

The Price of Frozen Concentrate Orange Juice

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Introduction

The price of Frozen Concentrate Orange Juice (FCOJ) is one critical determinant of the price for Australian juicing fruit. This paper collects imported FCOJ price data and verifies them by means of a number of alternative estimation methods to estimate the competitive price for local juicing fruit.

Consultations done to collect the data

Discussions were done with

- Australian Citrus Growers Inc
- 1 Australian importer of juice concentrates
- 4 Brazilian exporters of orange juice concentrates

Analysis

Firstly, landed FCOJ price data collected by industry are presented. Secondly, checks are performed by comparing those price data against

- information previously held by PIRSA
- customs data
- FOB prices for exports from Brazil
- the so-called folding equation used by Berri Australia P/L.

Thirdly, using estimates of the cost of processing in Australia, an approximate competitive price for local juicing oranges is provided.

Table 1 below shows landed costs of imported from Brazil into Australia, as provided by the Australian Citrus Growers (ACG). The values represent average prices calculated from imported quantity and value data. Prices are provided for Brazil, by far the largest source, and for imports from all sources. Figures 1 and 3 which follow show changes in the landed FCOJ price since 2000.

Table 1: Unit price of imported Frozen Concentrate Orange Juice into Australia

Year	2000		2001		2002		2003		2004	
	(\$/KG)	\$/Litre	(\$/KG)	\$/Litre	(\$/KG)	\$/Litre	(\$/KG)	\$/Litre	(\$/KG)	\$/Litre
Brazil	2.12	2.81	1.62	2.1	1.62	2.14	2.22	2.94	1.68	2.22
Total	2.12	2.81	1.65	2.2	1.66	2.20	2.19	2.90	1.68	2.22

Source: Australian Citrus Growers

Notes:

- Data obtained from ACG and collected via ABS¹
- Data includes duties and charges
- \$/Litre = per litre of concentrate (not per litre of single strength)
- Assumption: FCOJ is at 66 Brix
- Assumption: gravity of 1.3239 used to convert kilograms into litres of concentrate²

¹ Data is provided to the ABS by the Australian Federal Customs authority, which compiles a comprehensive list of statistical information on all goods that are imported into Australia. In reference to this enquiry, all data including: value, weight/quantity, origin, mode of transport etc are collected by customs. Customs runs automated checks on the data it is provided, and all data is forwarded to the ABS on a daily basis.

Figure 1: FCOJ unit price per Litre

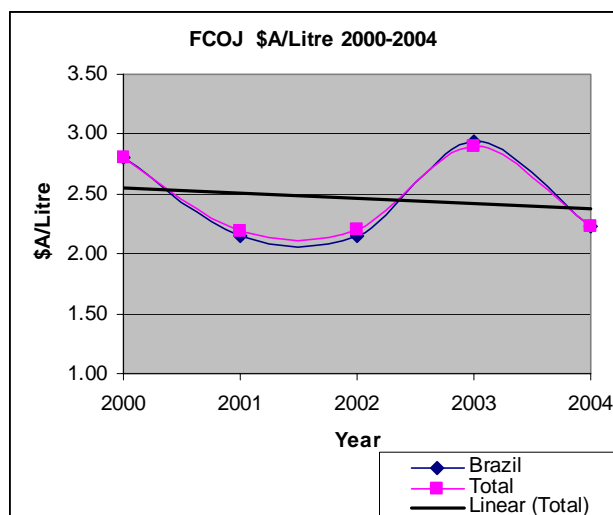
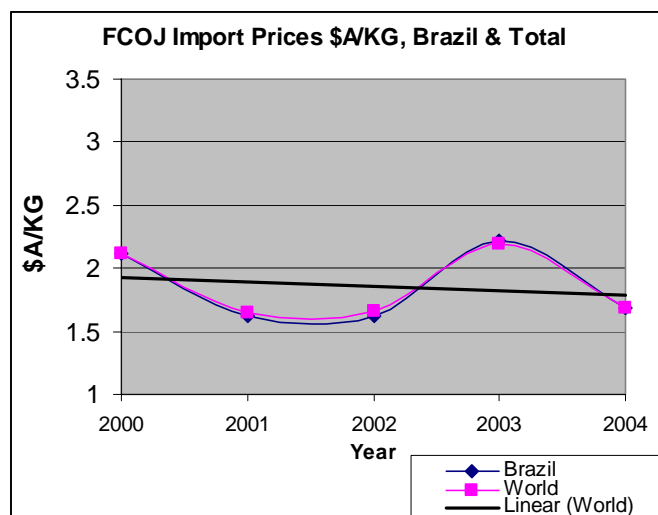


Figure 2: FCOJ unit price per kilogram



As we can see from figures 1 and 2, the landed unit price in Australia of FCOJ from Brazil has risen and fallen over the last 5 years, but is on a downward trend. Factors influencing the oscillations include changes in the value of the Australian dollar and industry-specific issues in Brazil.

The accuracy of the estimates in Table 1 can be partially confirmed from price data previously given to PIRSA by Australian processors. Those data are \$A1.959/litre of concentrate (66 Brix FCOJ) and \$A1.48/kilogram of concentrate (66 Brix FCOJ). The minor differences between these data and those in Figures 1 and 2 might be due to:

- differences among prices offered by different companies
- quality differences (intrinsic or otherwise)
- differences in quantities imported providing different volume discounts.
- the specific time of purchase and the associated exchange rates
- movements in shipping and freight costs
- the state at which the FCOJ was landed.

ABS customs data further support the accuracy of the data in Table 1 and Figures 1 and 2. They also show that unit price varies by state of final destination.

Table 2: Imported FCOJ from Brazil by destination (\$A/Kg) – May 2003

State of Final Destination	\$A/KG
New South Wales	2.62
Victoria	1.97
Queensland	1.77
South Australia	1.63
Western Australia	2.14
Tasmania	1.52
Total	2.15

² This is the measure provide by processors.

The estimates in Table 1 are also supported by Table 3 below which displays quantities and FOB values for FCOJ exported from Brazil to Australia and the world. The differences between these values and those stated in Table 1 constitute the costs associated with ocean freight, insurance clearing and duties. Industry sources place those costs at between \$A0.50-0.70/Kg concentrate (66 Brix), meaning that the landed price in 2002-03 was between \$1.70 and \$1.90 (\$1.60 and \$1.83 in 2003-04). Those values are consistent with the estimates in Table 1.

Table 3: FCOJ Exported from Brazil (KG and US\$ FOB)

	2002/2003					2003/2004				
	Quantity	Value (US\$)	US\$/MT	\$A/MT	\$A/KG	Quantity	Value (US\$)	US\$/MT	\$A/MT	\$A/KG
Australia	25,238	22,370,000	\$ 886	\$1,182	\$ 1.2	11,416	9,423,000	\$ 825	\$1,101	\$1.10
Total	998,851	874,383,000	\$ 875	\$1,167	\$ 1.2	887,761	749,794,000	\$ 845	\$1,126	\$1.13

Source: USDA Foreign Agricultural Service, obtained via Brazilian Department of Foreign Trade (SECEX)

Notes:

- Quantities are in kilograms
- All prices represent unit prices (value/quantity) and are FOB
- Year 2003/2004 represents only 10 months of data however this will have marginal impact on the unit price

Australian processors use a so-called folding equation which refers to the process by which concentrate is transformed into single strength juice. By inserting the prices from Table 1 (not necessarily the prices used by processors) into the so-called 'folding' equation provided to PIRSA by Australian processors, we arrive at a cost per single strength litre of \$0.26 (PIRSA cannot provide the details of the equation as it is confidential). That figure of \$0.26 is consistent with the prices stated by industry, which have varied from \$0.20-\$0.40/single strength litre (SSL).

The final task is to estimate the competitive price for local juicing oranges. To do so it is necessary firstly to convert the FCOJ to a fresh fruit equivalent. That is generally accepted to be a factor of 13 ie 1 tonne of FCOJ is equivalent to 13 tonnes of Australian juicing fruit. Applying that to the 2004 landed cost of \$A1680/tonne, gives a figure of \$A129/tonne for juice processed from Australian fruit. The second adjustment is to subtract the costs of processing in Australia which industry sources place at around \$A85-100/tonne. That gives an estimated competitive price of between \$29 and \$44/tonne.

There is some uncertainty about the exact price of FCOJ and hence the estimates here are provided as a range of values. However, the conclusion of this analysis is that imported FCOJ is still far cheaper than locally produced product.

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PIRSA: Corporate Strategy and Policy