

The consumption analysis instills a fair degree of confidence in the medium-term future. All the markets are demonstrating a solid growth dynamic, expression of which is still often held back by the lack of volumes available to sell, especially during the winter season. Growth seems to have resumed in the finest form in the United States thanks to more attractive retail prices and to the long-haul work of the HAB. Consumption is progressing on all the European markets, despite the near-absence of sales boosting programmes. The only flat notes can be heard from certain Scandinavian markets which seem to be approaching maturity, and the need for close management of the summer campaign. Canada is continuing its rise, while new consumption zones are emerging (especially China). All this makes for a particularly rare scenario in the world of fruit markets, and even more generally, in the world of agriculture ■

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European avocado consumption

France, United Kingdom, Scandinavia and Germany: Hass territory!

The additional consumption of each of the 400 million inhabitants of the North-West EU (plus Norway) from last season is equivalent to a size 24 avocado! Thanks to this considerable rise, volumes absorbed in the western part of the Old Continent beat a new record, approaching 770 g, i.e. 3.5 size 18 avocados per capita per year. The four main consumer countries remained the driving forces of the market, and showed that they still represented major growth reserves.

France retained its lead position in outstanding fashion, with volumes consumed rising by more than 10 000 t. The country also broke two symbolic barriers: 100 000 t consumed and 1.5 kg/capita/year. This new exceptional performance, following on from three other seasons of steep rises which saw this market expand by 25 000 t, leads us to question the targeting of the all too rare avocado promotions in Europe. Why almost systematically exclude the French market, when it has such a fine proclivity for growth?

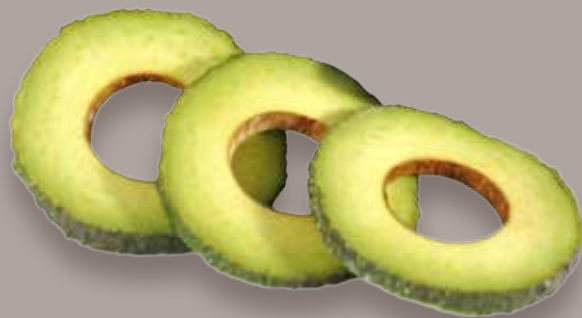
The United Kingdom, the number two European market, recorded the best performance of the season in terms of growth, with an Olympian leap of nearly 15 000 t which raised consumption per capita to 900 g... a first in Europe! British demand had already proven its winning form, but operators received the added boost of the particularly favourable exchange rate in 2014-15, which lured an influx of volumes onto the British market with its strong pound sterling, to the detriment of the Continent with the toiling euro.

Germany continued its rise, as powerful as it was relentless, climbing by more than 6 000 t. With approximately 33 000 t consumed in 2014-15, the volumes absorbed per capita remained limited, though they exceeded the 400-g mark.

Scandinavia, Europe's number three market in terms of volumes sold, though far ahead of the rest in terms of consumption per capita, recorded another lacklustre performance this season. While Denmark pulled itself together, and Finland and Norway continued their strong progress, Sweden conversely registered a distinct downturn. The 2 kg/capita mark, the consumption level of all the countries in the zone barring Finland, seems to be a difficult threshold to pass in the EU, at least without promotional support.

Analysis of the more modestly-sized markets, amounting to less than 10 000 t, also reveals some interesting movements. Italy seems to be confirming its reawakening, with considerable progress for the second consecutive year, after a long period of lethargy. With barely more than 9 000 t of imports and consumption reaching barely 150 g/capita, the market nonetheless remains extremely limited in size.

Outside the borders of the EU-28, though still in Western Europe, the Swiss market continued to rise moderately, though very steadily. The volumes on the market approached the 10 000-t mark, while consumption, with 1.2 kg/capita, remained near the top of the class for Western Europe. The Eastern Community markets continued their considerable progress (+ 5 000 t). The combined volumes sold across the 11 countries in this zone exceeded 20 000 t, with the average consumption per capita reaching 200 g.

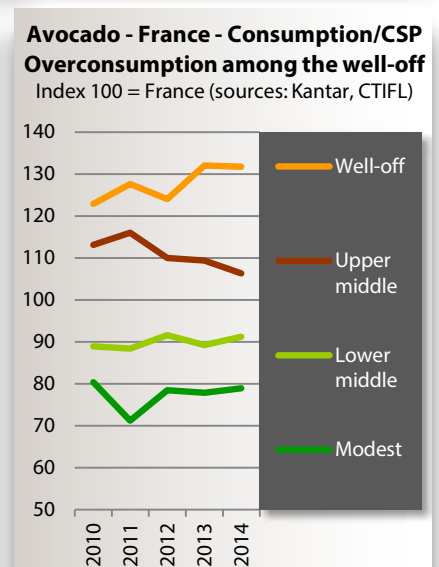
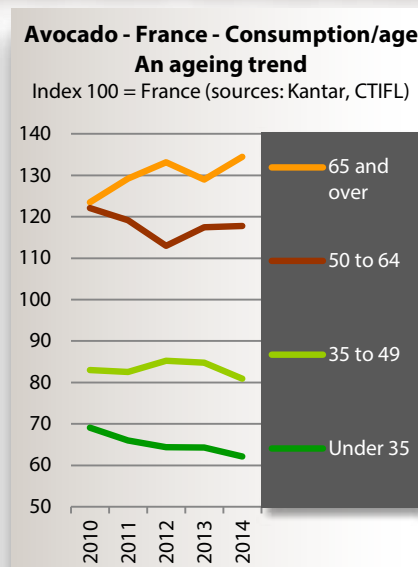
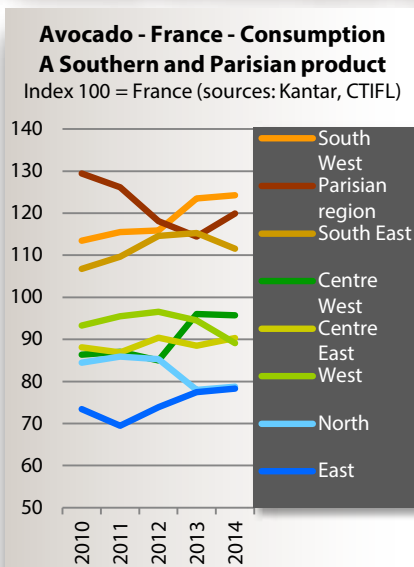


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Avocado — Consumption in Europe

	Estimated marketed volume in 2014-15 (tonnes)	Population in millions	Consumption per capita (grams)	2014-15 compared to		GNP-PPS (index)
				2013-14	average 2010-11 to 2013-14	
EU-28* + Norway	329 330	495.0	665	+ 18 %	+ 23 %	100
EU-15* + Norway	308 627	401.2	769	+16 %	+ 21 %	111
France	99 004	65.9	1 502	+ 12 %	+ 23 %	107
Scandinavia	48 165	25.8	1 867	+ 10 %	+ 25 %	132
Sweden	18 594	9.6	1 937	- 7 %	+ 5 %	124
Denmark	11 774	5.6	2 103	+ 35 %	+ 10 %	124
Norway	10 899	5.1	2 137	+ 10 %	+ 52 %	179
Finland	6 897	5.5	1 254	+ 33 %	+ 124 %	110
United Kingdom	57 844	64.3	900	+ 34 %	+ 56 %	108
Germany	33 624	80.8	416	+ 24 %	+ 37 %	124
Netherlands	42 386	16.8	2 523	+ 56 %	+ 89 %	130
Spain	na	46.5	na	na	na	93
Italy	9 063	60.8	149	+ 41 %	+ 77 %	97
Belgium	5 542	11.2	495	+ 7 %	+ 13 %	119
Austria	4 250	8.5	500	+ 24 %	+ 54 %	128
Portugal	2 655	10.4	255	- 18 %	- 12 %	78
Ireland	3 394	4.6	738	+ 53 %	+ 64 %	132
Greece	2 375	11.0	216	- 17 %	+ 7 %	72
Luxembourg	325	0.6	591	+ 22 %	+ 45 %	263
Eastern Europe NMC's	20 704	99.7	208	+ 29 %	+ 100 %	66
Poland	7 467	38.5	194	+ 58 %	+ 144 %	68
Baltic States	4 786	6.2	772	- 1 %	+ 35 %	70
Czech Republic	1 875	10.5	179	+ 37 %	+ 120 %	84
Slovakia	949	5.4	176	+ 58 %	+ 92 %	76
Hungary	1 749	9.9	177	+ 33 %	+ 140 %	68
Slovenia	565	2.1	269	- 27 %	+ 37 %	83
Romania	2 539	19.9	128	+ 37 %	+ 176 %	54
Bulgaria	775	7.2	108	+ 43 %	+ 122 %	45
Croatia	400	4.2	95	+ 56 %	+ 56 %	59
Switzerland	9 516	8.1	1 175	+ 19 %	+ 32 %	161

* Excluding Spain / From June 2014 to May 2015 / Import-export+production / Sources: Eurostat, FAO, professionals



Summer season review

Herculean demand!

“Can do better!” was the title, in the form of a schoolmaster’s verdict, which we selected for the review of the 2014 season. The 2015 campaign which has just finished shows that it was indeed possible to do better, or even much better. This is borne out by the figures: with a very similar or even identical supply, the average campaign price registered a rise of 50 %!

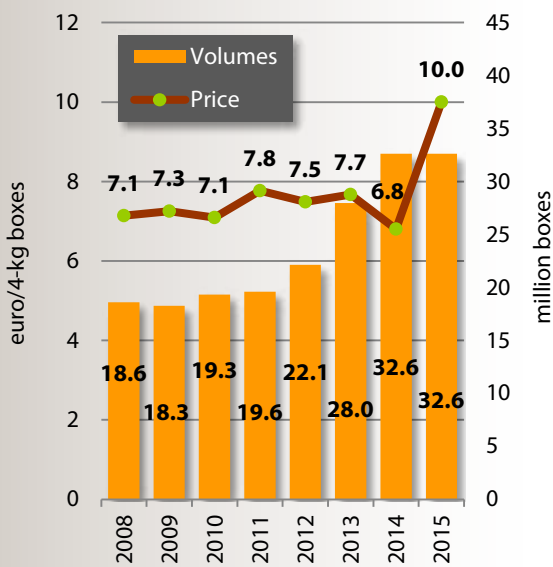
The professional statistics, which still need to be confirmed by the Customs data not available at the time of submission of this article, show that European imports amounted to approximately 180 000 t during the 2015 summer season. While this cumulative total, similar to last season, is unsurprising and had been forecast, it nonetheless conceals supply levels which had not been anticipated for the various supplier countries. Contrary to the forecasts, Peru did better than last season, earning a market share of just over 60 %, with volumes

of around 105 000 to 110 000 t. This rise was due to inter-market trade-offs highly favourable for Europe to the detriment of the United States, with the total exports across all destinations registering a considerable fall from 2014 (at probably around 165 000 t, as opposed to 180 000 t in 2014). While Peruvian exports were more abundant than predicted, South Africa ebbed more than expected, with exports to Europe set to be slightly less than 50 000 t. The blame lies with the limited size range due to the drought, which encouraged producers to direct a larger proportion of production than planned to a highly dynamic local market. Volumes from smaller-scale suppliers (Kenya, Brazil) seem to have been similar to last season, with the exception of Tanzania, whose exports were considerably more abundant.

The economic verdict is quite simply exceptional, with the average campaign price peaking for the first time during a summer season at more than 10 euros. Demand, which we could not dare imagine so strong, managed to absorb incoming shipments with an even worse time spread than in 2014 (extremely heavy supply in excess of 2 million boxes per week between mid-May and late June, followed by a dip in July and above all August, and then another peak in September). Nonetheless, the major crisis experienced in 2014, which sent prices plummeting to between 5.50 and 8.00 euros per box for 18 weeks, was avoided (just 4 weeks at between 7.00 and 8.00 euros). This says a lot about the growth reserve that the Community market holds.



Avocado - EU-28 - Hass market during the summer season (May-September)



Professional sources, CIRAD



© Guy Brehmer

Avocado — EU-28 — Counter-season market supply							
tonnes	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*
Total S. Hemisphere	102 323	120 954	111 570	132 871	149 634	181 196	181 000
Peru	45 661	56 345	66 155	62 618	86 260	101 971	107 000
Southern Africa**	38 821	47 800	27 375	49 083	45 165	56 713	50 000
Kenya	15 038	14 123	15 028	17 078	13 313	15 604	15 000
Brazil	2 797	2 665	3 006	3 959	3 928	5 265	5 000
Tanzania	6	21	6	133	968	1 643	4 000
Argentina	1 984	-	372	114	158	43	-

* Estimate / ** Southern Africa: South Africa, Swaziland, Zimbabwe / Source: Eurostat



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Evolution of avocado retail prices in Europe

Is the devil in the detail?

The avocado has never been as popular in Europe, yet paradoxically, it has never been as expensive for the consumer! This is the finding of a study conducted by our Market News service, taking the

French, German and Spanish markets as a benchmark. Despite the supply expanding considerably in recent years, the increase in retail prices seems to be structural, and inversely proportional to the number of promotions, in constant decline. While the international market tension due to the strong growth in world demand is one explanatory factor, the supermarket sector also seems to be increasingly riding the green wave.



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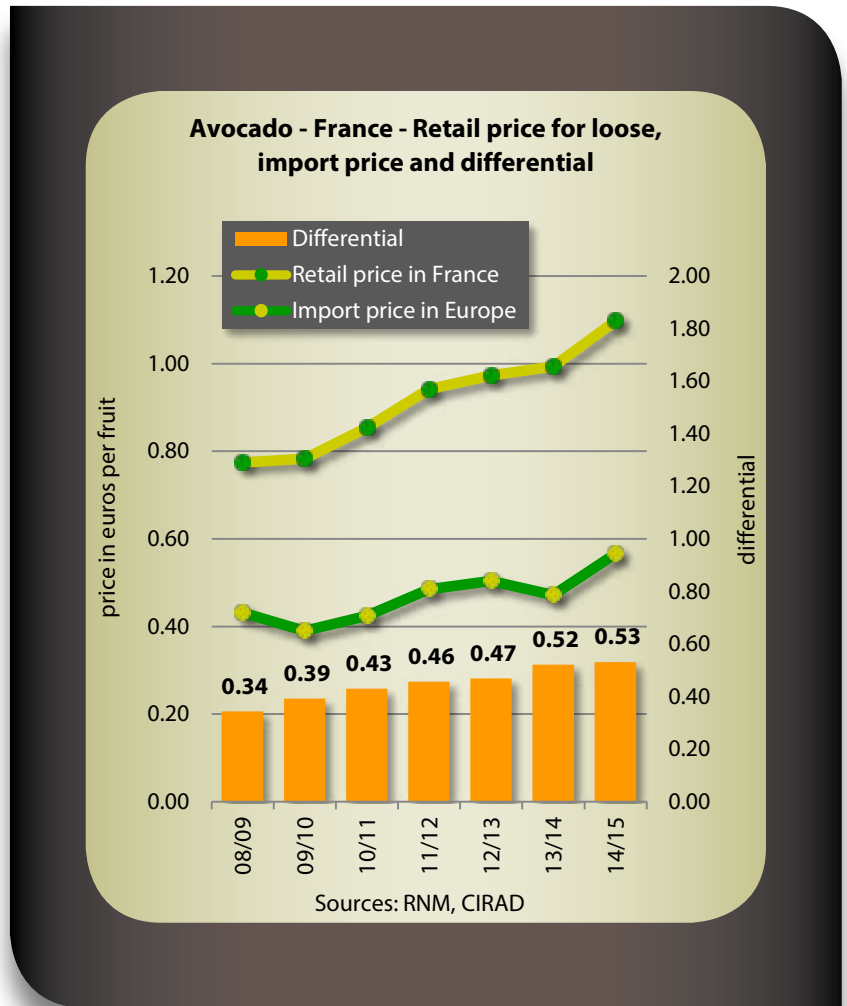

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Growers at heart

Retail price inflation due not only to international market tension and ripening

The days of the “10 francs (1.50 euro) for 3 fruits” promotions seem a long way off, though they were still commonplace until the early 2000s. In 2015, the average price per fruit reached 1.10 euros in France, with the most aggressive promotions offering 0.85 euro. There have been price rises well above inflation, due primarily to the world and European market tension, as is attested by the steady increase in quayside prices - which furthermore exceeded for the first time the symbolic 10 euros per box mark in 2014-15! Demand is increasingly lively, and increasingly international, growing quicker than world production, in particular during the winter season.

The qualitative development of the supply is another explanatory factor for this boom in the price tags. Most fruits on the shelves nowadays are triggered. The ripening chamber and maturity inspection entail a cost (of around 0.70 to 0.80 euro for medium-sized units in the case of automated processes, though this varies greatly according to the economies of scale made), and therefore have a knock-on effect on the sale price.

Yet these cumulative effects only partly explain the increase in retail prices, even if we add a small dose of inflation. True, the wager made by distributors on triggered fruits proved to be a winner for the industry, helping consumption take off. Yet since charity begins at home, it has also been just as much a winner for the hyper and supermarkets, as the evolution in the differential between retail price and quayside price shows. This indicator, which should be analysed in terms of evolution rather than absolute value, climbed 20 eurocents per fruit between 2008-09 and 2014-15.





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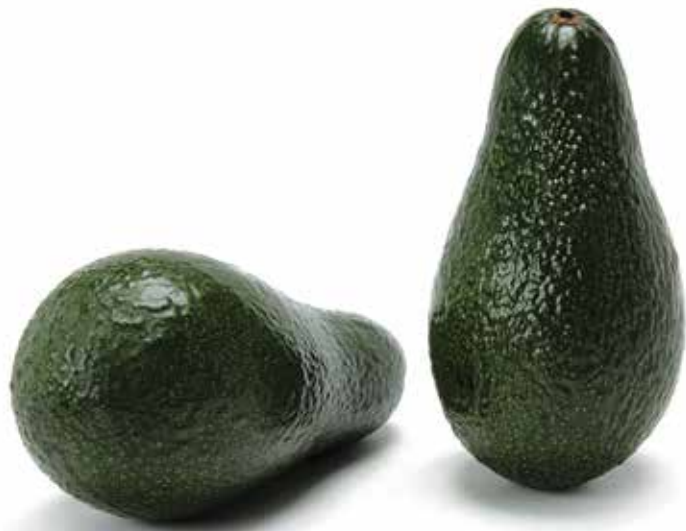
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The avocado, an easy victim of mark-ups

With the core range made up from loose fruits, selling avocados individually makes an ideal tool for introducing high retail prices. A price of 1.10 euro per piece (average consumer price in 2014-15) is seen as much more accessible and democratic than 4.95 euros per kilo, though this is its equivalent if we take a size 18. With such a fine tool, there is no point making concessions on the margins. Hence despite its high import price level, the avocado cannot evade the unjust pitfall to which practically the whole range of fruits and vegetables falls victim, i.e. doubling the purchase price. This practice overturns the laws of nature to such an extent that the avocado has become one of the richest fruits around: where the average margin is 0.85 to 0.95 euro/kg for bananas outside of promotions, it climbs to 2.25 euros/kg for the avocado.

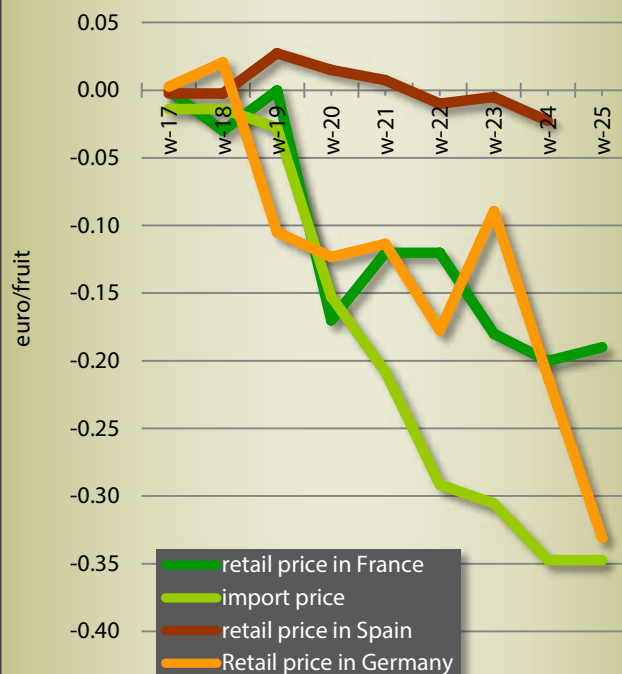


© Gary Brehmer

Rapid knock-on effect of fall in quayside prices, but with major threshold effects

Of course it is during periods when quayside prices are at their lowest that the distributors' margins rocket up. The example of the "mini-crisis" the market went through in May-June 2015 is particularly revealing. In mid-June, when import rates touched bottom, the retail price on certain markets equated to practically three times the quayside price! However, contrary to perception, the fall in quayside rates was passed onto the consumer almost immediately, at least in France and Germany, with Spanish distributors particularly lethargic to follow suit (doubtless because of the heat?). Conversely, in France, the scale of the fall was much smaller at the retail stage than quayside (20 eurocents per kilogram on 35 eurocents), with the price tags becoming paralysed at around 1.10 euro. A similar threshold effect could be observed in Germany, though much more temporary since the German distribution sector ended up passing on the fall in full.

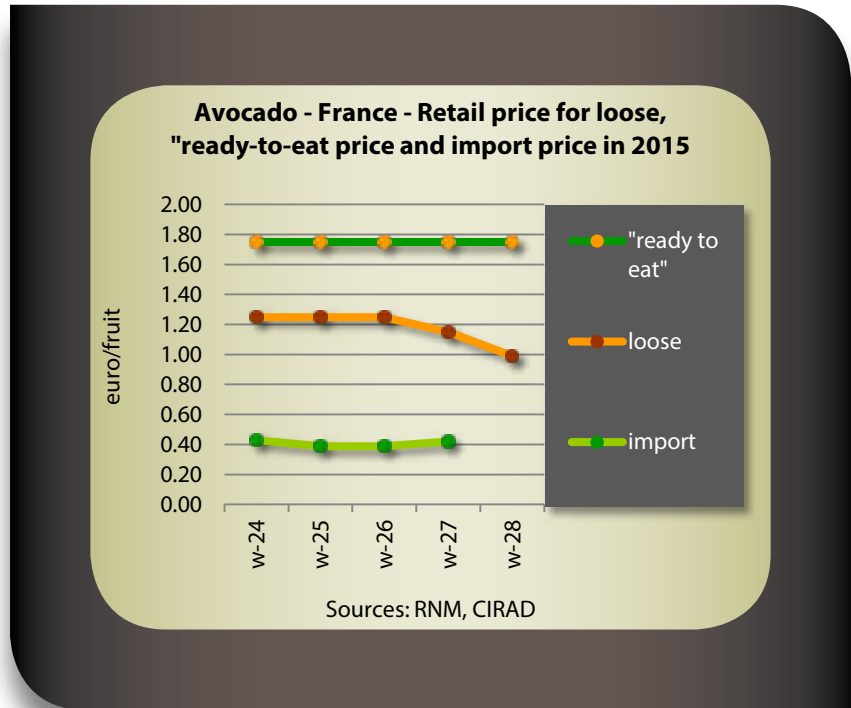
Avocado - Europe - Evolution of import and retail prices from week 17 2015 summer crisis



Sources: CIRAD, RNM, professionals

Ready-to-eat: a "cash cow" market segment

The tray with two ready-to-eat fruits is also a gold mine for distributors. That is the conclusion we can draw from a mini-survey conducted by our team on a small sample of chains in the Montpellier region. The price tags seem to be engraved in marble to such an extent that they are indelible — doubtless a fine tribute to the Roman Septimania period. They maintained a level of between 3.50 and 3.75 euros/kg depending on the chains, even when the import price was at its lowest, though this market is far from fully contract-based. Only one chain in our panel (non-exhaustive) — without naming names — did adjust its prices.



Miles import

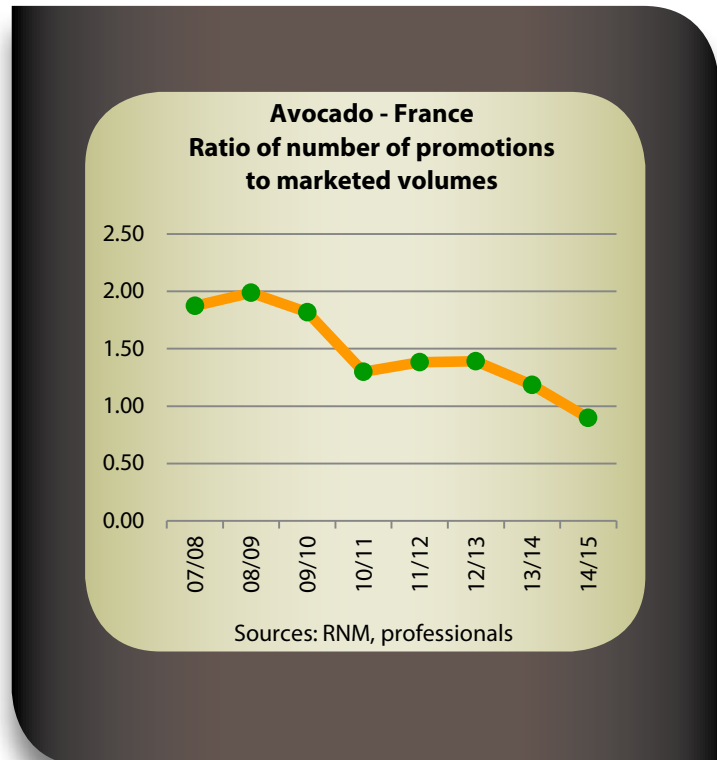
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Promotions drying up...

The policy of promotions has unfortunately changed in line with the retail price policy, and is driving sales less and less. The percentage of supermarket chains with avocado promotions has dropped from 14-15 % per week at the end of the 2000s to 10-12 % the last two campaigns. Which is a paradox in the knowledge that volumes sold have increased by 40 % during the same period: the ratio between the number of annual promotions and the quantities sold went from 2 to 1 during this period! Two factors explain this tumble. The first is rather reassuring: importers have overall less need to engage in low-price transactions, given the increasing market tension. The other is much less so: today, a large-scale promotion cannot be implemented without trepidation, since you need to take the risk of committing to a price for two months ahead on average, on an eminently fickle market, and for an extremely expensive product to purchase, often pre-paid for certain sources (e.g. Mexico).



Loss of supermarket sector purchaser power causing problems

This example is symptomatic of a development in the commercial organisation of the supermarket sector causing problems not only for the avocado but also for all fruits and vegetables. The quest for more elaborate promotions, to increase their impact (producing brochures, media campaigns, etc.), has meant that marketing has gradually supplanted purchasing in running these promotions. This system probably produces good results for manufactured products, but it is incompatible with the need for the real-time tracking needed by such perishable items, and with such changeable production, as fruits and vegetables. This loss of responsiveness results in an extremely damaging point for the entire industry: the difficulty of implementing spot promotions to balance a market becoming over-supplied, in order to prevent a serious crisis. The promotion programmes that can be implemented from week to week involve only tens of pallets. That is enough to solve the operator's problems for one size, though far from sufficient to relieve a swollen market. This point is particularly damaging for the avocado trade, which intrinsically requires occasional large-scale, unscheduled promotions. On the one hand, the supply cannot be managed in real time since the avocado is very often imported long-distance: hitting the brakes only takes effect two to three weeks later. On the other hand, the very high perishability of the product means that commercial solutions need to be found very quickly.

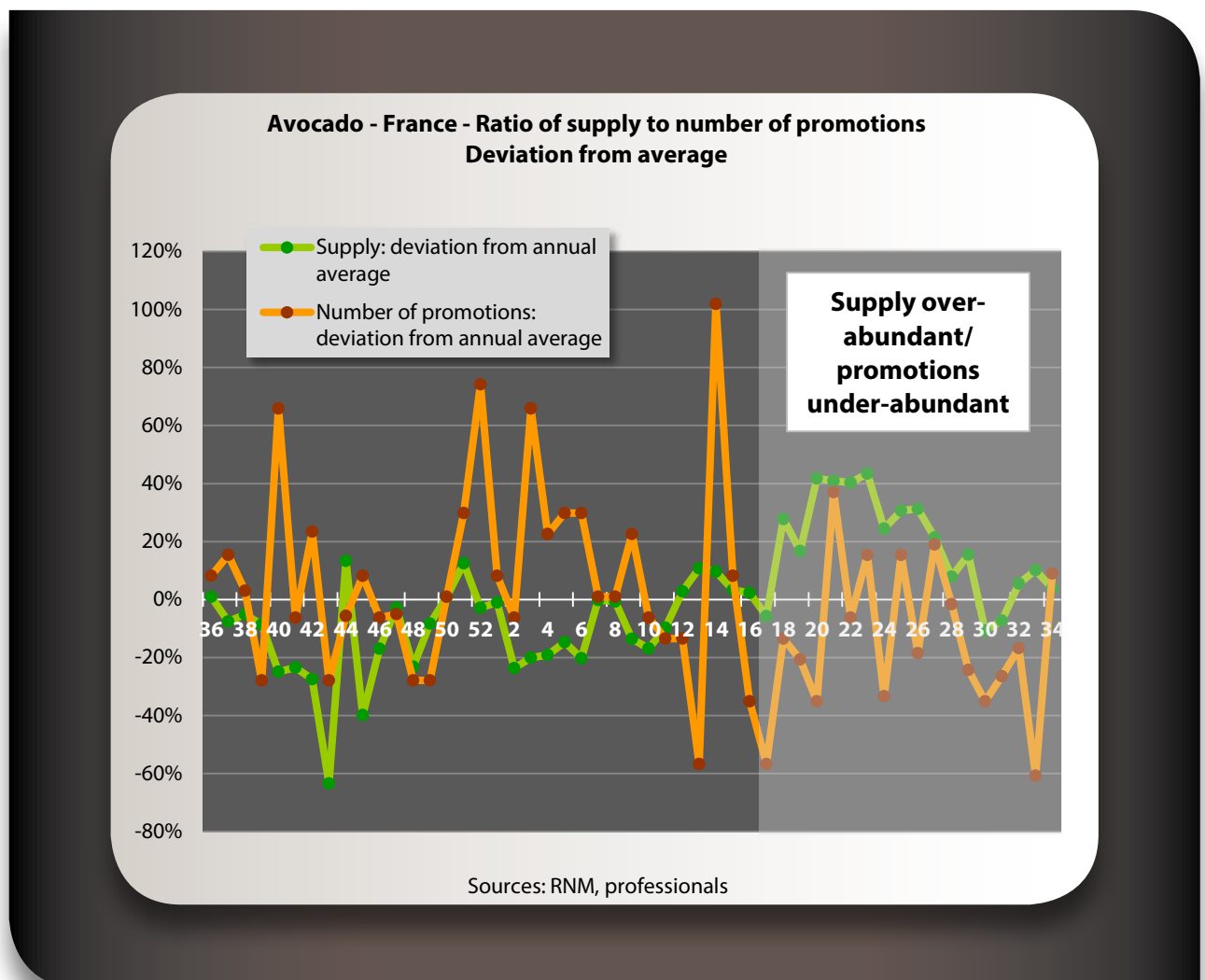
Marked disconnection between the market supply calendar and promotions calendar

Another point posing problems, and perhaps also due to the side-lining of the detailed knowledge purchasers have in promotion management, is that the calendar of the big national promotions does not take into account the recent fundamental shifts in the supply. Recurrent periods of heavy incoming shipments are not always accompanied by large-scale promotions. The most iconic example is of course the end of spring (May-June): Peruvian production is rising steeply, while the alternative market in the United States remains hard to penetrate given the available volumes of competing Californian and Mexican fruits. Adding this period to the other big promotional waves of the year (Christmas, Easter, early autumn) does not benefit only the upstream segment, but also the distribution sector. The avocado is particularly well-suited to making salads and other raw dishes which are part of the diet at this time of year, and enables more than comfortable margins to be set, even when offering slightly discounted retail prices.

Need for stronger commitment by exporter countries

Is the distribution sector ready to take this new gamble? The logic holds up in economic terms, admittedly in a context of plentiful competing local production driven by lobbying making a very powerful case through sheer vehemence. Exporter countries too have a role to play in promoting their produce. To this end, Peru has a particular responsibility given the boom in its shipments to Europe over the past few seasons, and those to come. In this context, we can marvel at — and lament — the very poor signal given by the decision to suspend for 2015 the budgets allocated to avocado promotion in Europe ■

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European avocado market 2015-16 winter season forecast

Limited supply for a giant appetite

Are we heading once again this season for record Hass prices in Europe? That is what the market supply prospects would lead us to believe. On the one hand, the spring heatwave in the Mediterranean had a very adverse effect on the harvest, already impaired in certain countries by the production swing phenomenon. On the other hand, the euro, which remains weak against the dollar despite recently rallying, will count against trade-offs between markets for Chilean exporters, who have a bigger harvest than last year at their disposal.



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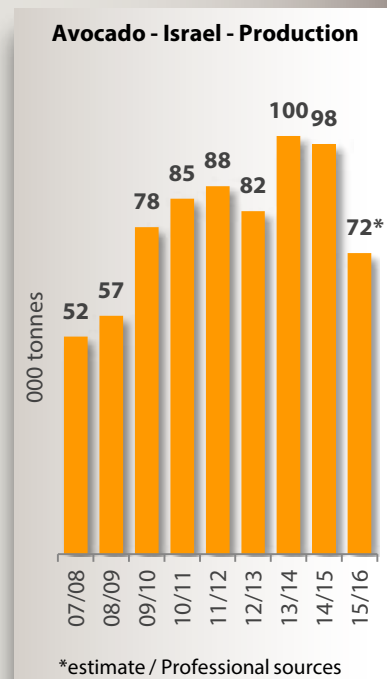
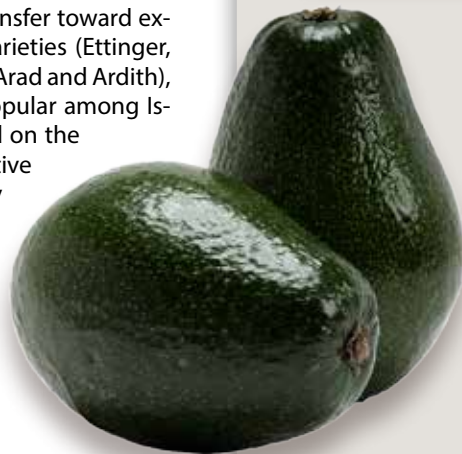
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Tel +33 (0)1 46 87 30 00 - Fax : +33 (0)1 45 12 96 74
g.burunat@commercial-fruits.com

Heat wave in the Mediterranean!

Spring heatwaves can have consequences as disastrous as hard frosts, really ravaging flowers or fruits which have only just set. This is what happened in May 2015, with absolute temperature records actually beaten in both the East and West Mediterranean. The thermometer climbed to 43°C in Rabat and Valencia on 14 May, with a similar level reached on 28 May in Tel Aviv (42°C). The consequences were considerable for all the Mediterranean producer countries.

Lean harvest in Israel

There was a considerable fall in Israeli production, especially since the May heatwave had been preceded by frost in January. The harvest should register a drop of 25 to 30 % according to an initial estimate, to around 72 000 t (26 000 t of Hass and 46 000 t of green varieties). We need to go back more than five years to find such a limited production level. Volumes intended for international trade should register a slightly less marked fall than production, with the prices anticipated in Europe encouraging operators to divest the local market to some extent. However, this transfer toward export will affect only certain varieties (Ettinger, Fuerte, and later in the season Arad and Ardith), with Hass and Pinkerton unpopular among Israeli consumers. The light load on the trees might have a rather positive impact on sizing, i.e. slightly bigger than last season. The campaign should actually only get started at the end of the first third of October, after the Jewish holidays.



tonnes	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
EU-28	30 071	38 522	38 512	40 448	35 175	42 844	46 086
Others	1 729	4 578	6 488	4 152	9 625	10 210	5 514
Total	31 800	43 100	45 000	44 600	44 800	53 054	51 600

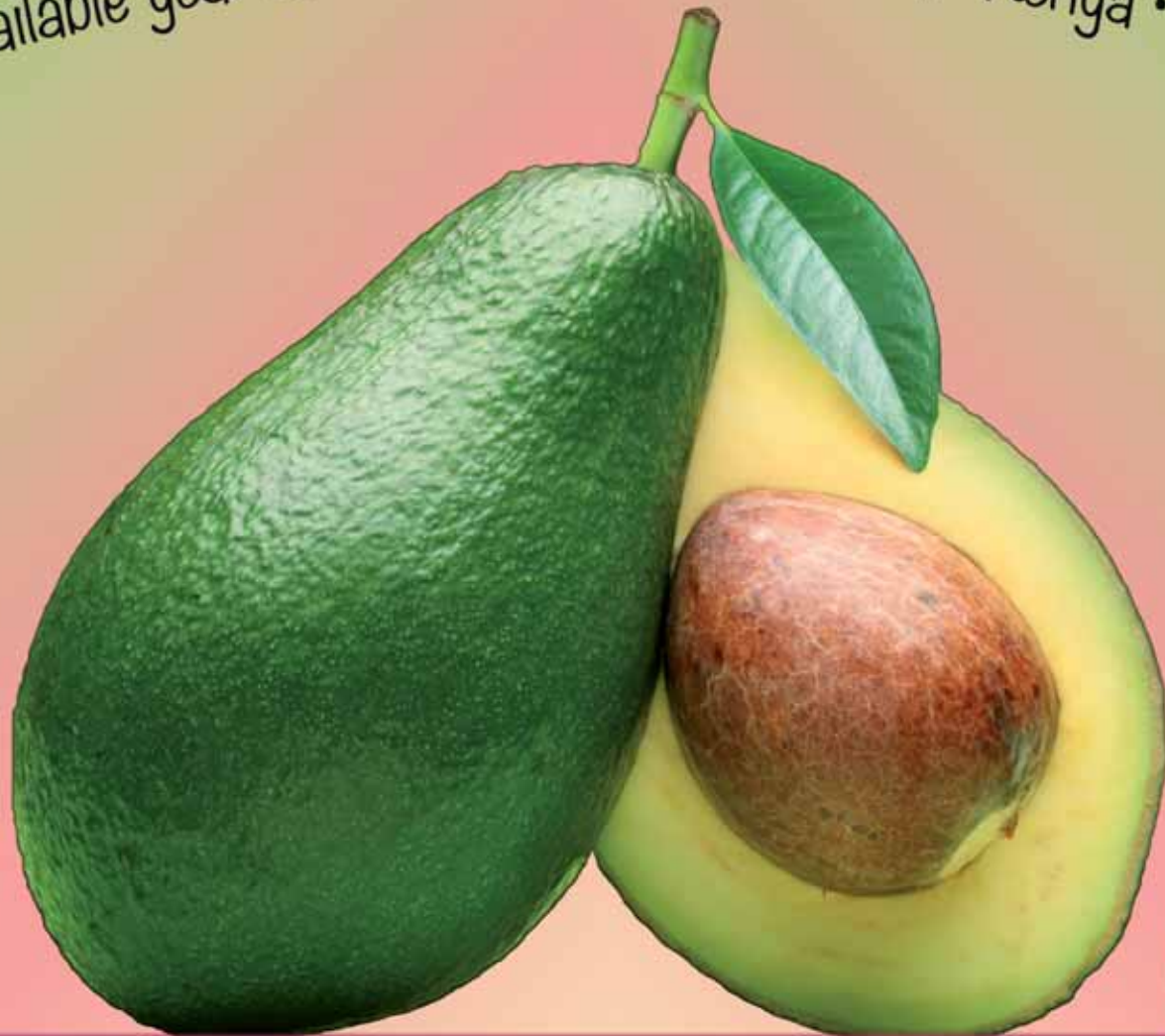
Estimated according to Eurostat and professional sources



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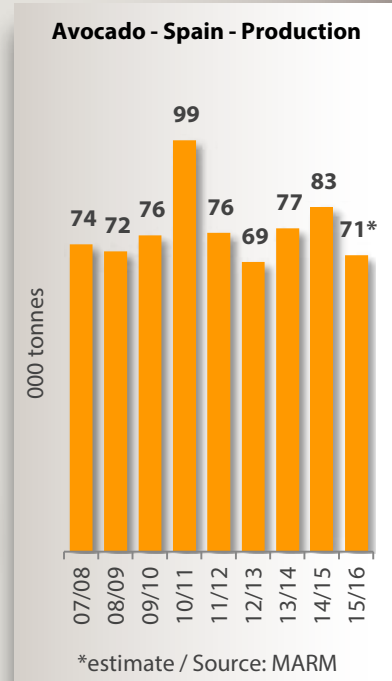
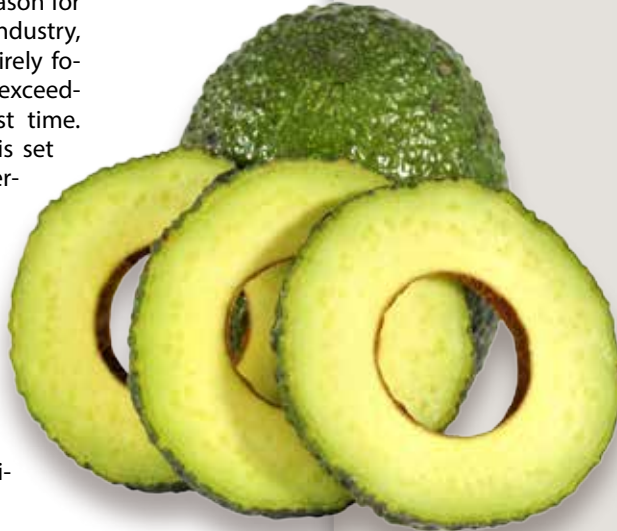
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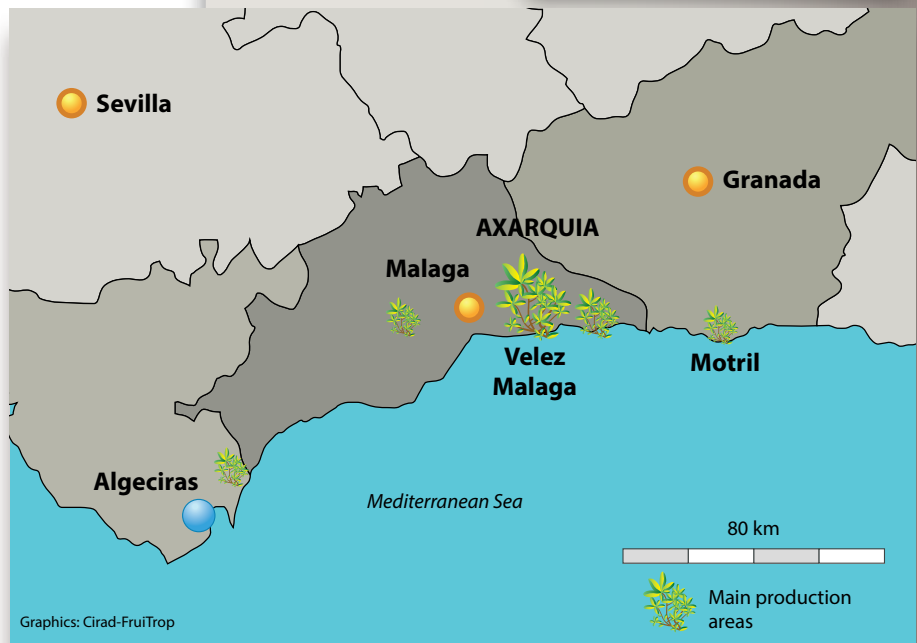
From one extreme to the other in Morocco

2014-15 was a record season for the young Moroccan industry, with exports almost entirely focused on Europe, and exceeding 8 000 t for the first time. The 2015-16 campaign is set to be completely different. Production is on a negative swing (and a large one since it is a young cultivation area), and most of all the May heatwave took a heavy toll. Professionals believe that the harvest should be 50 % less than the previous one.



Spain escaping the worst

The situation in Spain is of great contrasts. The heatwave seems to have hit the green varieties very hard. Hence the Bacon harvest could be halved from 2014-15, while Fuerte registered a 40 to 50 % drop. Conversely, Hass production seems fairly similar to the previous season. The sizing is at present considerably below normal. However, the proportion of exportable fruits is high, and the rains which occurred in early September should have a positive impact. Overall, the export potential of the Mediterranean Basin producer countries should be 20 % less than last season — a shortfall which counts, in the knowledge that these short-range suppliers provide between 55 and 65 % of the supply to the European market during the winter season. What about things on the other side of the Atlantic?



Avocado — Spain — Exports

tonnes	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Intra EU-28	32 930	31 420	44 461	33 272	42 039	41 293	55 527
Extra EU-28	1 995	4 980	1 804	4 750	7 717	3 145	4 063
Total	34 925	36 401	46 265	38 022	49 756	44 440	59 590

Estimated according to Eurostat (October to May or April)

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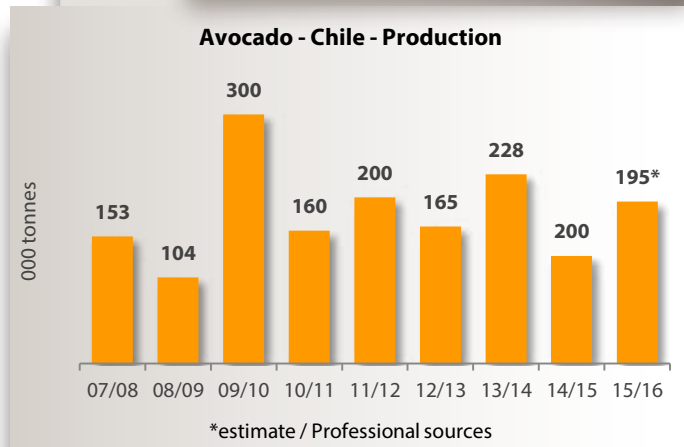
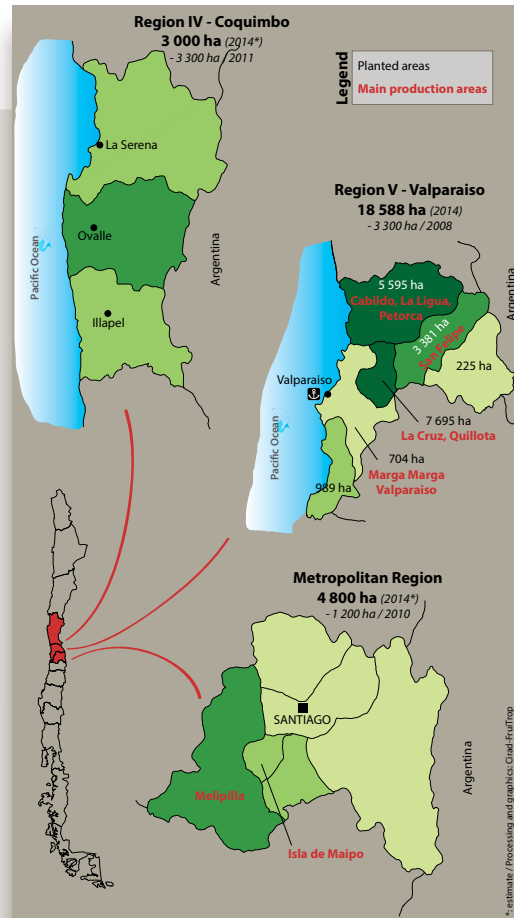


Fine rise for the Chilean harvest, though of little help to Europe

Things look much rosier for the 2015-16 Chilean campaign than the previous one, when export volumes reached one of their lowest levels for more than a decade. With an expected 180 000 to 200 000 t, the harvest is reportedly up by more than 40 % from the 2014-15 season. This climb, due primarily to a positive production swing phenomenon, should be facilitated by the abundant rain which fell on the country in August, a shot in the arm in particular for the country's northern regions (region 4) affected by a critical drought in recent years.

Subtracting the large volumes sold on the local market, the leading outlet for production with an annual consumption per capita of approximately 5 kg, the export potential should be around 110 000 t: a high level, but still well below the 130 000 t of 2013-14 and 166 000 t of 2006-07. Should this help offset the shortage of Mediterranean fruits in Europe? Probably not, since unlike previous seasons, Chilean exporters seem inclined to favour the US market and its strong dollar. True, after a clear tumble in 2014-15, euro/peso parity did rally in early September to a slightly higher level than last year; though at the same time the dollar rose by practically 20 %.

Another factor acting against the European market, though on a lesser scale, is the growth in shipments to diversification markets. Argentina, easy to operate on due to its proximity, should absorb increasing volumes (nearly 9 000 t in 2014-15). On the other hand, shipments to China might get started thanks to the loosening of sanitary restrictions aimed against the fruit fly (approval of the Valparaíso and Metropolitan regions, although the transport time is a heavy constraint). Thus the programme to Europe, limited to 48 000 t, allows for only a slight increase on last season's 43 500 t.



Avocado — Chile — Exports							
tonnes	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Europe	16 974	52 174	25 762	32 929	42 571	64 247	43 481
United States	55 373	134 596	54 383	73 795	14 710	53 297	12 341
Central and South America	2 345	5 971	5 900	7 342	8 888	11 735	9 943
Japan + Asia	224	1 703	393	1 638	1 283	1 978	1 877
Total	74 916	194 444	86 439	115 703	67 452	131 257	67 643

Source: Chilean Customs



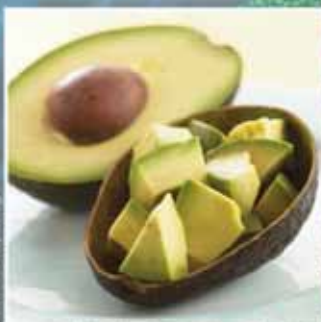
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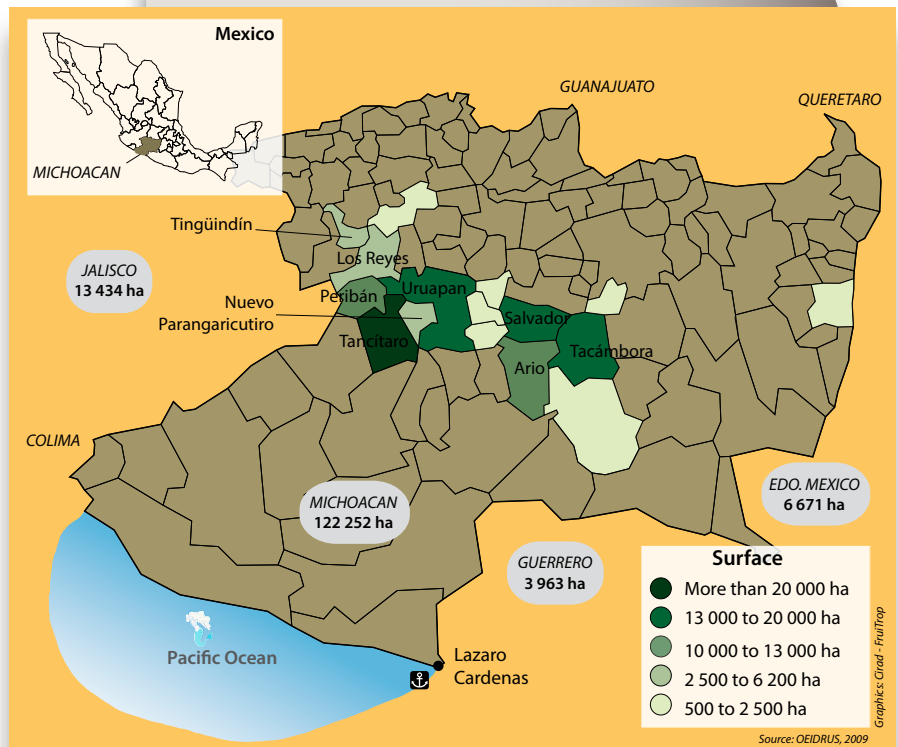
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Visual: Getty Images

Colombia: a big player on the Community market, at least in 2015-16

Will the outsiders be able to make up this shortfall, at least in part? The answer is yes for Colombia. The export tempo should start to pick up considerably in 2015-16, with the gradual entry into production of the large and medium production facilities set up since the beginning of the decade. Furthermore, shipments should again this season remain almost entirely aimed at Europe, before the very probable opening up of the US market around late 2016-early 2017. Hence the volumes bound for the Old Continent should be around 8 000 t in 2015-16, as opposed to approximately 4 000 t in 2014-15.

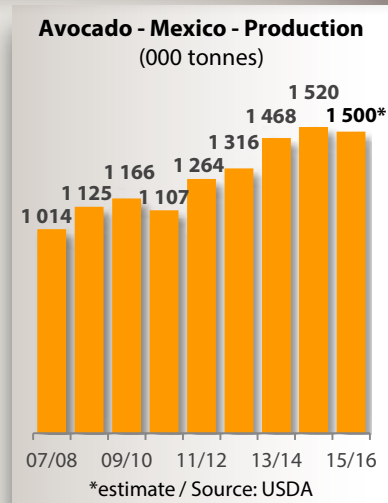


Prices fit to siphon off some additional volumes, especially from Mexico

These projected volumes, which lead us to believe that the supply to the Community market probably will be around ten percent down on last season, point to a new price record being beaten, above the 10.60 euros/kg reached in 2014-15. Such a high level leads us to ask another question. Will European importers take the risk of bringing in larger volumes of Mexican Hass than in previous seasons? The exchange context seems at least as poor as last season, with the projections of financial bodies reckoning on the bounce-back seen in August coming to an end, and on euro/dollar parity in Q2 2016. However, purchase prices should make it possible to operate on the European market. The harvest seems to be at a good level in Michoacán, despite the impact of the heavy hail in early spring.



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Avocado — Mexico — Exports							
tonnes	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
USA	315 620	274 329	283 814	359 262	522 488	516 085	693 344
Japan	25 330	34 473	35 159	42 354	55 883	51 626	53 175
Canada	20 474	25 435	22 687	27 431	35 044	33 632	44 958
EU	13 434	10 807	3 155	4 153	9 137	5 690	12 996
Others	26 128	25 883	19 642	29 537	34 893	26 386	42 597
Total	400 987	370 927	364 457	462 737	657 445	633 418	847 070

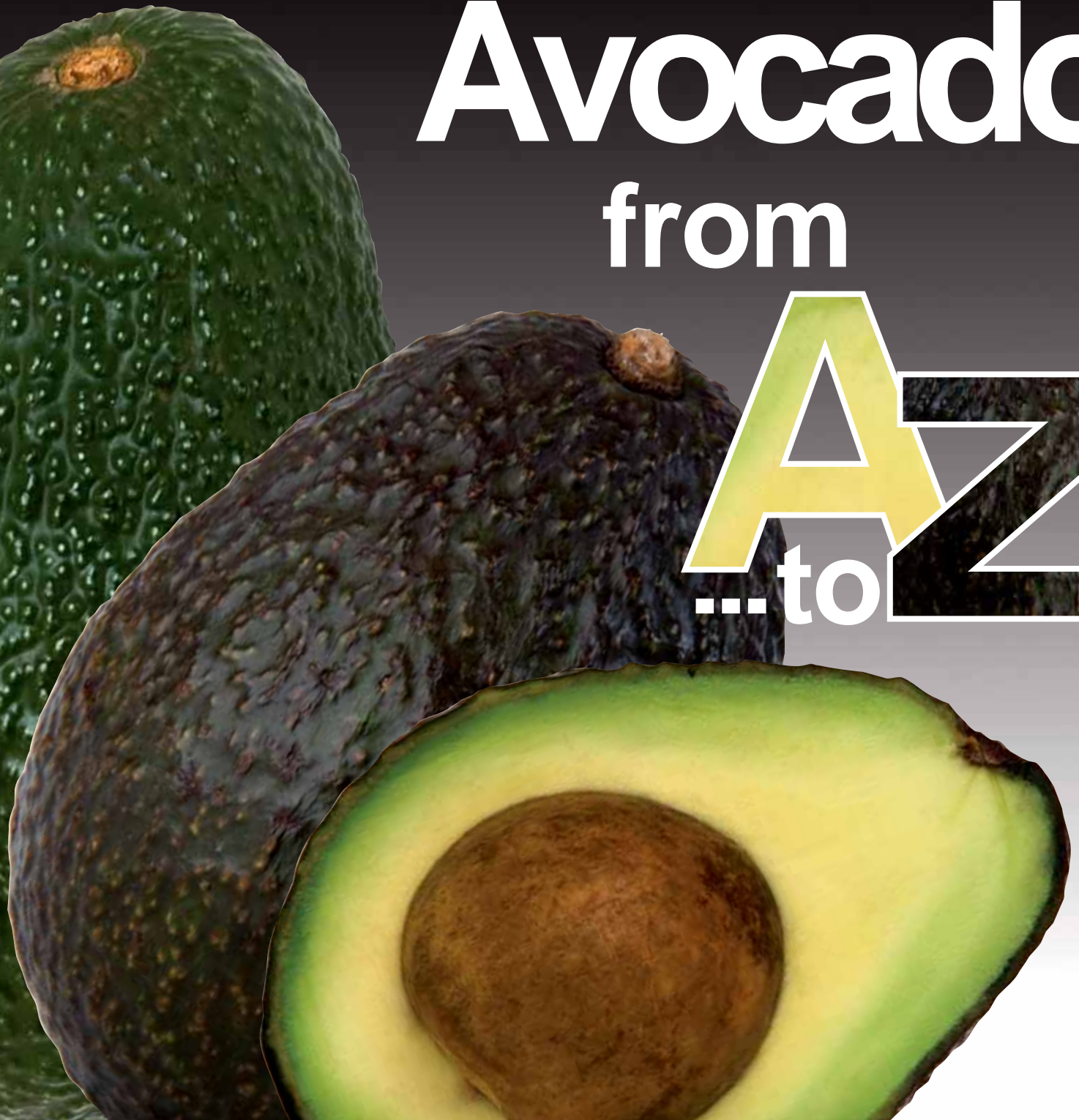
Source: Mexican Customs

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...to



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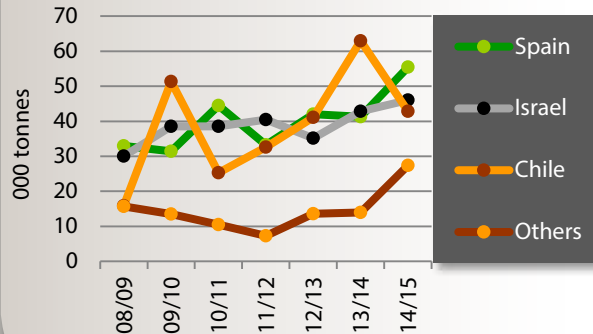
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Volumes of “flor loca”, which have been feeding the market since the beginning of the season, are clearly greater than last season, while volumes of “Aventajada” and “Marcena” are practically equivalent according to several professionals. Hence the rates expected in the United States should be relatively sound, especially since Michoacán will be able to expand its exports (nearly 100 000 ha approved in 2015-16, i.e. 10 000 ha more than in 2014-15), and Jalisco with its 100 000 t of production should see the doors of the US market open toward the end of the year.

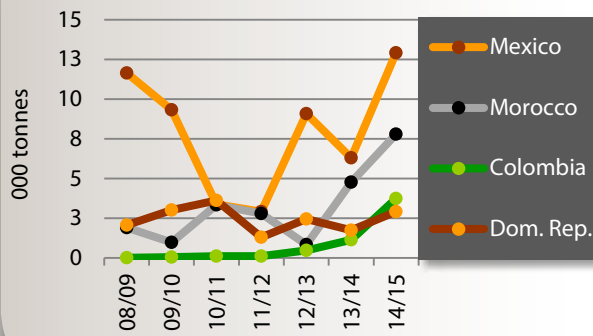
Hence the trend for Mexico’s gradual return to Europe should continue: imports, which had sunk to a level of approximately 3 000 t at the beginning of the decade, climbed back above the 10 000-t mark last season. Nonetheless, we should not expect a breaker, since the financial risk will remain a heavy constraint for importers (cost price of merchandise still very high, with “pre-paid” contracts). The price difference between the European and US markets could also lead to a turnaround in the Chilean programme, in favour of the European market.

Avocado - EU-28 - Supply from 3 main leaders



Source: Eurostat

Avocado - EU-28 Other sources in detail



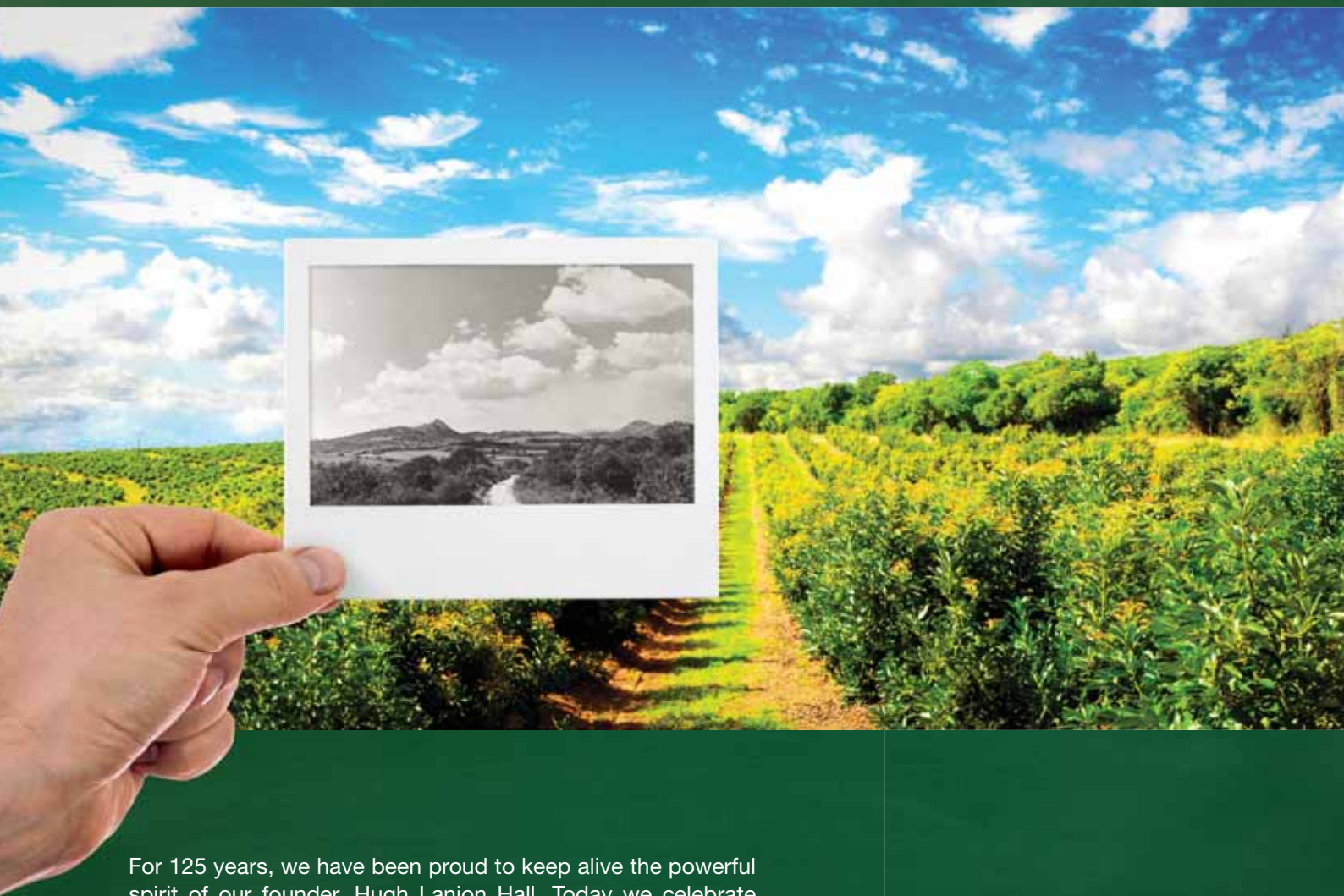
Source: Eurostat

Avocado — European Union — Winter season supply

tonnes	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total	210 487	239 455	239 747	225 621	265 089	311 157	353 438
Total Northern Hemisphere	94 535	134 795	118 680	113 600	131 798	161 065	171 752
Chile	15 832	51 383	25 244	32 637	41 074	62 968	42 797
Israel	30 071	38 522	38 512	40 448	35 175	42 844	46 086
Spain	32 930	31 420	44 460	33 270	42 000	41 300	55 500
Mexico	11 647	9 326	3 371	2 909	9 085	6 293	12 918
Morocco	1 908	977	3 346	2 803	840	4 766	7 798
Dominican Rep.	2 077	3 016	3 621	1 312	2 451	1 749	2 910
Colombia	25	51	121	121	486	1 142	3 740
United States	45	101	5	100	687	3	3

Source: Eurostat

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A new absolute price record in early spring, before an abrupt change in the supply tempo?

The price evolution scenario should be fairly similar to last season. The supply shortfall will grow, and could be particularly marked after the Chilean campaign winds down in March. The supply will be based solely on leftover Mediterranean volumes, probably limited. A new absolute price record is very likely in early spring. The change in market supply tempo could be even more abrupt than in 2015 during the transition between the winter and summer seasons. If no major climate problems arise — which remains to be confirmed in this year of the El Niño phenomenon “which could be the most severe since 1950” according to an American meteorological study published in September — the Peruvian harvest should continue its rise, while South Africa will have an “on” year.

On the other hand, again on paper, the US market could be less open because of the Californian harvest returning to a decent level after two very lean seasons (initial forecast by the California Avocado Commission). The need to prepare the market for this abrupt change in supply tempo, via a policy of gradual price reduction in order to get demand moving again, will be more necessary than ever.



Avocado — Export forecast to Europe					
tonnes	2015-16	2014-15		2013-14	
		t	/ 2015-16	t	/ 2015-16
Chile	48 000	42 797	+ 12 %	52 883	- 9 %
Mediterranean	85 000-90 000	109 384	- 18 to - 22 %	109 384	- 9 to - 14 %
Total	133 000-138 000	152 181	- 10 to - 13 %	162 267	- 15 to - 18 %

Source: Eurostat

Avocado — Production and exports — 2015-16 trend				
tonnes	2014-15 production	2015-16 trend	2014-15 trend	Notes
Mexico	1 520 000	≈	847 000	+ Flor loca / = core season / - end of season
Chile	130 000	+ 50 %	68 000	Renewed interest in US market / to be confirmed
Israel	98 000	- 25 to - 30 %	51 600	Buffering effect of local market, except for Hass and Pinkerton
Spain	80 000-85 000	- 10 to - 20 %	55 000	Distinct shortfall in green varieties / stability for Hass
Morocco	8 000	- 50 %	7 800	Shortfall in green varieties and Hass

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Toward an increasingly marked contrast between winter and summer seasons

This scenario could well risk repeating itself during the campaigns to come. The production of the countries feeding the world counter-season market should continue to grow very significantly. The South African cultivation area is expanding, challengers are entering the fray (Tanzania, Brazil), and most of all, Peru should continue making giant strides forward. The 25 000 ha of orchards currently in place, the exceptional yields due to the pedoclimatic conditions and technical expertise should enable exports to reach 350 000 to 400 000 t by the end of the decade, according to the Chairman of ProHass, a level equating to more than double those made this season.

Conversely, the development prospects remain limited for suppliers feeding the Community market during the winter season. There is genuine production growth in the Mediterranean, though it remains fairly half-hearted. The cultivation area is expanding on average by 300 to 500 ha per year in Israel, where the time to obtain plants is approximately two years. The dynamic is weaker in Spain, where approximately one hundred hectares of new plantations is set up every year. The industry is continuing its surge in Morocco, thanks in particular to the establishment of a producers cluster in Gharb (Packfruit), under the "Maroc Vert" plan, though it is still limited in scope.

In Latin America, the trend is for surface area shrinkage in Chile due to drought. The uprooting of orchards or topping for mothballing purposes (in region IV in particular) are outstripping new planting activity, mainly taking place in the central valleys of the South. True, Colombian production will quickly come to the fore and provide significant additional volumes, but the stated priority objective is to supply the US market, its natural market due to proximity.

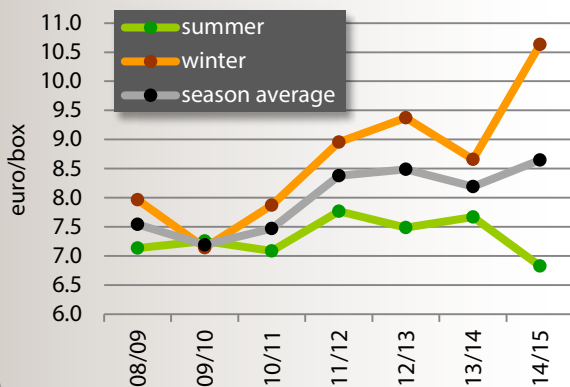
Which leaves us with Mexico, a country whose production is capable of supporting the Community market growth: a single month of exports from this source represents half of the total supply to the European winter market. European professionals able to find arrangements providing a quality supply under realistic price conditions with this source will definitely figure among the driving forces of the winter market in the years to come ■

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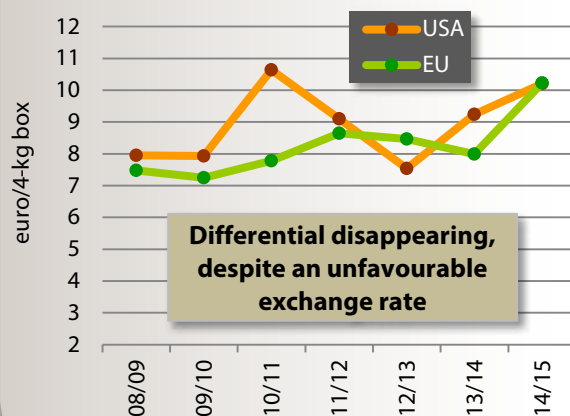
© Gay Brehner

Hass avocado - France - Summer season and winter season price differential



Source: CIRAD

Avocado - USA and EU-28 - Comparison of average campaign quayside price (size 17/18), including exchange differential



Differential disappearing, despite an unfavourable exchange rate

Sources: CIRAD, USDA/ERS, Bloomberg

Sigfrido

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Thanks to our location in the **(Costa del Sol)**, with its subtropical climate, our fruit is picked at the perfect moment of maturity, ensuring its nutritional value.

At **Sigfrido**, we don't only think about the production of our fruit; we carefully consider the marketing of our products and rely on a network of farmers, who adhere to the high standards and protocols that our company maintains.

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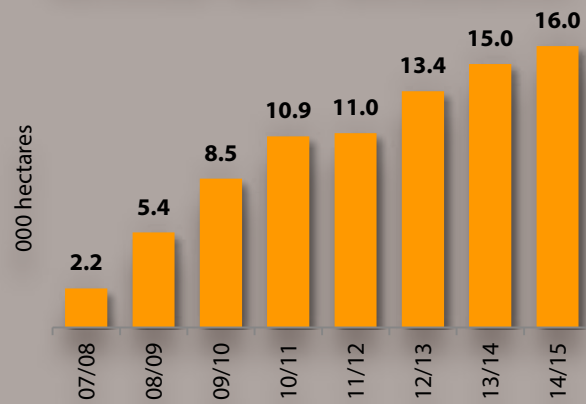


Jalisco

The other Mexican giant

In Mexico, everything about the avocado is on an immense scale! True, the production of Jalisco is a long way from matching the 1.2 million tonnes from neighbouring Michoacán. Nonetheless, this State is among the world's five leading Hass producers, with a harvest of approximately 100 000 t in 2014, thanks to its orchards concentrated mainly in the south-east (Ciudad Guzman region in particular), and it should soon strengthen its position in the ranking! The cultivation stock, which covers approximately 16 000 to 17 000 ha according to 2015 estimates, is so young that only 60 % of trees have already entered production. Furthermore, the annual expansion rate is very high (2 500 ha per year on average since 2010), and does not seem to be weakening, a trend probably due to a relatively calm political climate favourable for investment, but which is not prevalent in all parts of the country. Finally, productivity is considerably above the

Hass avocado - Mexico - Jalisco planted area



Source: OEIDRUS

Mexican average (approximately 15 tonnes per hectare, as opposed to just under 10) thanks to use of very high-level cultivation techniques (85 % of the planted area is irrigated, significant percentage of orchards with high density planting, etc.), which also very positively affect the fruit quality standards.

Just 30 % of volumes are currently intended for export, mainly in order to feed the Japanese, Canadian and European markets. The hand could of course change with the opening up of the US border, which is expected by the end of 2015. The stated objective is to rapidly double exports. It is true that Jalisco has no shortage of assets to expand its presence on the international market. Besides the good quality level of fruits already mentioned, the earliness of production is also a strong point. The cultivation stock largely comprises the Mendez selection, harvesting of which can start from June in the warm valley zones, providing decent volumes during the summer, when Michoacán's production is at its lowest. Investments made in Jalisco by big names in the world avocado industry, such as Calavo which is building a packing station in Ciudad Guzman, show the strategic advantages of this large-scale supplier.

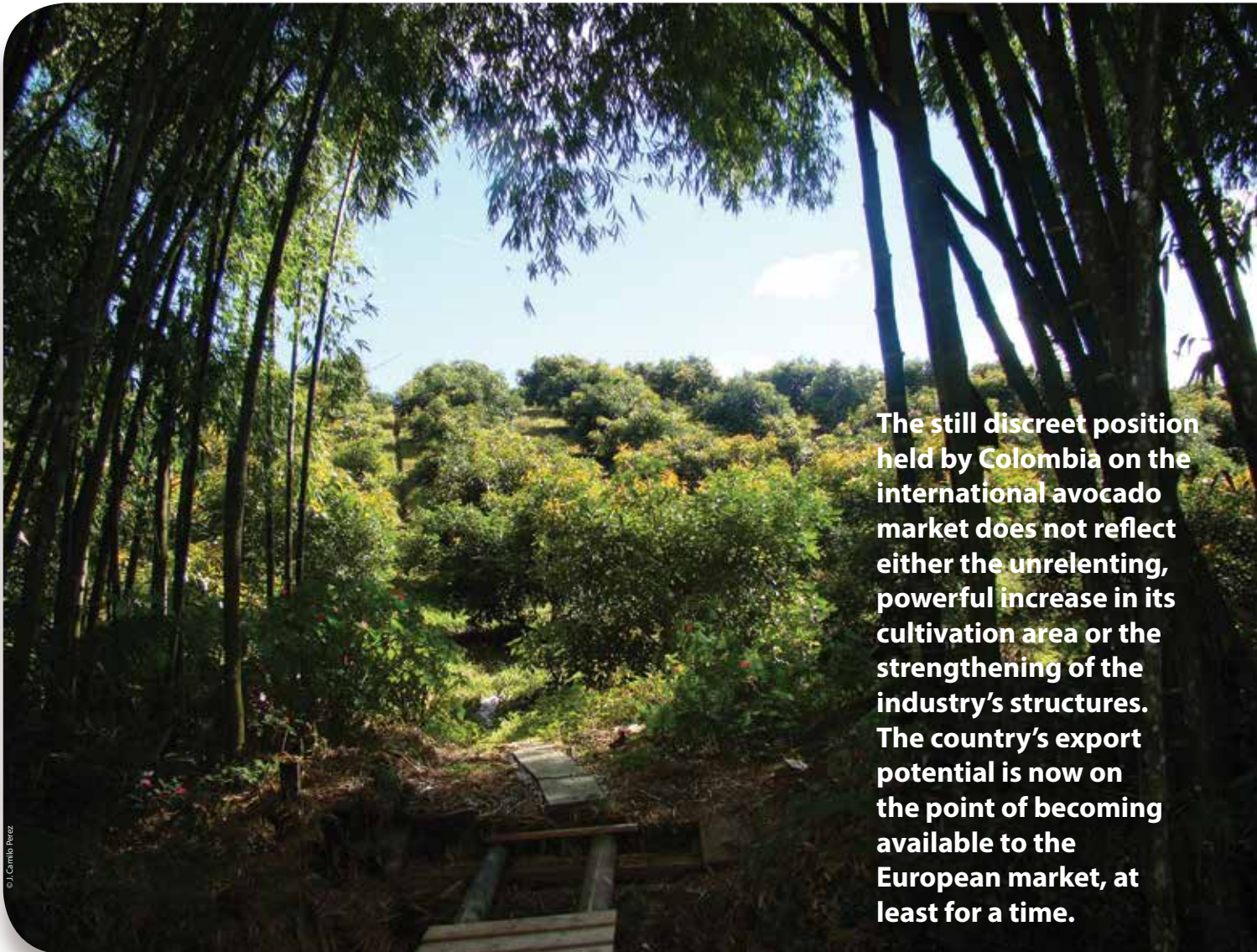


Source: SAGARPA / Graphics: CIRAD-Fruitrop



The Colombian avocado sector

Appearances should never be trusted!



The still discreet position held by Colombia on the international avocado market does not reflect either the unrelenting, powerful increase in its cultivation area or the strengthening of the industry's structures. The country's export potential is now on the point of becoming available to the European market, at least for a time.

Large Hass surface areas, still seeing rapid growth

The Hass avocado remains a favoured investment for Colombian farmers. This is illustrated perfectly by a one-liner from the Chairman of the Board of Corpohass, the local governing body of the bulk of producers in the country: "If you had a million dollars, would you invest it in the avocado? No, I'd go to the bank and ask for another million dollars to invest in the avocado!" Hence the growth tempo of the cultivation area, around 1 000 ha per year between 2008 and 2012, has apparently remained very high for the past three seasons, although there are no figures available to confirm this. Planting has continued to gain momentum in the country's two main production centres, namely the department of Antioquia (Medellin region), which already accounted for more than one third of surface areas in 2013, and the "coffee zone" (departments of Quindio, Caldas and Risaraldra), on the strength of more than a quarter of the national cultivation area back in 2013. The professionals agree that surface areas are now in excess of 10 000 ha, and in the opinion of some even approaching 12 500 ha.



Avocado — Colombia Main production zones

Planted areas estimated from 10 000 to 12 000 ha in 2015

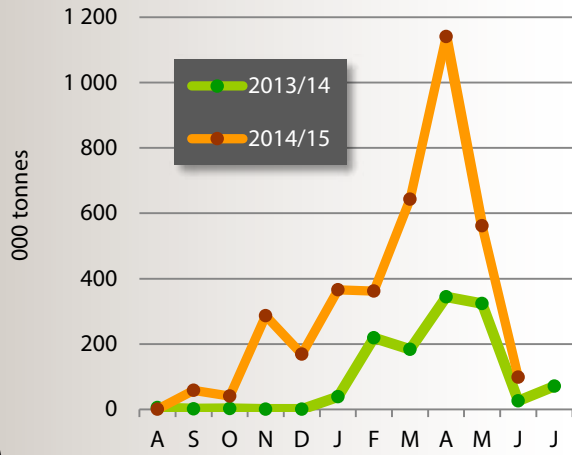
East Antioquia	2 200 ha
North Coffee zone*, South-West Antioquia	2 400 ha
North Tolima, East Caldas	2 600 ha
South Coffee zone*, North Valle, Popayan plateau (Cauca)	1 800 ha

*Coffee zone: Caldas, Risaraldra, Quindio counties /
Source: Consejo Nacional del Aguacate

Sector SWOT still on a high!

This trend, as powerful as it is discreet, is no surprise. The SWOT (Strengths-Weaknesses-Opportunities-Threats) grid, a fashionable arbiter in strategic analysis, would surely provide an extremely positive rating. The pedoclimatic conditions are highly suited to Hass cultivation in the belt of the Andes between 1 600 and 2 400 m. Water is fairly abundant and the restoration of a peaceful political situation has finally created a favourable climate for investment, as well as freeing up a large amount of land previously unexploited because of the presence of the guerrillas. Furthermore, the country enjoys a favourable geographic position allowing it to serve the United States very easily, as well as Europe reasonably readily (10 to 12 days by sea). Production costs are competitive, although they are above average because in particular of the high workforce required for plantations often situated on occasionally very steep slopes. Finally, the production calendar is a big advantage, in particular as it covers the high tension period on the European market. These numerous powerful assets easily make up for the structural weaknesses, occasionally significant, in terms of logistics. The public road network remains underdeveloped, occasionally making transport to the packing station difficult. The famous Willis jeeps, or mechanical mules, of the coffee zone are not yet fully part of the story. In addition, the omnipresent congestion of national highways slows transport to the ports and swells the costs. Furthermore, port transit costs are high, and container availability is low. The State has decided on a massive infrastructure improvement plan (0.8 % of GDP dedicated to transport between 2012 and 2020 according to the local press), though this will take time. Furthermore, the availability of quality plant stock remains limited. Finally, the average technical level of the young Colombian industry requires further strengthening.

Avocado - Colombia - Monthly exports



Source: DIAN



© J. Camillo Perez

Avocado — Colombia — Production calendar

	A	S	O	N	D	J	F	M	A	M	J	J
East Antioquia												
North Tolima												
Coffee zone												
South-West Antioquia												
Popayan												
North Valle												

Source: Consejo Nacional del Aguacate

Strengthening structures and quality level of supply

While this remains a big challenge, very notable progress has already been made, and the percentage of production of a quality level compliant with international standards, and certified production, is rising in line with the quantities harvested. Medium to large-sized production facilities, employing cutting-edge cultivation techniques, have proliferated since the beginning of the decade. They are gradually supplanting non-specialised small-holdings (45 % medium or big producers in 2014). Despite real efforts by the public institutions (especially at regional level), the rise in the technical and certification level is slower among small producers due to lack of financial resources, knowledge of international benchmarks or crop scientists able to provide specialised mentoring in Hass cultivation. This remains a problematic point, as growth in their numbers has been well off the pace of cultivation area growth.

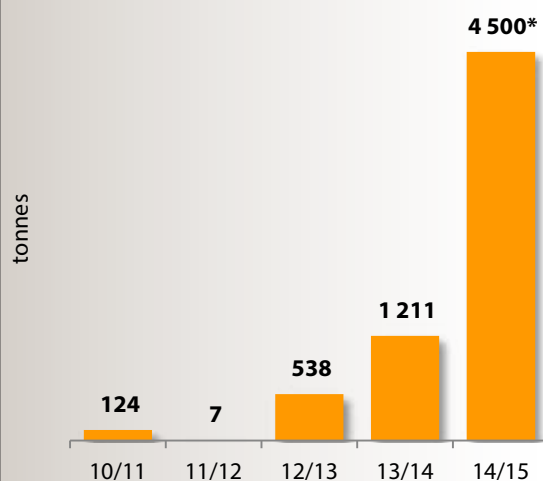
The main export operators play a role of structural mentoring, lending crack technical staff for the purposes of acquiring and securing volumes. Hence according to a 2014 study, 70 % of planted surface areas had permanent (50 %) or occasional (20 %) technical assistance. Furthermore, the sector has built up its post-harvest capabilities: there are five operational packing stations, one of which opened in September. This development is again due to the arrival of large-scale local or international investors. Westfalia, a world leader in the sector, owns the country's biggest packing station (in association with Subsole). Other South American companies (from Chile and Peru) or European companies are now in place.

Considerable progress in exports to be expected over the coming campaigns

The upscaling of the Colombian industry can be read implicitly in the export record of the 2014-15 campaign. For the first time, exports reached a significant level (of around 4 500 t, since the official Customs data are not yet



Hass avocado - Colombia - Exports



*estimate / Source: DIAN



complete enough to provide a more precise figure). The qualitative improvement in the supply has also been considerable, although an isolated operator — whose poor international reputation has been firmly established — has somewhat tarnished the source’s brand image. The tempo of growth in export volumes should pick up rapidly. Some of the large and medium facilities built at the beginning of the decade, for purely export purposes, will start to enter production. Professional estimates are reckoning on approximately 6 500 t in 2015-16, possibly breaking the 10 000-t mark from the 2017-18 campaign.

Europe-bound... until 2017

Colombian Hass exports are at present aimed almost exclusively at the European market (with 70-80% via the Dutch ports). Only tens of tonnes per season are dispatched to other destinations (neighbouring countries, mainly Central

and South America). Nonetheless, it is clear that Colombia’s natural market is somewhat further north, with the United States a five-day sea voyage away. The avocado might well be the 81st Colombian agricultural product to see the doors to this market open. The proceedings are underway, and the political will to move things along seems to be strong on both sides, as is attested by the visit of the US Ambassador for Colombia to the Colombia Hass packing station in early 2015. The monitoring process of the three quarantine insects (*Heilipus lairi bohemian*, *Heilipus triasciatus fabricius* and *Stenoma catenifer*) is in place, as is region-by-region infestation measurement. The eligibility conditions will still need to be defined. The process could be completed in late 2016-early 2017. Unlocking the US market would provide a major fresh boost for the plantations, though it would unfortunately do only very little to resolve the problem of under-supply to the European winter market, which could become chronic ■

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Avocado — Colombia — Sector players

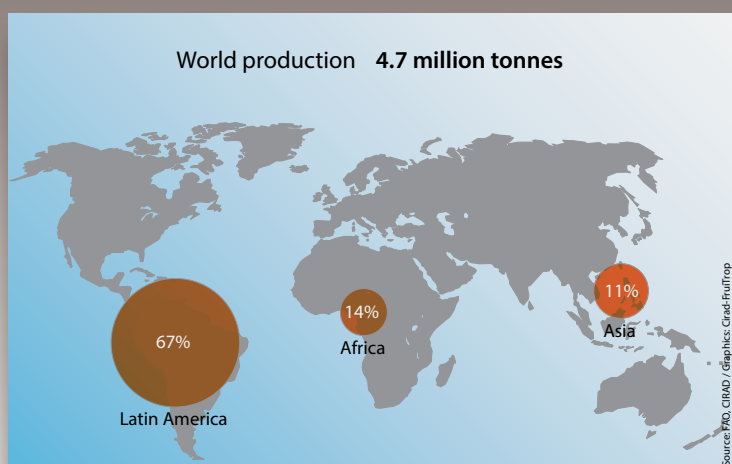
Exporters with packing

Hass Colombia	Packing in El Retiro (Antioquia)	2 lines	formerly cooperative Aproare, also provides custom packing
Westsole	Packing in Guarné (Antioquia)	6 lines	2014 - alliance of Westfalia (South Africa)/Prosol (Chile)
Wolf&Wolf	Packing in Armenia (Quindio)	1 line	
Cartama	Packing in Pereira (Risaraldra)		new local operator ready in September 2015
Las Lajas	Packing in Zarzal (valle del Cauca)	2 lines	2013 - local operator - 80 ha of orchards - custom packing

Exporters without packing

ColHass			Alliance with Agricom
VerdeFlor			

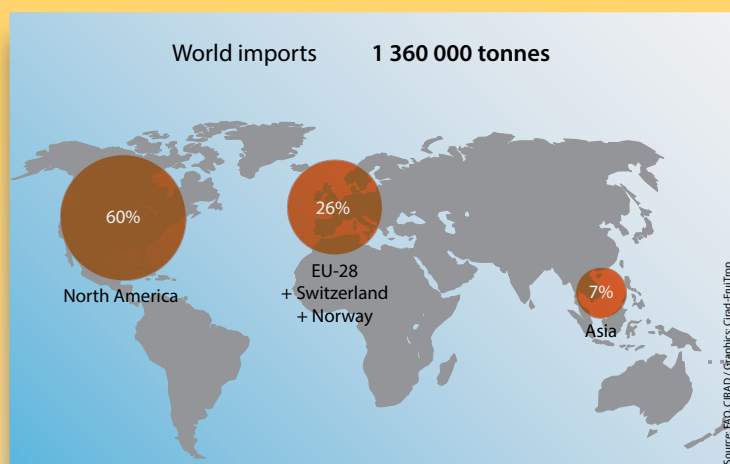
AVOCADO - Production (2014-15)



Avocado - The 10 leading producer countries	
tonnes	2014-15 or FAO 2013
Mexico	1 520 000
Indonesia	276 000
Dominican Republic	387 000
Chile	130 000
Colombia	303 000
Peru	288 000
Kenya	191 000
United States	129 000
Brazil	157 000
Rwanda	149 000

Sources: FAO, USDA, professionals

AVOCADO - Imports (2014-15)



Avocado - The 6 leading importer countries	
tonnes	2014-15
United States	757 441
Netherlands	155 861
France	93 207
Japan	57 372
Canada	56 510
Spain	48 117

Source: National Customs

USA - Imports - Main supplier countries						
tonnes	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total	420 361	351 120	462 777	561 892	603 160	757 441
Mexico	270 200	281 672	360 924	515 143	512 276	686 404
Peru	11	137	9 157	15 860	21 617	41 477
Dom. Rep.	15 984	14 956	17 204	16 150	15 958	15 548
Chile	133 888	54 355	74 701	14 721	53 305	10 600
New Zealand	269		791			3 356
Bahamas	9	-	-	18	4	56

Source: USDA

Canada - Imports - Main supplier countries						
tonnes	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total	30 980	32 104	36 832	47 849	44 076	56 496
Mexico*	25 435	22 687	27 431	36 299	33 451	44 958
Peru	1 342	1 266	2 483	2 282	2 905	5 542
USA*	3 814	7 728	6 497	8 786	7 189	5 208
Dom. Rep.	314	314	255	351	456	534
New Zealand	-	-	-	-	-	138
Brazil	75	109	166	131	75	116

Source: COMTRADE and *National Customs

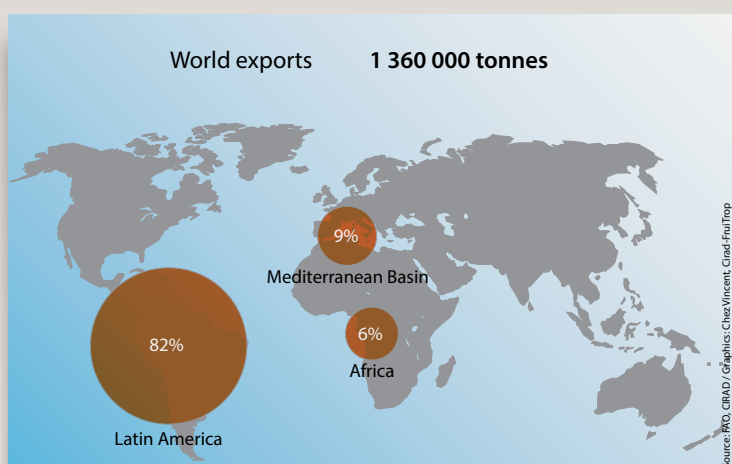
South America - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	11 047	19 088	18 881	15 048	17 670	18 403	21 125
Argentina	2 638	3 494	8 357	5 493	9 179	9 621	13 208
Colombia	7 507	12 501	9 044	7 190	6 023	3 904	3 128
Chile	390	678	303	1 880	698	3 882	2 659
Ecuador	512	2 416	1 177	485	1 770	996	2 130

Source: COMTRADE

Central America and Mexico - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	28 683	35 956	27 486	42 132	42 266	38 184	42 266
Costa Rica	6 809	9 638	9 958	13 731	13 061	12 424	13 061
El Salvador	11 163	9 308	9 262	13 754	12 666	12 213	12 666
Honduras	8 939	9 032	6 426	10 412	11 405	10 263	11 405
Guatemala	1 772	1 380	900	3 312	2 923	3 211	2 923
Mexico	0	6 598	940	923	2 211	73	2 211

Source: COMTRADE

AVOCADO - Exports (2014-15)



Avocado - The 6 leading exporter countries	
tonnes	2014-15
Mexico	840 000
Peru	179 044
Chile	67 643
Southern Africa	65 845
Spain	59 590
Israel	54 848

Sources: National Customs, professionals

European Union - Imports - Main supplier countries						
tonnes	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total, incl.	239 455	239 747	225 621	265 089	311 157	353 438
Total N. Hemis.	134 795	118 680	113 600	131 798	161 065	171 752
Spain	31 420	44 460	33 270	42 000	41 300	55 500
Israel	38 522	38 512	40 448	35 175	42 844	46 086
Chile	51 383	25 244	32 637	41 074	62 968	42 797
Mexico	9 326	3 371	2 909	9 085	6 293	12 918
Morocco	977	3 346	2 803	840	4 766	7 798
Colombia	51	121	121	486	1 142	3 740
Dom. Rep.	3 016	3 621	1 312	2 451	1 749	2 910
United States	101	5	100	687	3	3
Total S. Hemis.	104 307	120 954	111 942	132 985	149 792	181 239
Peru	45 661	56 345	66 155	62 618	86 260	101 971
Southern Africa*	38 821	47 800	27 375	49 083	45 165	56 713
Kenya	15 038	14 123	15 028	17 078	13 313	15 604
Brazil	2 797	2 665	3 006	3 959	3 928	5 265
Tanzania	6	21	6	133	968	1 643

* South Africa, Zimbabwe, Swaziland / Source: Eurostat

Other West European countries - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	9 018	9 568	11 538	13 644	14 779	17 148	20 600
Norway	3 841	4 046	5 154	6 555	7 090	8 787	10 496
Switzerland	4 995	5 340	6 152	6 789	7 340	7 915	9 516
Iceland	183	183	232	300	349	446	588

Source: COMTRADE

Russia - Imports - Main supplier countries							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	4 806	5 827	8 367	9 474	11 156	13 948	14 391
Total N. Hemis.	2 180	3 479	5 345	6 221	6 999	9 097	8 969
Israel	2 016	3 316	5 135	5 794	6 674	8 716	8 762
Chile	-	-	27	22	74	100	134
Spain	164	163	183	405	251	281	73
Total S. Hemis.	2 515	2 224	2 861	3 087	3 934	4 545	5 208
South Africa	1 923	1 445	1 984	1 321	2 345	2 678	3 994
Peru	442	438	597	1 475	1 259	1 462	982
Kenya	150	342	280	291	330	405	232

Source: COMTRADE

Other East European countries - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	842	844	1 254	1 529	1 948	2 636	2 749
Ukraine	691	694	1 026	1 249	1 623	2 068	1 852
Belarus	97	113	177	229	255	482	744
Serbia	54	37	51	51	70	86	153

Source: COMTRADE

Japan - Imports - Main supplier countries						
tonnes	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Total	37 520	39 043	47 734	62 687	56 836	57 372
Mexico	33 603	35 733	40 722	56 373	50 278	52 758
United States	1 023	2 430	3 966	5 140	4 971	2 124
New Zealand	1 221	546	2 032	639	695	1 704
Chile	1 673	334	1 014	535	892	786

Source: National Customs

Other Asian countries - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	2 869	3 534	4 616	5 255	6 103	8 285	13 757
China	989	1 293	1 976	2 393	2 783	4 223	8 455
Singapore	747	978	1 285	1 497	1 691	2 015	2 815
South Korea	492	325	457	402	534	722	1 097
Malaysia	228	274	359	523	565	773	956
Thailand	413	664	540	440	530	552	434

Source: COMTRADE

Oceania - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	9 737	9 551	9 415	16 166	10 725	12 593	22 117
Australia	9 729	9 509	9 287	16 166	10 723	12 567	22 117
New Zealand	8	42	128	-	2	26	-

Source: COMTRADE

Persian Gulf - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	3 491	3 862	10 639	8 880	10 391	22 081	14 955
Saudi Arabia	376	682	1 610	2 056	7 736	10 156	10 000
United Arab Em.	2 528	2 442	4 160	5 347	1 046	9 698	1 724
Kuwait	371	400	4 494	1 001	857	1 247	1 601
Qatar	217	338	366	360	486	598	904
Bahrain	-	-	9	116	266	382	726

Source: COMTRADE

Africa - Main markets							
tonnes	2008	2009	2010	2011	2012	2013	2014
Total	8 669	8 942	11 045	9 598	11 107	15 086	10 121
Morocco	7 105	6 927	8 055	6 683	8 817	9 130	7 627
South Africa	1 123	1 381	1 976	2 156	1 660	2 308	1 962
Namibia	337	564	569	674	518	734	452
Egypt	104	70	445	85	112	2 914	80

Source: COMTRADE



© Eric Imbert



The main avocado varieties

Avocado is a dicotyledon of the genus *Persea* of the Lauraceae family. More than 200 varieties are divided between three races. The Mexican race is of little commercial interest as most of the fruits are too small. However, its agronomic qualities mean that it is widely used as rootstock or as a parent. Practically all sales of fruits of the West Indian race are on domestic markets. International trade handles mainly varieties belonging to the Guatemalan race or crosses between the Guatemalan and Mexican races.

The Guatemalan race

Persea nubigena L. Wins var. *guatemalensis*

This race probably originated not only in the highlands of Guatemala but also in the Chiapas in Mexico. The leaves are large and uniformly dark green on both faces. Although it is not as tolerant to cold as the Mexican race, it is useful for marginal cultivation zones. The fruits are roundish and have thick, very hard warty skin. The size may vary considerably but they are generally larger than fruits of the Mexican race. The seed is fairly small and almost always clings. Pulp oil content is medium at 10 to 20%. Flowering to harvest time is 8 to 10 months. It can be longer in the cold parts of California (12 to 14 months). The race is a good parent for crosses (contributing genes for small seeds). Nearly 40% of avocados belong to this race, including 'Anaheim', 'Corona', 'Sharwil' and the major commercial varieties such as 'Edranol', 'Gwen', 'Hass', 'Nabal' and 'Reed'.

The West Indian race

Persea americana Miller var. *americana*

In spite of its name, this race probably originated in Colombia. It is well suited to humid tropical regions where it is used to supply local markets. The tree has large green leaves. The fruits are elongated, usually large and weigh 400 to 900 g. The epidermis is fairly thin (0.8 to 1.5 mm) and is smooth and shiny, soft green or greenish yellow or reddish when mature. The pulp is watery with a low oil content (< 10%). The seed—often free—is large and has a more or less corrugated surface. All these characteristics make the fruits delicate. They often display pulp browning (caused by chilling injury) at the temperatures generally used for the storage and refrigerated transport of fruits of the other races (+ 6°C, + 8°C). The race is the most sensitive one to cold and aridity but the most tolerant to salinity. The flowering to harvest time is only 5 to 7 months. The West Indian race groups about 15% of avocado varieties and the best known among them are 'Peterson', 'Pollock' and 'Waldin'.

The Mexican race

Persea americana Miller var. *drymifolia*
Schlecht and Cham.

This fairly hardy race is adapted to low temperatures originated in the Mexican highlands. It differs from the two other races in several botanical characteristics:

- the leaves are generally small and release a characteristic aniseed odour when crumpled;
- flowering is earlier than in the other races and the flowering to harvest time is 7 to 9 months;
- the fruits are small and elongated and rarely weigh more than 250 g. The skin is very thin and smooth.

The pulp is often fibrous and has a high oil content (> 15%). The seed is generally large and sometimes free. This race is very sensitive to salinity. In contrast, it tolerates high temperatures and comparatively low relative humidity. Furthermore, it has greater tolerance to *Phytophthora cinnamomi* than the other races. It thus forms good rootstock and its genetic potential is well exploited in hybridisation breeding programmes. Finally, its high lipid content is an interesting feature when the fruits are used for oil production. About 20% of varieties belong to this race. The best known include 'Duke', 'Gottfried', 'Mexicolo', 'Topa Topa' and 'Zutano'.

Hybrids

A large proportion of the varieties of interest for international trade are hybrids. These are generally natural crosses and in rarer cases are the result of breeding exploiting the inter-fertility of the three races. The main selection criteria are agronomic (resistance to pests and diseases, especially *Phytophthora*, tolerance to salinity and cold, productivity, etc.) and those related to fruit quality (size, high pulp percentage, flavour, absence of fibres, oil content, etc.). 'Bacon', 'Ettinger', 'Fuerte' and 'Lula' in particular are natural Mexican x Guatemalan hybrids. Guatemalan x West Indian hybrids, mainly from Florida, include the varieties 'Ajax', 'Booth', 'Choquette', 'Collinson' and 'Simpson'. Mexican x West Indian hybrids such as 'Indian River' are very rare. Other varieties resulting from inter-race crosses are possible.

Hass

Guatemalan race

Flowering type: A

Fruit shape: pyriform

Skin: dark green and brown at maturity, not very thick, warty

Oil content: 18 to 20%

Average weight: 250 to 350 g

Seed:skin:pulp ratio: 16:12:72 (small seed)

'Hass' has replaced 'Fuerte' as the sector standard. It is currently the most commonly planted avocado in the world. It was selected by Rudolph Hass in California in the early 1920s and registered in 1935. The tree is vigorous and highly productive. The fruits vary in shape in some production regions, ranging from pyriform to ovoid. Average fruits size is fairly small in hot regions. Keeps well on the tree. The skin turns from dark green to purplish brown at maturity. It is easy to remove from the pulp. The organoleptic qualities are excellent. Rich flavour (nutty taste) and buttery nonfibrous pulp.



Fuerte

Mexican x Guatemalan hybrid

Flowering type: B

Fruit shape: obovate

Skin: green, matt, smooth, medium thickness. Pliable and tough, it is easy to remove

Oil content: 16 to 18%

Average weight: 250 to 400 g

Seed:skin:pulp ratio: 15:10:75 (large seed)

This variety was long the most commonly planted in the world and originated in Mexico (Atlixco). The tree is vigorous with fairly good frost resistance (to 4°C), but is particularly temperature-sensitive during the flowering period. Productivity is generally good in temperate zones but it displays strong alternate bearing. The fruits are easy to peel and have excellent organoleptic qualities (buttery pulp).



Ettinger

Mexican x Guatemalan hybrid

Flowering type: B

Fruit shape: narrowly obovate

Skin: bright green, fine, fairly smooth

Oil content: 18 to 22%

Average weight: 250 to 350 g

Seed:skin:pulp ratio: fairly large seed

This variety was bred from 'Fuerte' in Kefar Malal in Israel, where it is mainly grown. The tree is very fertile and vigorous with an erect habit. The fruits are similar to those of 'Fuerte'. The skin is susceptible to problems of corky areas and tends to adhere to the pulp. The pulp is buttery and fibreless and has good organoleptic qualities.



Reed

Guatemalan race

Flowering type: A

Fruit shape: spheroid

Skin: medium thickness, slightly rough, pliable

Oil content: 19 to 20%

Average weight: 400 to 500 g

Seed:skin:pulp ratio: 17:11:72

This variety of Californian origin was selected by James Reed. Registered in 1960, the patent expired in 1977. It has succeeded in conserving the qualities of its parents 'Nabal' and 'Anaheim' without their negative features. It is fairly productive and alternate bearing is not marked. Its resistance to cold is comparable to that of 'Hass'. The fruits are large and a singular round shape. They keep well on the tree. The organoleptic qualities are excellent and the buttery pulp has a slight nutty taste and does not blacken after slicing. Peeling is also easy.



Pinkerton

Mexican x Guatemalan hybrid

Flowering type: A

Fruit shape: pyriform

Skin: dark green, rough, tough and pliable, medium thick, easy to peel

Oil content: 18 to 25%

Average weight: 270 to 400 g

Seed:skin:pulp ratio: 10:13:77 (small seed)

A recent variety bred in California by John Pinkerton and registered in 1975. It is probably the result of a Hass x Rincon cross. The tree is very vigorous and tolerates temperatures of -1/-2°C to 30°C. Production is good and alternate bearing is little marked. The fruits may suffer from ring-neck if the tree is under conditions of stress. The organoleptic qualities of this variety are excellent (nutty taste). The pulp is smooth, buttery and fibreless.



Photos © Guy Bréhinié

Avocado quality defects

Parasite disorders

The most common: Anthracnose
(black rot due to *Colletotrichum*)



Mild internal anthracnose



Mild internal anthracnose



Mild internal anthracnose



Mild to severe external anthracnose



Final-stage external anthracnose

Stem-end necrosis
Fusarium spp., *Lasiodiplodia theobromae*, *Dothiorella gregaria*



Stem-end necrosis due to *Fusarium*



Stem-end necrosis



Stem-end necrosis

Epidermal disorders



Surface disorder due to *Sphacelma perseae* - Scab



Surface disorder due to *Sphacelma perseae* - Scab

Photos © Pierre Gerbaud et E. Laville

Physiological disorders

Damage caused by the cold
Poor regulation of
controlled atmosphere



Internal damage, early development



Internal damage, mid-stage development



Internal damage, late development



External damage



Lack of O2 and excess CO2

Mechanical and other problems

Variation in coloration and maturity
Mechanical bruising



Variation in coloration and maturity



Mechanical bruising



Cork-like patch due to friction



Cork-like ridges due to friction



Burst nodules due to friction

Photos © Pierre Gerbaud et E. Laville



Avocado post-harvest

Post-harvest management of fruits is of prime importance. It affects both quality and yield as losses can range from 5 to 50%.

The special features of climacteric fruits

Climacteric fruits have special physiological characteristics. They must be harvested after reaching a sufficiently advanced stage of development and hence of maturity. It is only then that they are capable of synthesising sufficient amounts of ethylene to be able to start ripening (a strong increase in respiration that physiologists refer to as 'climacteric' marks the start of deep-seated physiological changes). Only mature fruits will display satisfactory organoleptic characteristics once they have ripened. Avocado is a singular climacteric fruit. It can only start the ripening process after it has been picked. One of the best ways of storing the fruit is therefore to leave it on the tree. Some varieties can remain on the branch for several months, depending on the season. Suitability for 'tree storage' is generally very small or non-existent for West Indian cultivars but marked for hybrids, especially for Guatemalan x Mexican crosses. Nevertheless, prolonged storage can have a negative effect on production in the following season. These physiological considerations highlight the importance of the harvest date. Several variables that depend on the variety and the producer country concerned are to be taken into consideration to judge the optimum stage of maturity. Visual appraisal, fruit weight and diameter and the number of days after flowering give useful information but this is not accurate enough. Determining the matter content—strongly correlated with the oil content—is the most commonly used method. Appraisal of the stage of maturity is completed by analysis of enzyme activity, electrical conductivity, aromatic compounds or precursors or by tasting tests when the fruits have ripened.



Photos © Eric Imbert

Storage

Cooling

The temperature is lowered to slow the metabolism of the fruit so that it can be stored. This slows ethylene synthesis and its effects. It is therefore sought to bring the fruits to the best temperature for storage as rapidly as possible after harvesting (ideally in less than 6 hours). The duration of cooling depends on the initial and final temperature of the fruit and on the ambient air conditions (temperature, wind velocity and relative humidity). The time necessary varies from 8 to 10 hours. It is important to halt the cooling phase 2°C before the final temperature desired to be sure not to reach temperatures that are too low and that might damage the produce.

Refrigeration

Optimum storage temperatures vary according to the variety, the period of the season (maturity) and the storage period desired. In general, the temperature for mature avocado ranges from 5 to 12°C with atmospheric relative humidity of 85 to 95%. The more delicate end-of-season fruits are stored in the lower part of the temperature range. For 'Hass', physiologists advise maintaining fruits at 5 to 7°C at the beginning of the season and 4.5 to 5.5°C at the end. More than four weeks of storage at these temperatures is not recommended. The optimum temperature range for 'Fuerte' is 6 to 8°C but for no more than three weeks. In practice, professionals keep all the classic commercial varieties at between 5 and 6°C. Temperatures must be strictly controlled to prevent any fluctuation. Movement of air is also regulated. Heat is released during the beginning of the ripening process and this must be taken into account. Maintaining the cold chain is of crucial importance.

Controlled atmosphere

Controlled atmospheres are widely used for long transport and can lengthen the duration of storage. Low O₂ levels combined with high CO₂ reduce respiration and ethylene production. An O₂ content of 2 to 5% and CO₂ of 3 to 10% are generally used. The main classic commercial varieties can thus be stored for 5 to 6 weeks and even longer for 'Hass'. The effects of unsuitable O₂ and CO₂ levels are described in the paragraph entitled 'Main types of post-harvest physiological deterioration' below.

Alternative technologies for long storage

Treatment with 1-MCP. Application of 1-MCP (1-methylcyclopropene) is reported to limit the internal symptoms of chilling injury (dulling of the pulp, vascular browning) in fruits stored for more than four weeks. The technique is said to give good results especially for the green varieties that are less suitable than 'Hass' for long storage (with regard to the standards in force). It has been used on a proportion of the South African harvest for three years.

Step-down temperature. This technique has been used in the South African avocado sector for several years to conserve fruit quality and reduce internal symptoms of chilling injury. The storage temperature is lowered in steps (1 to 2°C each week) during transport, with care taken not to descend below 3.5°C. There are procedures (temperature and duration) for the different cultivars and regions of South Africa.



Packing

Fruits with the desired maturity index are sorted, washed and graded before packing. Each market has its own packing requirements.

Avocado — USA — 11.34-kg box 43 x 32.6 x 17.50 cm

Weight (g)	Size
422	28
377	32
340	36
298	40
241	48
196	60
156	70
122	84
102	96

Avocado — USA 5.67-kg box

Weight (g)	Size
422	14
377	16
340	18
298	20
241	24
196	30
156	35

Avocado — Europe — 4-kg box 35 x 28.5 x 9 cm

Weight (g)	Size
461-475	8
366-400	10
306-365	12
266-305	14
236-265	16
211-235	18
190-210	20
176-189	22
156-170	24
146-155	26

Avocado — Japan — 6-kg box 43.9 x 33.1 x 11 cm

Weight (g)	Size
340	18
298	20
241	24
196	30
156	35

Ripening

The ideal temperature for ripening is 15 to 20°C. Above 25°C, ripening is irregular, unpleasant flavours appear and the risk of rot increases. This natural process can also be controlled. Treatment with ethylene (100 ppm at 20°C for 12 to 72 hours depending on the maturity of the fruit) speeds up ripening by 3 to 6 days. It is possible to obtain fruits at an even stage of ripeness in chambers in which temperature, relative humidity and ethylene content are the main parameters controlled. Nevertheless, ripening still depends on the initial stage of maturity of the fruit.

The main precautions to be taken in shops

Avocado fruits are very sensitive to impacts and to pressing by consumers. Ripe and nearly ripe fruits must be stored at lower temperatures (1 to 6°C). Misting is not recommended.



Photos © Eric Imbert

Main types of post-harvest physiological deterioration of avocado

Storage-related damage

Chilling injury. This damage is caused by low temperatures—generally lower than 3°C—or by prolonged storage. The symptoms may appear three days after packing during storage and more often when the fruits are removed from the cold room. Two forms of chilling injury are observed. The symptom of internal chilling injury is a browning of the pulp starting at the base of the fruit and sometimes vascular browning in the same area. In 'Fuerte', this disorder takes the form of small dark spots in the pulp. The symptoms of external chilling injury are irregular black spots on the epidermis. They may appear during storage and most frequently when the fruits are removed from cold storage.

O₂ deficit and excessive CO₂. Too great a decrease in the O₂ level (in particular to less than 1%) can cause irregular brown spotting of the epidermis that can spread to the pulp. Too high a CO₂ level (over 10%) can cause discoloration of the epidermis and the development of unpleasant flavours, especially when the O₂ level is low.

Fungal infection in the field revealed during or after storage

The control of fungal diseases requires effective orchard management and appropriate pre-harvest treatments. Any bruising of the fruits must be avoided at the post-harvest stage, they must be refrigerated rapidly and the cold chain maintained.

Anthracose. This is the most frequent disease during storage and is caused by infection of the fruit by *Colletotrichum gloeosporioides* in the orchard and appears only during ripening. It causes serious necrosis. Ordinary small, scattered injuries develop into large circular brown spots on the epidermis. The underlying pulp blackens and the rot reaches the stone. The rate of development of this rot depends on the transport and storage temperature and above all the state of maturity of the fruits.

Stem-end rot. This disease is also caused by infection by a fungus, *Botryodiplodia theobromae*. Small pale brown spots appear initially in the stem zone. The rot spreads rapidly to the rest of the fruit. The pulp is then infected to the stone. Any injury in the epidermis favours infection by the pathogen.

Avocado — Post-harvest diseases caused by pathogenic fungi

Pathogen	Diseases
<i>Alternaria</i> spp	Black rot
<i>Botryodiplodia theobromae</i>	Stem-end rot
<i>Botryosphaeria ribis</i> (<i>Dithiorella gregaria</i>)	Stem-end rot
<i>Colletotrichum gloeosporioides</i>	Anthracose: Black rot
<i>Fusarium</i> spp	Stem-end rot
<i>Penicillium expansum</i>	Blue mould
<i>Pestalotiopsis perseae</i>	Brown spots
<i>Phomopsis perseae</i>	Brown rot
<i>Phytophthora citricola</i>	Small surface injuries
<i>Pseudocercospora purpurea</i>	Soft rot
<i>Rhizopus stolonifer</i>	Corky patches on epidermis
<i>Trichothecium roseum</i>	Pink rot

The harvest stage in the case of climacteric fruits

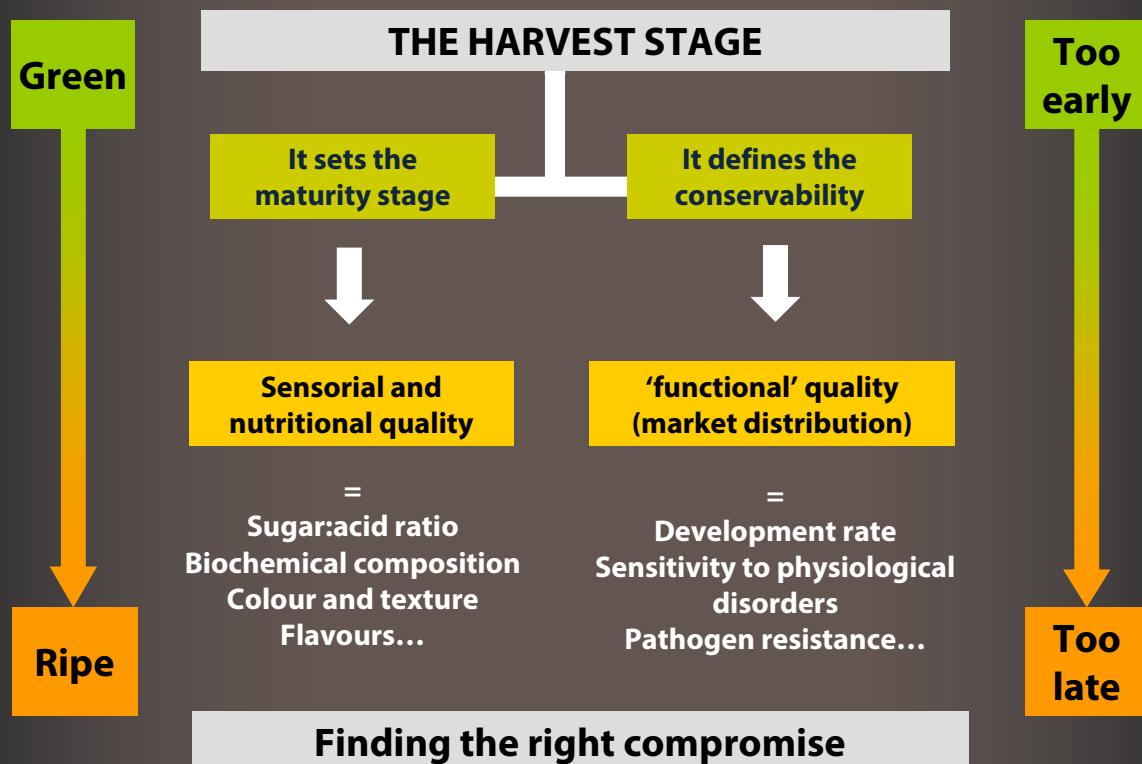
This stage is particularly important since the state of maturity of the fruit is “set” upon harvesting (see **FruiTrop** No.198, page 29, maturation article). The impact of the harvest stage is split into two aspects (see diagram):

- in qualitative terms, the earlier a fruit is harvested, the less taste properties it will exhibit, with a fairly low sugar content (enrichment in sugars is linked to the length of time on the plant) and a poor ability to develop flavours;
- in commercial terms, a fruit harvested at a stage too close to the fruit’s true maturity will have a lower conservability. But if the fruit is harvested too early, its ability to ripen may be insufficient, and it will not be able to go through the correct maturation development.

Importers are dependent on the compromise which may be found to reconcile taste quality and market distribution. Defining an optimum harvest stage is a real challenge, since there are not necessarily any clear visual descriptors indicating with acceptable precision the stage of maturity before maturation of climacteric fruits (known as the preclimacteric stage).

In parallel, with the markets constantly changing, the development of triggering (avocado, mango) becomes singularly complicated: how to be sure that the fruits have reached their ability to ripen? How to adapt the triggering process to the fruit’s stage of maturity, in the knowledge that the batches are heterogeneous?

There are possible alternatives for improving batch homogeneity, but this calls for a high degree of interaction between the production and distribution industries. Eventually, we will need to take into account the changes to cropping techniques on fruit physiology (conservation, metabolism of maturation). We will also need to assess the possibility of sorting fruits using non-destructive measures, to obtain homogeneous batches in order to adapt and ensure the performance of the triggering techniques.



Wholesale market prices in Europe

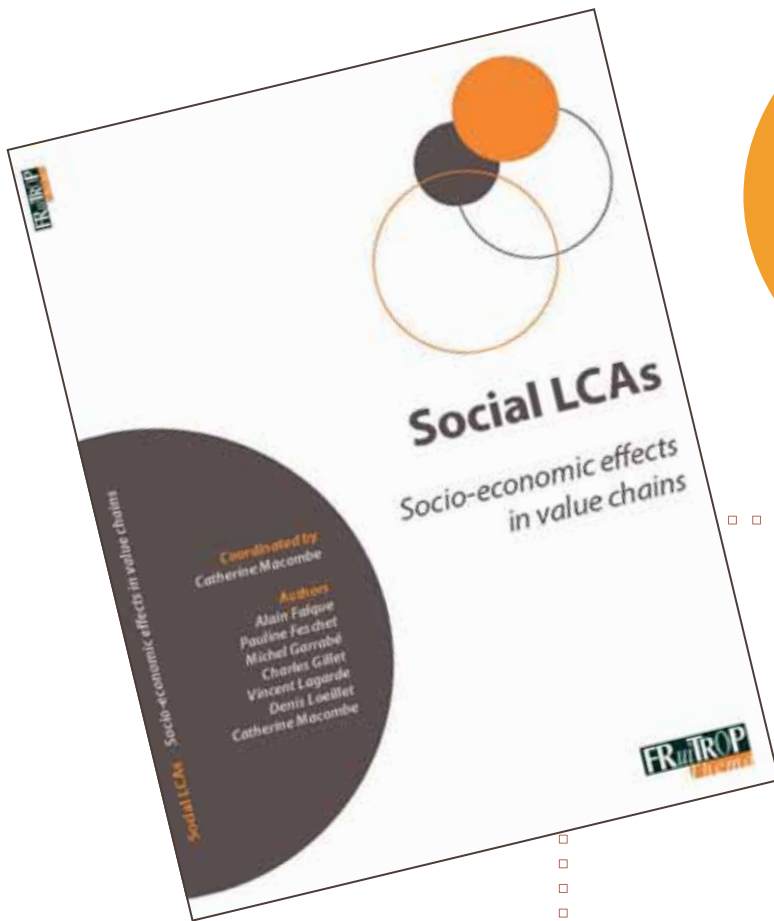
July/August 2015

					EUROPEAN UNION - EURO					
					Germany	Belgium	France	Holland	UK	
AVOCADO	Air	FUERTE	KENYA	Box				11.85		
			HASS	KENYA	Box			10.88		
			TROPICAL	MEXICO	Box			12.00	13.50	
	Sea	EDRANOL	BRAZIL	Box				18.00		
			ETTINGER	DOMINICAN REP.	Box			15.20		
		FUERTE	SOUTH AFRICA	Box				11.38		
			HASS	PERU	Box			9.75		
		HASS	SOUTH AFRICA	Box				9.00		
			NOT DETERMINED	KENYA	Box			9.25	11.19	
		NABAL	PERU	Box				10.00		9.37
			PINKERTON	SOUTH AFRICA	Box			10.75	11.75	
		RYAN	HASS	CHILE	Box	10.50				
			NOT DETERMINED	KENYA	Box	10.50		9.50	11.75	
		RYAN	NOT DETERMINED	PERU	Box	10.75	13.50	10.25	12.56	13.00
			RYAN	SOUTH AFRICA	Box	10.75	13.50	10.35	12.50	13.76
		RYAN	RYAN	TANZANIA	Box	10.50				
			RYAN	BRAZIL	Box					15.05
RYAN	RYAN	PERU	Box				8.00			
	RYAN	SOUTH AFRICA	Box		11.50	10.00	12.09			
RYAN	RYAN	SOUTH AFRICA	Box		11.50	10.00	11.63	8.89		
BANANA	Air	SMALL	COLOMBIA	kg			6.90			
			ECUADOR	kg			5.67			
	Sea	SMALL	ECUADOR	kg			2.15			
			ECUADOR	kg			1.70	2.47		
CARAMBOLA	Air	NOT DETERMINED	BRAZIL	kg				4.56		
			COLOMBIA	kg				4.01		
			MALAYSIA	kg		5.33	4.86	5.23	4.81	
COCONUT	Sea	NOT DETERMINED	COTE D'IVOIRE	Bag		14.00	10.00	12.40	14.02	
			DOMINICAN REP.	Bag				25.45	10.94	
			SRI LANKA	Bag					16.42	
			THAILAND	Bag					11.50	
			YOUNG	COSTA RICA	Bag				17.00	
			YOUNG	THAILAND	Bag				13.80	
DATE	Sea	BAHRI	ISRAEL	kg				4.24		
			JORDAN	kg				4.24		
		DEGLET	ALGERIA	kg			5.50			
			MEDJOOOL	ISRAEL	kg			11.00	4.68	
		MOZAFATI	PERU	kg					6.00	
			NOT DETERMINED	SOUTH AFRICA	kg				8.53	
			NOT DETERMINED	IRAN	kg				3.30	
			NOT DETERMINED	ALGERIA	kg				1.58	
			NOT DETERMINED	EGYPT	kg		4.00			
		STONELESS	TUNISIA	kg					2.02	2.15
			STONELESS	TUNISIA	kg				2.75	
GINGER	Sea	NOT DETERMINED	BRAZIL	kg		2.23		2.31	1.50	
			CHINA	kg		1.62	2.20	1.73	1.71	
			THAILAND	kg				1.49	1.51	
GUAVA	Air	NOT DETERMINED	BRAZIL	kg				6.50	3.16	
	Sea	NOT DETERMINED	BRAZIL	kg					3.01	
KUMQUAT	Air	NOT DETERMINED	BRAZIL	kg					4.92	
			ISRAEL	kg				4.75	7.02	
			SOUTH AFRICA	kg				3.98	5.39	
LIME	Air	NOT DETERMINED	MEXICO	kg			5.20			
	Sea	NOT DETERMINED	BRAZIL	kg	1.36	1.61	2.25	1.71	1.56	
			GUATEMALA	kg				1.67		
			MEXICO	kg	1.61	1.70		1.93	2.22	
LITCHI	Sea	NOT DETERMINED	INDIA	kg					1.44	
			ISRAEL	kg					1.37	
MANGO	Air	HADEN	ISRAEL	kg				4.42		
			KENT	MEXICO	kg			4.94		
		MAYA	SENEGAL	kg			4.13			
			NOT DETERMINED	ISRAEL	kg				3.87	
		SHELLY	NOT DETERMINED	ISRAEL	kg			4.40		
			SHELLY	ISRAEL	kg				3.08	

					EUROPEAN UNION - EUROS						
					Germany	Belgium	France	Holland	UK		
MANGO	Sea	ATKINS	BRAZIL	kg			1.75	1.59	1.88	1.63	
			ISRAEL	kg					1.66		
		KEITT	DOMINICAN REP.	kg						1.83	1.79
			ISRAEL	kg		1.94				2.13	
		KENT	NICARAGUA	kg						1.88	
			BRAZIL	kg						1.56	
			MALI	kg					1.60		
		LILY	SENEGAL	kg		1.75	1.63		2.30	1.94	2.16
			ISRAEL	kg						2.01	
		NOT DETERMINED	DOMINICAN REP.	kg							1.80
			MEXICO	kg							1.98
PALMER	BRAZIL	kg		1.69			1.63	1.91			
	SHELLY	ISRAEL	kg					1.74			
MANGOSTEEN	Air	MALAYSIA		kg					8.50		
		THAILAND		kg					8.08		
MANIOC	Sea	COSTA RICA		kg			1.29	1.11			
PAPAYA	Air	FORMOSA	BRAZIL	kg					3.29		
			BRAZIL	kg			3.36	3.20	3.44	4.30	
			MALAYSIA	kg					4.44		
	Sea	FORMOSA	THAILAND	kg					5.25		
			BRAZIL	kg					1.94		
			BRAZIL	kg			2.22				
		ECUADOR	kg					2.64	2.34		
PASSION FRUIT	Air	NOT DETERMINED	BRAZIL	kg						3.24	
			COLOMBIA	kg		4.50	5.19	5.65	5.11	5.53	
			ISRAEL	kg					5.25		
		PURPLE	KENYA	kg			5.00				5.26
			SOUTH AFRICA	kg				6.50	5.75		
			VIETNAM	kg				8.80			
		YELLOW	ZIMBABWE	kg			5.19			4.44	
			COLOMBIA	kg						8.30	
			ECUADOR	kg						7.58	
PHYSALIS	Air	COLOMBIA		kg			9.00	9.00	8.69		
	Sea	COLOMBIA		kg		3.96		5.92			
PINEAPPLE	Air	VICTORIA	MAURITIUS	Box					14.00		
			MAURITIUS	kg				3.90			
			REUNION	kg				3.90			
	Sea	MD-2	SOUTH AFRICA	Box						12.70	
			COSTA RICA	Box		8.58	8.92			9.59	
			COSTA RICA	kg					0.90		
			COSTA RICA	Piece							0.80
			COTE D'IVOIRE	kg					0.90		
			COTE D'IVOIRE	Piece							1.03
			HONDURAS	Box		6.50					
			PANAMA	Box						9.39	
PANAMA	kg					0.75					
PITAHAYA	Air	RED	VIETNAM	kg					7.91		
			COLOMBIA	kg					10.52		
			ECUADOR	kg					8.80		
PLANTAIN	Sea	COLOMBIA		kg			1.10				
		ECUADOR		kg			1.00	1.05			
		JAMAICA		kg					1.52		
		WINDWARD ISL.		kg					1.58		
RAMBUTAN	Air	THAILAND		kg				7.58			
SWEET POTATO	Sea	EGYPT		kg				1.09	1.37		
		ISRAEL		kg					1.82		
		SENEGAL		kg				1.20	1.80		
		SOUTH AFRICA		kg			1.55				
TAMARILLO	Air	COLOMBIA		kg				7.00			
YAM	Sea	BRAZIL		kg					1.00		
		GHANA		kg			1.30	1.69			

Note: according to grade

These prices are based on monthly information from the Market News Service, International Trade Centre UNCTAD/WTO (ITC), Geneva.
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- ▶ You belong to one of the following groups: entrepreneurs, public decision-makers, public authorities, consultants, researchers or students.

Social LCAs

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What are the social consequences of changes enacted in the value chains, especially when they involve large international agricultural product industries? How can we anticipate the results of changes in technical procedures, supplier, work organisation, distribution of revenue generated, etc.?

Researchers from French research centres (Cirad, Inra, Irstea, SupAgro, and University of Montpellier I) and consultants (Epsil'Hôm, CEP) set out over 100 pages their methodology and practices for assessing socio-economic effects.



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