

Argentina dominates world lemon production with a harvest exceeding 1.3 million tonnes. Historically specialised in the manufacture of juice and derivatives, the sector has played a preponderant role in fresh lemon supplies for the northern hemisphere in the summer since the mid-1990s. However, increased production cost resulting in particular from the appearance of citrus canker, the decrease in the profitability of the lemon industry and the slowing of world demand for fresh lemon has made the sector fragile.

## Location of the plantations

Argentinian lemon plantations total 42000 ha mainly concentrated in the province of Tucuman in the northwest of the country. The two main production centres are on a narrow strip of the foothills of the Sierras de Burruyacu and the Aconquija (between Tafi Viejo and the recent more southerly orchards running as far as the Rio Chico). The microclimate of the area precludes the serious risk of frost in the plains further east and more difficult topography to the west. Furthermore, rainfall is fairly satisfactory (800 to 1500 mm ) although irrigation is necessary to achieve satisfactory yields. The rest of the area under lemon is equally distributed between other provinces in the north-west (Jujuy and Salta) and the fringe in the extreme north-east of the country between Misiones and Entre Rios. However, yields are smaller there. Commercial plantations are dominant.



## Production

Introduced in the province of Tucuman by Spanish and Italian immigrants at the beginning of the twentieth century, lemon-growing first developed after the appearance of tristeza in the mid-1940s at the expense of the other citrus fruits that are more susceptible to the disease. However, the sector really only got off the ground at the end of the 1960s following the slump in the sugar sector. Production increased slowly but steadily until the end of the 1980s. It accelerated distinctly at the beginning of the 1990s with the signing of contracts for the supply of concentrated juice and essential oils between foreign multinationals in the beverages sector and a proportion of growers. The extremely rapid increase in production resulted in a strong decrease in profitability from the mid-1990s onwards, encouraging producers to diversify their outlets by exporting fresh lemons to Europe. The economic balance of the sector has become even more fragile since the early 2000s. On the one hand, production costs have increased strongly, in particular as a result of the additional costs of prophylactic measures and spraying to control citrus canker, detected in 2002. On the other, the stabilising of demand for fresh fruits and the strong decrease in juice prices since the beginning of the decade caused a decrease in economic returns until 2007, when a conjunctural increase occurred. In this context of over-production, the areas devoted to lemon have stabilised or are decreasing.

## Production calendar and varieties

Production is based on four main varieties. 'Eureka' is grown on approximately $35 \%$ of the area, 'Limoneira' and 'Lisbon' on $25 \%$ and 'Genova' on $11 \%$. Production is staggered thanks to four flowerings of variable intensity. The main harvest is from May to September (winter picking: approximately $70 \%$ of production). However, the export season can start in March with the crudo (about 15\% of production). The fruits resulting from the other flowerings are sold on the domestic market.

## Outlets

Argentina is the world's leading producer of lemon juice and derivatives. The outlet is in leading position and handles 70\% of production. Five very large companies process a total of approximately a million tonnes of lemons each year. However, the economic profitability of the sector is based increasingly on fresh fruits after the strong decrease in the price of concentrate in recent years. Exports thus account for an increasing proportion of production. Domestic consumption has stabilised at 60000 t in a country with a population of 40 million.


major point of entry but shipments to the producing countries in southern Europe have increased markedly since the beginning of the 2000s with a category management approach. Italy is tending to edge ahead of Spain, with Greece still receiving large quantities. Shipments to destinations outside Europe form less than 10\% of total exports (Canada, Hong Kong, etc.). The Japanese market has opened up but the sanitary protocol is very strict. The US market has been closed since the early 2000s but should reopen in 2009. Only fruits from plantations approved by the SENASA and monitored by the latter from the plantation to the port of shipment are eligible for export. Argentina has about 60 export companies but the seven largest account for 75\% of shipments (with the three leading companies handling 50\%).

## Logistics

As a rule, the fruits to be shipped to Europe are taken by refrigerated road transport to Campana on the river Parana some 1200 km from Tucuman. They are then usually loaded on conventional ships and reach the ports in the northern part of the EU (Rotterdam and Antwerp) after 15 to 20 days at sea. The route is similar for Eastern Europe. The volumes for markets in the Far East and Canada are containerised and generally shipped from the port of Buenos Aires. Significant volumes are also shipped from the ports of San Pedro and Zarate.

