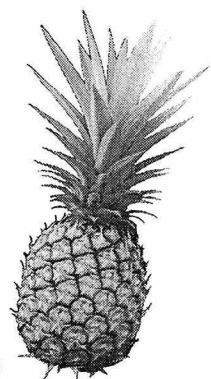


The world pineapple market

When growth goes hand in hand with diversity

Fresh or processed, pineapple is found all over the world. Nearly two pineapples in five are sold on the international market, with canned fruits and juice accounting for 80 percent of the total. Fresh pineapple is in a strong growth phase. Imports exceed a million tonnes and there are no signs of a change in trend. Driven by the multiplication of origins and strong segmentation, demand should increase in the coming years.



The international pineapple market can be summarised by the word 'dynamism'. Pineapple has a very important position in the economies of many countries and on all fronts (canned fruits, juice and fresh fruits). According to FAO, more than 80 countries produce nearly 14 million tonnes of pineapple.

Thailand (2.3 million tonnes), the Philippines (1.5 Mt), Brazil (1.4 Mt), China (1.4 Mt) and India (1 Mt) are the main producer countries. Costa Rica and Côte d'Ivoire, with strong involvement in the fresh pineapple market as seen below, are in the 8th and 15th position respectively.

Eaten mainly in the production zones after sale on local or regional markets, pineapple has the special feature of being a strongly internationalised fruit. Our calculations show that nearly two pineapples in five are traded on the international market and sold fresh or processed. This is a major feature of the sector, which has strengthened continuously in recent years after stagnation or decrease in the mid-1990s. More than 5 million (39 percent) of the 14 million tonnes grown is destined for export. In comparison, banana has trouble in attaining 10 percent and mango 3 percent.

Growth and more growth

This international success is obviously a direct result of the use of this fruit for processing. Nearly 80 percent of pineapples are found on the market in processed form: 48 percent for single or concentrated juice and 30 percent for canned fruits.

More than a million tonnes of fresh pineapple is traded: 1 154 203 tonnes in 2001. This market accounts for more than 20 percent of world business in pineapple and the proportion has increased since the end of the 1980s.

Analysis of FAO data makes it possible to identify three clearly distinct periods in the history of fresh pineapple. The first runs from the end of World War 2 until the very beginning of the 1980s and consists of the restarting of export operations. However, the market was not considered as a priority in comparison with the canned pineapple market that developed very rapidly.

The second phase runs from the mid-1980s to 1995. The rate of supply increased. The half million tonne level was reached in 1987 and 700 000 tonnes was shipped in 1994 and 1995. This vitality is linked to the

general increase in trade in fresh produce, the improvement of sea transport techniques and the enthusiasm—especially in Europe—for exotic fruits.

The third phase is in progress today and enhances the favourable trend of the second phase. The increased number of origins is one of the explanations: Côte d'Ivoire has lost its quasi-monopolistic status to the benefit of Costa Rica, Honduras, Ghana, etc. Segmentation policies with the sale of new varieties associated with new brands are an alternative to the traditional Smooth Cayenne that hitherto formed the whole of pineapple supplies, with the exception of the micro-market for Victoria pineapple shipped by air. The tendency for operators to register new brands and protect their plant varieties confirms the need to stand out in a strongly growing market.

Another feature of the market is a certain specialisation of origins or production regions in types of product. Asia preferentially grows pineapple for processing and export (canned and juice). Fresh pineapples are exported from West Africa, Central and South America and the Caribbean.

Asia for processed pineapple ...

Pineapple processing is closely linked to Asia. Thailand, the Philippines and Indonesia account for nearly 80 percent of world canned pineapple exports! The market is depressed at the moment. The stocks of canned fruits formed during a period of very low prices (2000-2001) cover

Pineapple — World production and imports

Tonnes	World production	Imports — Fresh fruit equivalent				Total export
		Concentrat. juice	Single juice	Fresh pineapple	Canned pineapple	
1995	12 493 725	2 195 308	467 497	695 961	1 547 616	4 906 382
1996	12 211 943	2 358 869	427 924	776 771	1 601 027	5 164 592
1997	12 436 476	2 093 744	416 779	867 581	1 533 537	4 911 641
1998	12 174 673	1 657 535	419 266	860 619	1 382 769	4 320 190
1999	13 651 158	2 108 821	465 277	1 031 629	1 641 889	5 247 617
2000	13 706 726	1 847 856	483 458	1 035 433	1 686 474	5 053 221
2001	13 889 043	1 965 588	625 114	1 154 203	1 628 969	5 373 874

Source: FAO

demand. This slump can be considered as classic and traditional. The low prices in 2000 and 2001 encouraged growers—especially in Thailand—to abandon the sector, leaving the processing plants idle. In 2002, Thai juice production operated at only 50 percent of its potential. As a result, prices at production shot up to THB 5 per kg in contrast with THB 1.5 per kg in 2000. The price of concentrated pineapple juice also increased strongly, reaching \$US 1 350 per tonne (CAF Europe) in 2002. The same trend has been observed for canned pineapple. The price per box of 24/20oz rings increased from \$US 6.15 to \$US 8 FOB Bangkok between January and August 2002. The comparatively good winter harvest enabled a return to more reasonable prices of around \$US 6 per box for delivery in the first quarter of 2003. No doubt while awaiting the next slump!

...Costa Rica and Côte d'Ivoire for fresh pineapple

The fresh pineapple market is the stamping ground for two countries: Costa Rica (387 000 tonnes) and Côte d'Ivoire (183 000 tonnes). Between them, they account for half of international trade in fresh pineapple. The Philippines are in third position with 154 000 tonnes.

This picture does not show the upheavals that have been experienced by the market. The roles of leader and outsider were reversed over a 15-year period. Côte d'Ivoire alone had a 30 percent market share in 1996 and 1997, while Costa Rica accounted for less than 7 percent. The order has now been reversed following investment by the multinational Del Monte in the production sector in Costa Rica. The situation has remained fairly stable for the other origins. Ghana has developed its shipments little by little (20 000 tonnes) but under heavy constraints (freight capacity, shortage of water, etc.). Although it has ambitious projects, Honduras has oscillated between 20 000 and 50 000 tonnes for decades. The Philippines export 120 000 to 170 000 tonnes, mainly to Japan. Hawaii supplies its national market, the United States. Among the secondary origins, Mexico could no doubt create a surprise in the

Fresh pineapple — United States and EU imports				
United States	Total of which	Costa Rica	Honduras	Mexico
1996-1997-1998	197 365	146 592	26 243	13 666
2002	405 715	344 731	20 629	18 041
EU-15	Total of which	Côte d'Ivoire	Costa Rica	Ghana
1996-1997-1998	273 149	149 940	75 579	21 689
2001	366 948	174 644	135 646	31 743

Customs sources

coming years. Its exports increase every year and reached 35 000 tonnes in 2001. Brazil is another origin to keep an eye on. The third-largest producer in the world, its very strong domestic demand covers production. However, there are many signs that it could emerge as an exporter, as it has considerable experience in trade in fresh fruits, large irrigated perimeters, etc. Nevertheless, Brazil has always displayed 'Yo-Yo' style performance on the international market, with 35 000 tonnes in 1993 and 10 000 tonnes two years later.

In questions of price, the fresh pineapple market resembles the other markets for raw materials. At best, prices have stagnated in current terms for 15 years, varying around \$US 600 per tonne. A very distinct decrease is clearly observed in constant terms, at all trade stages (import or export).

Varietal renewal accompanying market growth

At the other end of the fresh pineapple chain, on the import side, the market is driven by the United States and the European Union. The United States displays impressive dynamism, with imports multiplied by 1.6 between 1998 and 2002. After a pause in 2001 (stagnation of imports in relation to 2000), an increase of 85 000 tonnes was observed in 2002! The results for January 2003 show a promise of good performance with an increase of 18 percent in comparison with January 2002. Costa Rica increased its grip on the market thanks to the new variety MD-2, 'Del Monte Gold Extra Sweet Pineapple'. This has an 85 percent market share in comparison with 79 percent in 1998. An extra 84 000 tonnes was shipped to the United States from 2001 to 2002. Ecuador is certainly far behind its Central American competitor, but the growth rates show that it has

ambitions: + 111 percent from 2001 to 2002 and the multiplication of volumes by nearly 8 between 1998 and 2002.

The situation is more complex in the European Union. Costa Rica has not yet attained the same degree of hegemony. For the moment, Côte d'Ivoire has the leading position, with a 46 percent market share in 2001 against Costa Rica's 37 percent. But the trend is clearly towards the taking over by the latter origin in the short term. While Côte d'Ivoire is stabilising its export volumes, Costa Rica is developing its shipments rapidly. The EU market has gained nearly 100 000 tonnes since 1998, of which 57 000 tonnes is from Costa Rica, 33 000 from Côte d'Ivoire and 13 000 from Ghana. The reasons for Costa Rica's success are to be sought in the replacement of varieties available on a market hitherto dominated by Smooth Cayenne. After the semi-failure of Champaka green pineapple in the early 1990s, Del Monte marketed a new pineapple under the brand name *Del Monte Gold Extra Sweet Pineapple* and that corresponds to the expectations of a proportion of European consumers. Varied supply, backed up by practically perfect mastery of logistics and marketing, has made this pineapple successful even though the price is higher than that of Smooth Cayenne. Stimulated by this success, challengers have all in turn offered their 'Sweet' pineapple, with patent lack of imagination, at least as regards the names: *Super Sweet* from Dole, *Ultra Sweet* from Bonita, etc. However, the new competitors growing fruits in Honduras, Ecuador and Costa Rica seem to have arrived on the market a little too late to hit the jackpot. Indeed, the difference in the prices of Smooth Cayenne and 'Sweet' varieties has closed recently ■

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Segmentation of the pineapple market: a winning strategy

The international fresh pineapple market is fascinating for more than one reason. World imports have grown at the rate of about 10 percent per year for the past five years. Practically only the mango market is able to do so well. But study of the international market does not stop at these figures. Market growth is associated with the performance of a powerful threesome combining in the mid-1990s an origin, Costa Rica, a multinational, Del Monte Fresh Produce, and a new pineapple variety, MD-2 or Del Monte Extra Sweet Pineapple. This new variety has become as important a variety as Smooth Cayenne.



Plants (UPOV) while the other consists of taking out a patent. The first system is the rule in Europe while the second is used above all in the United States (Plant Patent Act) for plants with vegetative multiplication such as pineapple. In the UPOV system, the breeder submits an application for a certificate for a Community plant variety right, with a succinct description of the

variety, to the national correspondent. The certificate is not awarded officially until the variety has been examined by a

recognised expert body. The examination seeks criteria of Distinctness, Uniformity and Stability (DUS tests) defined specifically for each plant species and officially approved by UPOV. It is noted that CIRAD has lodged a list of descriptors

with the GEVES (*Groupe d'Étude et de contrôle des Variétés et des Semences*). The patent system used by US breeders is much less accurate and also more costly. The applicant describes his variety and a federal office awards the

patent or not after examination of the dossier.

The saga of MD-2

The history of MD-2 is fairly confused. Its origins differ according to the source. We therefore propose one of the probable scenarios for its creation but with no certitude whatsoever. The

variety MD-2 was bred in Hawaii by the PRI (Pineapple Research Institute) at the beginning of the 1970s. It was the result of a cross between two previous hybrids bred in 1958 and 1959. Its genealogy is complex, involving more than five different varieties including Smooth Cayenne. Other interesting hybrids were bred during these operations. In

conformity with the statutes of the PRI, which has since ceased to exist, these hybrids belong to all the members of the institute. These included Maui Pineapple, Del Monte and Dole.

According to *Maui News*, the Hawaiian daily, in the early 1980s, Maui Pineapple marketed hybrid 73-50 as 'Hawaiian Gold' and 73-114 as 'Royal Coast'. Del Monte started to market hybrid 73-114 in the USA in 1996 under the registered name 'Gold Extra Sweet'.

Since then, Dole has also marketed a variety, 'Dole Premium Select', with similar characteristics. So far, only Del

Monte seems to have gone in for a protection system. It obtained a US patent (23.08.93 US 110808) in 1993 for a variety then called CO-2. In 1994, Del Monte applied to the *Institut national de la propriété industrielle français* (INPI) for a patent for CO-2 ,

under the reference 94 10210. This request was unusual in France where the UPOV system is the rule and was justified in the absence of reference system for the DUS examination (criteria certifying Distinctness, Uniformity and Stability) and the awarding of a certificate for a Community plant variety right for

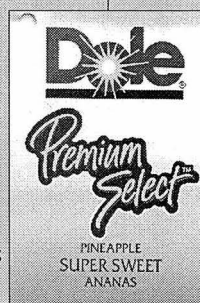
pineapple. Finally, in January 2001, Del Monte applied for a certificate for a Community plant variety right (ANA 00001) in Germany for the variety CO-2 referred to as 'Del Monte Gold', making reference to the US and French patents. We do not yet know what reply was given to this application.

Conflicts

A legal imbroglio has developed in the USA in the past few years around the question of the ownership of the PRI hybrids and trade marks, opposing Del Monte and Maui Pineapple on the one hand and Del Monte and Dole on the other.

The variety is thus an object of desire in many quarters—proof if need be of its commercial potential!

Competitors seek to benefit from this dynamic movement. But no mistake should be made about the success of this new pineapple. It is true that the colour, sweet flavour and comparative stability of quality are factors of success related to the variety. But nothing would have been possible without the commercial strength and production and logistic organisation set up by Del Monte. A great number of international operators are now throwing themselves into the *Sweet* adventure using identical or comparable varieties from plantations in Costa Rica and also in South America and even West Africa. Whereas the term 'sweet' associated with all kinds of superlatives is being set out on retailers' shelves, *Fruitrop* examines the legal aspects of the protection of plant varieties in general and of MD-2 in particular.



Protection systems for plant varieties

Two plant variety protection systems can be used by breeders. One follows the rules of the International Union for the Protection of New Varieties of