Dominican mango

A small country with favourable conditions for mango cultivation, the Dominican Republic is a newcomer to the international stage (for the past decade), with an incredible growth rate (7-fold increase in volumes in ten years), though still in modest quantities (14 300 t in 2014). Keitt seems to have found a favourable home to develop, since it represents at least 70% of export volumes, despite the efforts of the public institutions and associations to diversify cultivars in order to establish a footing on niche markets (ethnic, organic, gourmet). Because, evidently, the country is not in a position to compete with the heavyweights of the sector. Unusually compared to the country’s other agricultural industries, the mango is exported predominantly to Europe. The results obtained are better than decent, and worthy of special mention, given the growth in market share. Its natural economic partner, the United States, remains hard to access for competition and sanitary reasons. Nonetheless, the Dominican Republic must face up to the daunting challenge of climate change, which has brought severe drought since summer 2014, among other problems inherent to the industry.

History

1966: Ministry of Agriculture introduces 16 mango varieties, including Keitt and Kent, from Florida to San Cristobal (province west of Santo Domingo). Thereafter, development concentrates on Irwin, Kent, Keitt, Glenn, Carrie, Tommy Atkins, Springfield and Sensation.

1980: first commercial plantation.

2003: first exports.

2004: creation of the mango cluster ProMango from US funds in December, and structuring of the industry.

2006: cluster launches a competitive industry strategy with the following outlook: “to become by 2015 the number one high-quality mango exporter from Central America and the Caribbean for the ethnic, organic and gourmet markets (ready-to-eat mango) in Europe and the United States”. This ambitious mission has not yet been fully accomplished...

2014: imports of niche varieties for local development in 5 to 6 microclimate zones.

2015-2016: construction by ProMango of a packing station with ripening hall, due to be operational for the 2016 harvest.

2015: development of a national brand for local varieties (especially Banilejo, which takes its name from Bani, the Dominican Republic’s mango capital).
Location
While mangoes grow throughout the country, structured production is packed into the coastal zone of the south-west and mid-west. In decreasing order of volume, the main provinces concerned are Peravia (40% of the country’s cultivated surface areas), Azua, San Cristobal and San Juan. As well as these provinces, which represent 65 to 70% of planted surface areas, production and number of structured farms, it is important to add the north-west region (Dajabon province, close to the Haitian border), the northern region (Moca, Espaillat province), and the south-east region (La Romana province).

A mango festival is held every year in the city of Bani (capital of Peravia province), dubbed “the Dominican mango capital” for the occasion. The production area of Bani and the surrounding areas contains around fifteen mango packing stations (sometimes combined with other fruits and vegetables).

Production
In 2014-15, commercial production represented a surface area of 4,717 ha, for a volume of approximately 30,000 t, 40 to 50% of which was exported. Kent accounted for 70% of this volume, and is reportedly on the up (according to certain sources, 80% of exports). Next came Tommy Atkins with 15% (on the slide) and other varieties with 15%, including local varieties (yellow-fruit, especially Banilejo, Mingolo, Gota de Oro). Kent apparently accounted for minor volumes only.
If the estimated number of producers is between 1 400 and 1 500 (forming the mango cluster), those which provide most of the commercialised and export production can be counted on the fingers of one hand, each exploiting hundreds of hectares. Certain producers...
are GlobalGap, Tesco, JAS or Fair for Life certified. Furthermore, depending on the year, 10 to 30 % of export production is apparently organic certified, with three main producers located in the provinces of Azua and Peravia. Finally, there is a small biodynamic mango (and banana) producer based in Azua province (Demeter).

The average yield of traditional farms is 10 to 11 t/ha, while the maximum yield is 30 t/ha for a farm with more sophisticated production equipment (drip irrigation, advanced flower induction, etc.).

The ProMango cluster was established using public US funds in 2004. Thereafter, it has received aid via various other international backers. ProMango brings together approximately 350 active members involved in production, including the 149 members of the country’s only cooperative, Cooperativa Villa Fundación, fifteen or so exporters officially active in this sector and local associations from the provinces concerned.

The Villa Fundación cooperative is a project which emerged in 2004 in the village of the same name, covering a total surface of approximately 260 to 270 ha, producing above all Keitt (56 % of the cultivated area), and to a lesser degree Tommy Atkins (37 %). After being on standby for four years following management problems, this project was relaunched in 2013 thanks to a loan of 56 million DOP (approx. 1 million euros) granted by FEDA (Fondo Especial para el Desarrollo Agropecuario), a special agricultural development fund directly dependent on the President’s office.

While ProMango does not yet handle exports directly, it is building a packing station with a ripening chamber in Villa Sombrero (Peravia province, near Bani), which should be operational in 2016. This centre will provide services to producers-exporters, as well as exporters who will collect the fruits from local producers. In the longer term, ProMango could take responsibility for exports using this facility. It is planned to certify the packing station in good preparation practice with a long-term view to obtaining GlobalGap certification. According to ProMango, around fifty producers should sell their production this way.

Having described this facility, we cannot help but observe that control of this industry remains in the hands of a few private operators, which are positioned according to their own interest and advantage. And whatever our opinion of it, the surface area extensions involve a mango well-suited to the Dominican terrain, and which is also in demand from the international markets: Keitt.

The fruit fly of the genus Anastrepha (especially Anastrepha obliqua and Anastrepha ludens, or Mexican fruit fly) constitutes the main phytosanitary problem encountered in the country. The producers must accept a management and inspection programme governed by international phytosanitary standards. Hence in November 2014, the country was infested by the Mediterranean fly, which entered via the east of the country (via Punta Cana international airport). Consequently, the United States closed its borders to a range of Dominican fruits and vegetables (red tomato, smooth-skinned avocado, passion fruit, pepper, etc.) from March 2015, partially lifted in early January 2016 in zones which were not affected. This closure represented major dry losses for certain products. The sparse mango flows aimed at North America were not affected by this ban, given the sanitary conditions already imposed by the US Department of Agriculture before this crisis (hot water bath). Apart from this, there are other phytosanitary problems: other fruit flies, anthracnose, mites, lepidoptera such as Prays citri and Cryptoblabes gniidiella, scale insects, mildew, rats, etc.

Varieties and harvest calendar

After various research programmes, the Ministry of Agriculture ended up characterising 133 local cultivars, as well as around fifty unnamed varieties. We should note that the vernacular names can overlap. For example, Crema de Oro can be known as Gota de Oro or Crema de Leche, according to certain sources in the literature. The provinces of Peravia and San Cristobal pack in most of the varieties.

The domestic mango is characterised by a small size (237 g on average), a yellow colour and a lower pulp content than imported mangoes. The cultivars most commonly used as rootstocks are Largo, Sumozo, Mameyito and Banilejo. The latter, also in certain cases known as Mameyito, has emerged as being the most suitable local variety for industrialisation. It is also used for manufacturing pulp due to its low fibre content.

Furthermore, in 2014, ProMango imported ten or so new varieties aimed at niche markets (ethnic consumption). This genetic material was purchased from Fairchild Tropical Botanic Garden in Florida, under a development programme conducted by IDIAF, the Dominican Agricultural Research Institute. Five to six microclimates have been identified as able to accommodate these new varieties. The trees should enter production in approximately three years.

Finally, only around ten varieties are exported. Banilejo and Mingolo are highly rated in the United States and the United Kingdom by the Asian population. Exported in larger volumes from Haiti, Madame Francis is also mainly aimed at the United States.

The local varieties are harvested overall from March to July, whereas the introduced varieties are harvested a bit later (June to August-September for Keitt).
Domestic mango consumption is difficult to calculate in view of the lack of reliable production data. Indeed, the majority of the mangoes consumed in the country come from private gardens and orchards, backyards, all surface areas not registered by the Ministry of Agriculture. The supply for the national market mainly comprises local varieties and sorting rejects from the exportable supply. Some of the fruit is aimed at the processing sector. Note that it is important to include in national consumption those of the 4 million tourists who visit the Dominican Republic every year. In October 2015, mangoes sold from 20 to 35 DOP per piece at points of sale (including stalls) in the capital, Santo Domingo. The price is lower in rural zones close to production facilities.

The Dominican Republic started to export mangoes from 2003. From 300,000 boxes in the first year, the volume climbed to more than 2.5 million boxes in 2014. Exports have constantly risen, especially to Europe, to a more than noteworthy level. The main destinations are Continental Europe with more than 80%, and the Caribbean. Within the EU, the United Kingdom is the main outlet, followed by the Netherlands. After stagnating at less than 500 t for years, the United States had 883 t in 2013 and 932 t in 2014.

While the United States, the country’s economic partner, in theory represents the natural market of the Dominican Republic, mango exports to this country are nonetheless limited because of two main factors. On the one hand, the Dominican Republic faces direct competition with Mexico, undergoing price pressure barely tolerable for Dominican exporters, especially for Tommy Atkins, Kent, etc. On the other hand, due to the presence of the fruit fly (Anastrepha ludens, or Mexican fruit fly, and now Ceratitis capitata, the Mediterranean fly), the United States is forcing exporters to apply a hydro-thermal treatment: a hot water bath 46°C, from 65 to 110 minutes depending on the fruit size. The process must be monitored and validated by APHIS agents (Animal and Plant Health Inspection Service of the USDA). A single exporter based in the north of the country is equipped with such a facility, as opposed to 8 in Haiti. This technical constraint and considerable additional cost (installation + monitoring and inspection expenses), coupled to the commercial factor, are not doing anything to help a surge in exports to this destination. Apparently, Dominican mangoes will continue to harness value by developing outlets in Europe and the Caribbean.

The air-freight mango reportedly represents one third of export volumes. It takes advantage of cargo availability in tourist aircraft for transport to Europe from the country’s main airports: Punta Cana, La Romana, Santo Domingo, Puerto Plata. The sea-freight mango is...
exported primarily from the port of Caucedo (near Santo Domingo), and to a lesser degree Haina (Santo Domingo). Keitt is highly dominant with a 70 to 80% share of export volumes.

Shipping time:
- Europe (United Kingdom and Rotterdam): 10 to 12 days
- New York: 5 days
- Miami: 2 days

The country has 10 to 15 exporters. Some are also producers, but this is not the rule in this country. Overall, the majority of exports remain in the hands of a few operators.

There is a fruit processing sector in the Dominican Republic. Mango-derived products are exported in small quantities, practically all to the United States (including Puerto Rico), with a small proportion going to the Caribbean.