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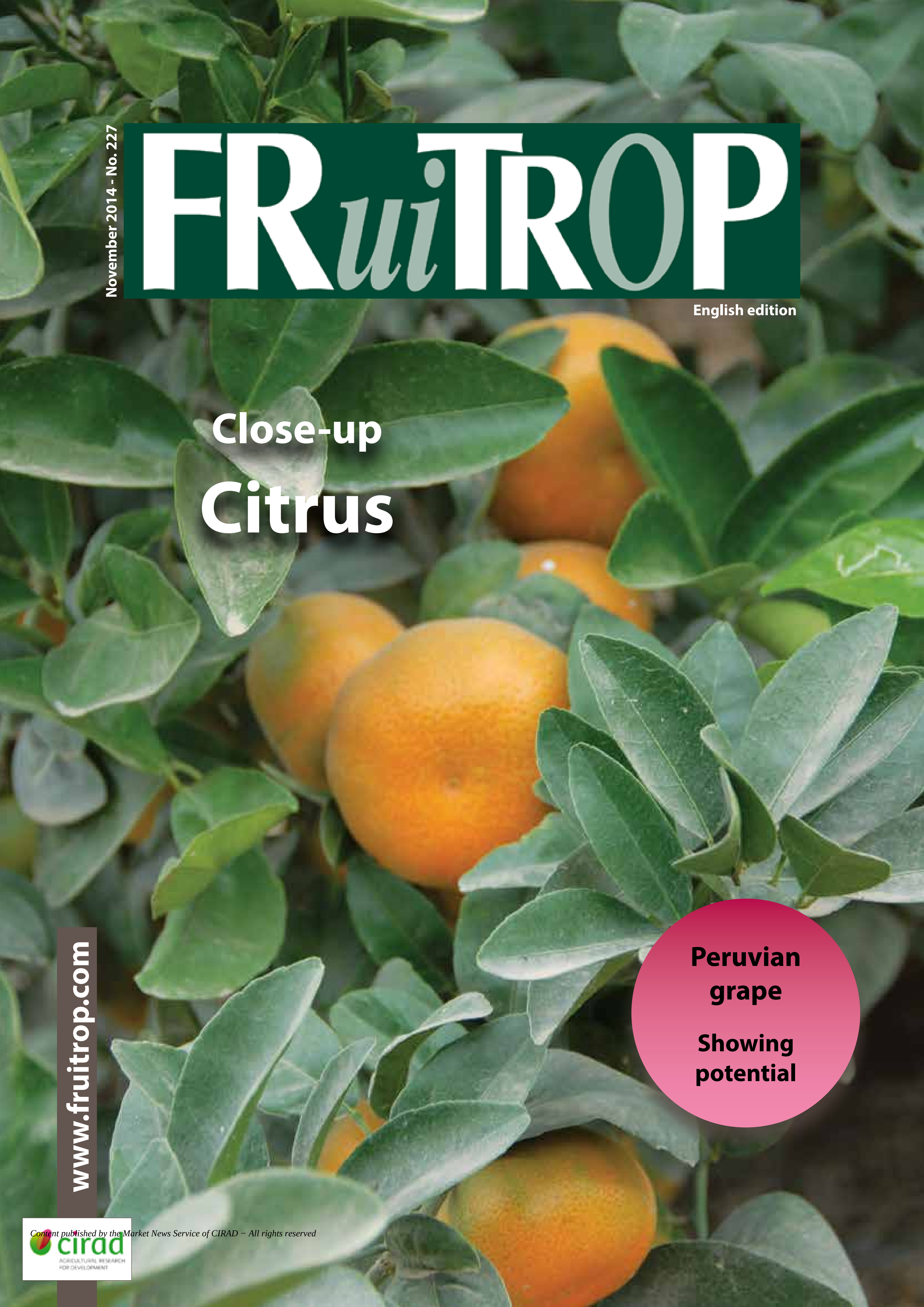

Close-up
Citrus

Peruvian grape

Showing potential

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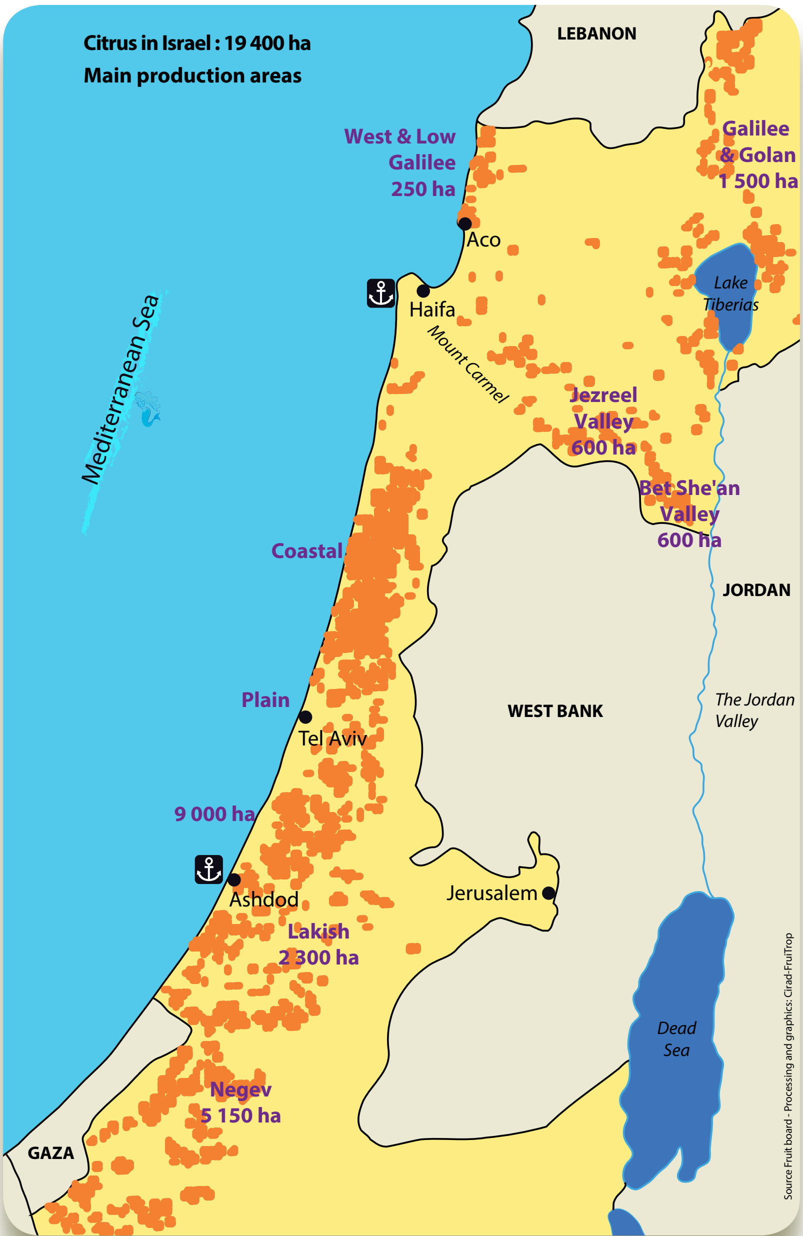
AGRICULTURAL RESEARCH FOR DEVELOPMENT

Israeli citrus industry

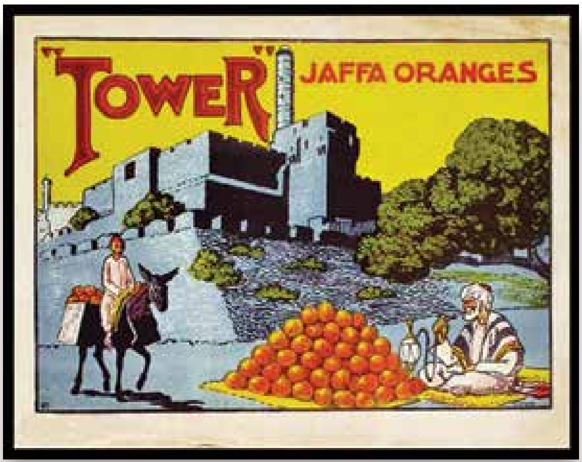
In-depth restructuring to combat growing constraints

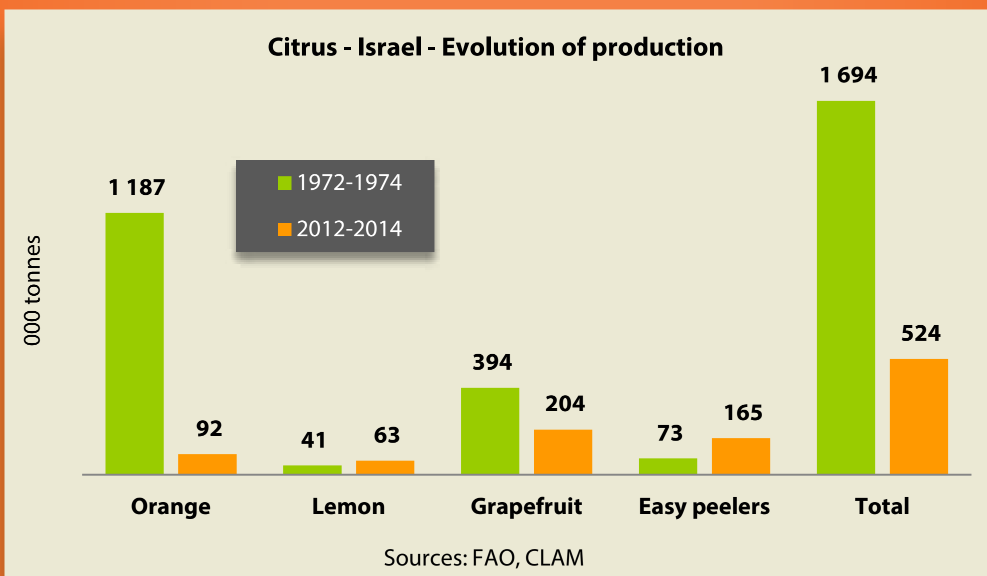


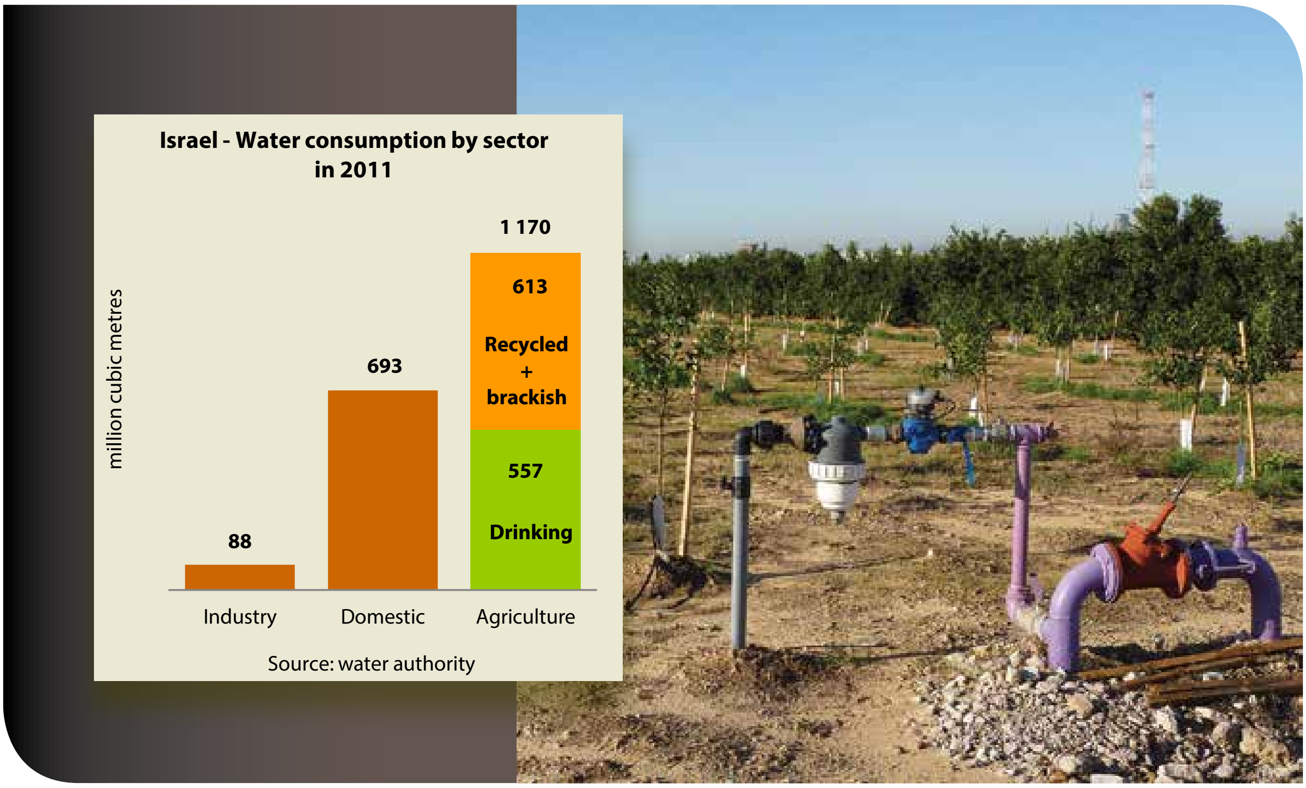
"Reinvention every day" must have been the guiding principle adopted by Israel's citrus producers, who have had to completely overhaul their production model over the past few decades to adapt to the new realities of the international market, and to an increasingly tough pedoclimatic and social context. FruiTrop offers you this review of an industry under heavy constraints, which has no choice but to keep moving forward.

A long dark spell between the early 1980s and the beginning of the new millennium

"Jaffa": this Israeli umbrella brand was such a vital player on the European markets during the 1970s that it was very much synonymous with citruses for many consumers. At this time, Israel was the world's third biggest exporter behind Spain and the United States, with volumes of between 650 000 and 700 000 t per season, mainly intended for Europe. This was a real feat if we bear in mind that two-thirds of the country are classified as an arid or semi-arid zone. But the skies gradually clouded over during the 1980s and 1990s. Competition in Europe saw constant growth, with in particular the entry into the Common Market of big producer countries like Spain. In addition, the availability of certain major production factors became scarce. Hence the citrus growing industry entered a period of outright recession, with the cultivation area gradually shrinking, down from 42 000 ha at its peak in the late 1960s to 17 500 ha in 2003. The country's specialities, which had enabled the Israeli citrus growing boom but had become unprofitable, were the hardest hit by this uprooting trend. The most iconic of them, Shamouti, and more generally oranges as a whole, paid the heaviest toll. The cultivation area of this varietal group went from more than 24 000 ha in the late 1970s to 4 000 ha now (just under 1 500 ha for Shamouti). The white grapefruit also bore the consequences of this rationalisation trend, uprooted or replaced on a large scale by Sunrise (Star Ruby).







Solutions for better access to key production factors

Two major challenges needed to be faced before things could start to pick up. The drastic fall in agricultural water allocations was definitely the most concerning point. A trend attributable to the deterioration of annual rainfall since the late 1990s and to increasing demand for drinking water, with the population having more than doubled between 1970 and today (5 million more inhabitants). It was desalination and above all recycling of household wastewater which enabled things to be turned around. Currently, re-use of nearly 80 % of the country's wastewater (100 % in the Tel Aviv region) covers over one quarter of the overall requirements, and provides more than 50 % of agricultural water, at a price practically less than half the rate of drinking water.

The shortage of agricultural labour is the other black spot which Israeli producers had to face from the early 1990s, especially after the closure of the territories from where many of the agricultural labourers came, following the two intifadas. The problem was resolved by bringing in foreign workers, primarily from Thailand.

Citrus – Israel – Planted area census		
Citrus species	**hectares**	**Share by species**
Easy peelers	9 417	48 %
Or	> 5 000	
Orange	4 000	21 %
Grapefruit	3 300	17 %
Lemon, lime	2 144	11 %
Various	600	3 %
Total	**19 461**	

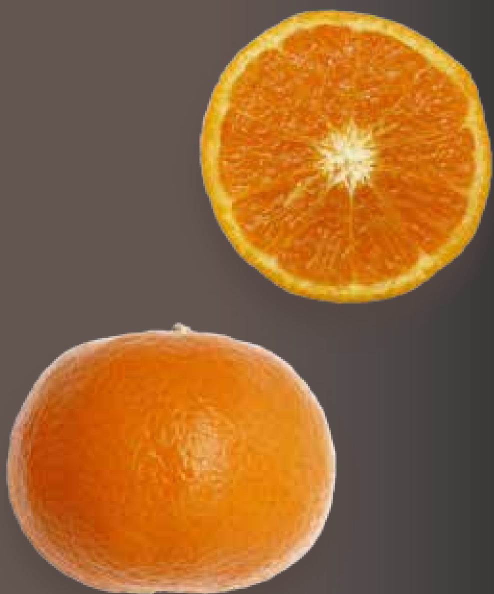
Source: Plant Board 2014

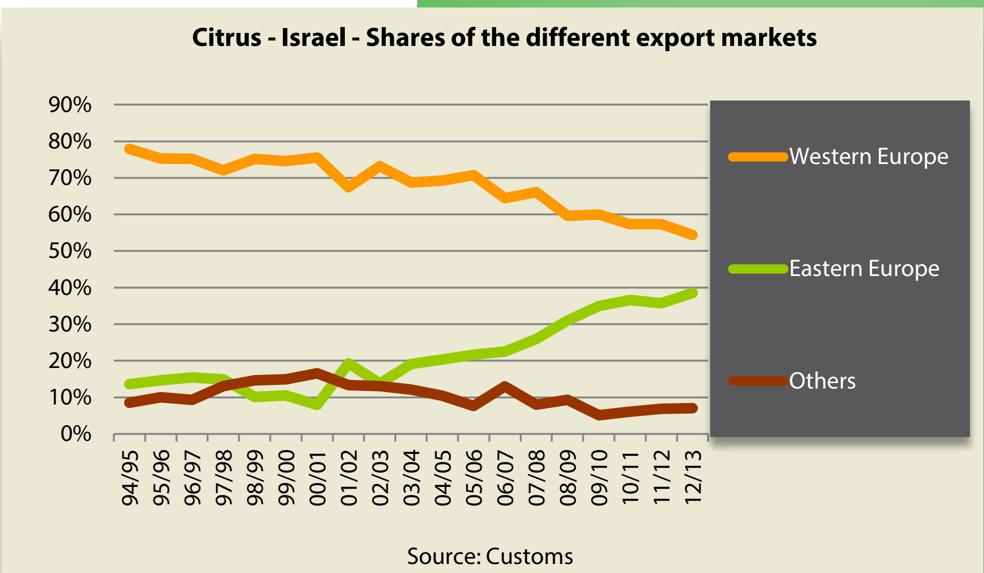
Stock reconstruction based on easy peelers as radical as it was redeeming

Yet it was also the launch of Or, the premium easy peeler variety developed locally by the Volcani Center, which helped Israeli citrus growing to bounce back. This term is no exaggeration since surface areas, which had fallen to 17 500 ha in 2003, have started growing again, now registering a level of approximately 19 000 ha. This variety is to this day a benchmark on the late easy peelers market. On its own it represents more than a quarter of Israel's cultivated surface areas, nearly 50 % rebuilt on easy peelers, a varietal group providing the high economic returns essential to citrus growing under the constraints inherent in Israel. Traditional varieties such as Minneola, Nova (Suntina) or Ortanique (Mandora/Topaz) represent less than 7 % of surface areas. Oranges come in second position, with just over 20 % of surface areas. There too, the traditional varieties (Shamouti, Valencia or Jaffa Late) are diminishing in favour of early Navel (Newhall) and late Navel. The grapefruit still represents 17 % of surface areas (30 % white and 70 % coloured), and the lemon, aimed at the local market – apart from exceptional exports – approximately 11 %. Hence the cultivation stock in the hands of Israel's 2 800 citrus producers is young (three quarters of the trees were planted after 2000), and completely restructured.

The easy peeler variety 'Or'

'Or' is a hybrid of 'Temple' and 'Dancy' and was bred by the Volcani Center in Israel. It is a medium-sized fruit recognisable by fairly marked grooves running from the base of the peduncle and the occasional presence of a small fruit embryo. The skin is fairly pale orange, of medium thickness and is easily removed. The segments are soft and juicy with few pips. The flavour is very pleasant thanks to a good sugar:acid balance.





Reducing dependence on the European market

The industry has also worked downstream to reduce its heavy dependence on the Community market. Three quarters of Israeli exports were intended for the Old Continent in the early 2000s. Their share in recent seasons has barely exceeded 50 %. Trade diversification efforts have mainly focused on the East European markets. Russia is currently Israel's leading market, ahead of the United Kingdom and France. Exports intended for these countries, combined with those to Ukraine and the Baltic States, represent more than 20 % of total volumes (mainly easy peelers, including the premium variety Or, and grapefruit). Shipments to Scandinavia are also tending to become significant. Asia remains a strategic avenue, and Israeli exporters have not spared their efforts in getting to grips with the particularly restrictive sanitary protocols demanded by most countries in the zone. In particular, Israel is one of the few countries in the world able to export its produce to Japan without an outgoing inspection by the Japanese sanitary authorities. Nonetheless, sales remain modest.

A new reconversion trend still in progress

As we have seen, Israeli producers have come a long way in the space of around thirty years. However, they must continue to move forward to remain competitive, given the production constraints and the changes both in demand and competition. The number one challenge is now the soaring production costs, which have gone up by approximately 30 % in five years, according to professional sources. They now exceed 10 000 USD/ha. This problem is all the more weighty since the shekel's strengthening against a good many currencies is weighing down on economic returns to producers. The Israeli currency climbed approximately 20 % against the euro and the dollar between 2009-2010 and the beginning of 2014. And now it is the turn of the coloured grapefruit to bear the consequences of a large-scale rationalisation trend. The drastic fall in demand and rise to prominence of competitors such as Turkey have meant that many plantations are no longer profitable. Surface areas, which had seen very considerable expansion after the collapse of Floridian production, are now going the other way: approximately 700 ha were uprooted between 2012 and 2014, i.e. just over 30 % of the cultivation area. Producers hope that this radical fall will be sufficient to restore an economic balance, before resorting to further uprooting if necessary.

Easy peelers still with the wind in their sails, though producers are more cautious

Of course, it is the easy peeler family which has taken advantage of the surface areas vacated by the grapefruit. However, the planting rate has slowed down considerably since 2013. Or remains in favour with the producers, though they are more cautious since the current cultivation area will provide an ample production of approximately 200 000 t by three to four years' time. Furthermore, there is scarcely any alternative in terms of variety. The main new cultivars, on which producers now have some perspective, have their strong points, but are not entirely satisfactory. Tami, a hybrid of Temple and Michal bearing fruit in mid-season, struggles to colour naturally. Odem, derived from a mutation of Orah and Shani, often contain pips. The same observations can be made with the grapefruit: Aliza (hybrid of Orah and Chandler) has some particularly attractive characteristics (lack of bitterness, low furanocoumarins content making it compatible with statin medications, original orange colour), but large promotion budgets would be required to publicise this very particular fruit. Hence it is primarily on Or that planting efforts should continue to focus for the forthcoming seasons (after completely halting for religious reasons in 2014-15), though still at a moderate tempo.

Nonetheless, there can be no doubt that valuable varieties will emerge in the medium term. Very many cultivars, selected for their regular productivity, being pip-free, their flavour, their resistance to *alternaria* and preservability are currently being tested. Israeli varietal research is among the most creative in the world, particularly thanks to the existing relationship between research (Volcani Center) and private partners, in the framework of varietal development projects. Meanwhile, it is once again on Or that the economic balance of the Israeli citrus growing industry will rest over the coming years ■

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