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Brazil

Citrus

Annual

2003

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Report Highlights:

Total Brazilian MY 2004/05 orange crop is forecast at 450 Mbx, up 23 percent from the current crop, assuming that good weather conditions prevail during the December 2003 to June 2004 period to support fruit setting and size. The Sao Paulo commercial area should amount to 360 Mbx, up 80 Mbx from the revised estimate for the current season (280 Mbx). Total FCOJ production for MY 2004/05 is projected at 1.26 mmt, 65 Brix, up 255,000 MT from MY 2003/04 due to expected higher availability of the fruit. FCOJ exports for MY 2004/05 are forecast at 1.195 mmt, up 60,000 MT compared to MY 2003/04.

Includes PSD Changes: Yes Includes Trade Matrix: No Annual Report Sao Paulo [BR3] [BR]

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FRESH ORANGES

PS&D Table

| Commodity | Fresh C | Dranges | (HECTARES)(1000 TREES)(10 | | | | |
|------------------------|----------------|--------------|---------------------------|--------------|------------|----------------------|---------|
| _ | 2001 | Revised | 2002 | Estimate | 2003 | Forecast | UOM |
| US | SDA Official [| Estimate [)A | Official [| Estimate [)A | Official [| Estimate [Nev | v] |
| Market Year Begi | n | 07/2002 | | 07/2003 | | 07/2004 MN | Λ/ΥΥΥΥ |
| Area Planted | 792900 | 792900 | 805400 | 805400 | 0 | 809400 (HI | ECTARE |
| Area Harvested | 727200 | 727200 | 727900 | 727900 | 0 | 730900 (HI | ECTARE |
| Bearing Trees | 210000 | 210000 | 210000 | 210000 | 0 | 211000 (10 | 00 TRE |
| Non-Bearing Trees | 24000 | 24000 | 28000 | 28000 | 0 | 29000 (10 | 00 TRE |
| TOTAL No. Of Trees | 234000 | 234000 | 238000 | 238000 | 0 | 240000 (10 | 00 TRE |
| Production | 18360 | 18360 | 15790 | 14974 | 0 | 18360 (10 | 00 MT) |
| Imports | 0 | 0 | 0 | 0 | 0 | <mark>0</mark> (10 | 00 MT) |
| TOTAL SUPPLY | 18360 | 18360 | 15790 | 14974 | 0 | 18360 (10 | 00 MT) |
| Exports | 41 | 41 | 41 | 82 | 0 | <mark>102</mark> (10 | 00 MT) |
| Fresh Dom. Consumption | on 4896 | 4896 | 4896 | 5100 | 0 | 5528 (10 | 00 MT) |
| Processing | 13423 | 13423 | 10853 | 9792 | 0 | 12730 (10 | 00 MT) |
| TOTAL DISTRIBUTION | 18360 | 18360 | 15790 | 14974 | 0 | 18360 (10 | 000 MT) |

Production

PS&D Tables

The following tables provide revised data for Sao Paulo and total Brazilian fresh orange production, supply and demand (PS&D) for marketing years (MY) 2002/03, 2003/04 (July-June) and the initial forecast for MY 2004/05.

| Sao Paulo: Fresh Oranges PS&D (Jul-Jun,1,00 | 0 ha, million tr | ees & million | 40.8 kg boxes) |
|---|------------------|---------------|----------------|
| Item/Marketing Year | 2002/03 | 2003/04 | 2004/05 |
| (Bloom/Harvest) | (01/02) | (02/03) | (02/03) |
| Area Planted | 600.0 | 609.0 | 613.0 |
| Area Harvested | 542.0 | 539.0 | 542.0 |
| Bearing Trees | 160.0 | 159.0 | 160.0 |
| Non-Bearing Trees | 20.0 | 24.0 | 25.0 |
| Total Trees | 180.0 | 183.0 | 185.0 |
| Production | 365.0 | 280.0 | 360.0 |
| Exports | 1.0 | 2.0 | 2.5 |
| Domestic Consumption | 45.0 | 47.0 | 57.5 |
| Processing FCOJ | 305.0 | 215.0 | 282.0 |
| Processing NFC (exports) | 14.0 | 16.0 | 18.0 |

| Brazil: Fresh Oranges PS&D (Jul-Jun,1,000 ha | a, million trees | & million 40.8 | kg boxes) |
|--|------------------|----------------|-----------|
| Item/Marketing Year | 2002/03 | 2003/04 | 2004/05 |
| (Bloom/Harvest) | (01/02) | (02/03) | (02/03) |
| Area Planted | 792.9 | 805.4 | 809.4 |
| Area Harvested | 727.2 | 727.9 | 730.9 |
| Bearing Trees | 210.0 | 210.0 | 211.0 |
| Non-Bearing Trees | 24.0 | 28.0 | 29.0 |
| Total Trees | 234.0 | 238.0 | 240.0 |
| Total Production | 450.0 | 367.0 | 450.0 |
| Sao Paulo | 365.0 | 280.0 | 360.0 |
| Others | 85.0 | 87.0 | 90.0 |
| Exports | 1.0 | 2.0 | 2.5 |
| Sao Paulo | 1.0 | 2.0 | 2.5 |
| Domestic Consumption | 120.0 | 125.0 | 135.5 |
| Processing FCOJ | 315.0 | 224.0 | 294.0 |
| Sao Paulo | 305.0 | 215.0 | 282.0 |
| Others | 10.0 | 9.0 | 12.0 |
| Processing NFC (exports) | 14.0 | 16.0 | 18.0 |

General

The Agricultural Trade Office (ATO)/Sao Paulo forecasts the total Brazilian orange crop for MY 2004/05 (Jul-Jun) at 450 million 40.8 kg boxes (Mbx), up 83 Mbx relative to the revised estimate for MY 2002/03 (367 Mbx), assuming that good weather conditions prevail during the December 2003 to June 2004 period to support fruit setting and size. The commercial area of the state of Sao Paulo and the western part of Minas Gerais should produce 360 Mbx, whereas other growing regions should account for the remaining 90 Mbx.

The major factors pointing to a projected rise in production for MY 2004/05 in the Sao Paulo and Minas Gerais commercial areas are:

- Orange trees will be rested from a smaller 2003/04 crop;
- Enhanced crop management including greater use of fertilizer, chemicals, etc. due to good orange prices received by producers in the past couple of years;
- Orange trees being very stressed from a prolonged dry period (May-October 2003);
- Good blossomings that occurred in the October-December period after the beginning of the rainy period. Note that historically the first big blossoming occurs in September, but in 2003 the first big flowering happened in November, when the second blossoming usually comes;
- Many groves showing blossoms in the inner part of the tree;
- Regular to good weather conditions that have prevailed since November 2003, thus supporting the fruit setting;
- The on-year of the biennial cycle of the Hamlin and Valencia varieties;
- Irrigated groves, which is becoming a common practice for a small, yet increasing share of orange growers.

The aforementioned factors should result in an expected higher yield for the Sao Paulo commercial area which is projected at 2.25 boxes/tree, up 28 percent from MY 2003/04,

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whereas the overall Brazilian orange yield is forecast at 2.13 boxes/tree, a 22 percent increase compared to the current Marketing Year.

Area expansion and tree inventory are likely to only marginally contribute to the expected higher MY 2004/05 production. ATO/Sao Paulo forecasts total Brazilian orange area for MY 2004/05 at 809,400 hectares (ha), a one percent increase from the current crop, based on relatively stable crop inventory for the Sao Paulo/Minas Gerais commercial areas and updated information from the Brazilian Geography and Statistics Institute (IBGE). The commercial areas of Sao Paulo/Minas Gerais should account for 613,000 ha, up 4,000 ha from MY 2003/04. Total Brazilian tree inventory for MY 2004/05 is projected at 240 million trees (211 million bearing and 29 million non-bearing trees), up 2 million trees compared to MY 2003/04.

Note that it is still too early to forecast the 2003/04 crop (MY 2004/05) and that more accurate numbers will be available only after February/March 2004, due to the blossoming delays.

The ATO/Sao Paulo has revised downward the size of the Brazilian crop for MY 2003/04 to 367 Mbx, down 5 percent from the previous estimate, due to lower crop yields than previously forecast in the Sao Paulo/Minas Gerais commercial areas. These areas should contribute 280 Mbx, while the estimate for the other orange growing areas remains unchanged at 87 Mbx, in accordance with updated information from IBGE.

The warm and dry weather during the crushing season (June-October 2003) in the commercial areas of Sao Paulo and Minas Gerais resulted in lower than average size of the fruits, thus reducing the crop volume. Additionally, fruits from CVC (Citrus Chlorosis Variegated) affected plants, which are smaller than the healthy ones also contributed to reduce the overall size of the fruits. Here, we are speaking of 10-15 year old trees, especially in Minas Gerais and the northern part of Sao Paulo, which resisted the disease through pruning and other crop management practices. Post contacts also report that the droppage was higher than average.

The Sao Paulo State Institute of Agricultural Economics (IEA) released the results of the sixth and last citrus crop survey (September 2003) for the 2002/03 crop (MY 2003/04). The Sao Paulo crop, including both commercial and non-commercial areas, is estimated at 327.1 Mbx, down 34.6Mbx compared to MY 2002/03 (361.7 Mbx). Note that IEA takes into account the entire state of Sao Paulo, while ATO estimates follow the citrus industry methodology limited to the commercial area of the state plus the western part of Minas Gerais. IEA also reports that the state of Sao Paulo orange tree inventory is estimated at 212.5 million trees (187.5 million bearing and 25 non-bearing trees)

According to the Brazilian Association of Citrus Exporters (Abecitrus), the size of the MY 2003/04 crop for the Sao Paulo commercial area is currently estimated at 260 Mbx. Industry sources place the figure between 260 and 280 Mbx, including both the commercial areas of Sao Paulo and Minas Gerais.

Diseases

According to the Sao Paulo State Fund for the Defense of Citriculture (Fundecitrus), the 2003 CVC field survey (June-July 2003) shows that 43.56 percent of the sampled trees in the Sao Paulo and western Minas Gerais commercial areas show symptoms of the disease. Results indicate that 10.38 percent of the sampled trees showed symptoms restricted to leaves

(Grade 1), while 33.18 percent showed leaf and fruit symptoms (Grade 2). The disease is mostly concentrated in the northern part of the state of Sao Paulo.

| Citrus Chlorosis Var | riegated (CV | /C) - Estin | nated Preva | alecence of | f Symptom | s (percenta | ige of total | sample). |
|---|--------------|-------------|-------------|-------------|-----------|-------------|--------------|----------|
| Severity | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| Grade 1 1/ | 15.93 | 22.89 | 13.68 | 20.95 | 13.23 | 12.37 | 10.36 | 10.38 |
| Grade 2 2/ | 6.17 | 9.39 | 7.55 | 15.13 | 20.8 | 24.07 | 27.92 | 33.18 |
| Total | 22.10 | 32.28 | 21.23 | 36.08 | 34.03 | 36.44 | 38.28 | 43.56 |
| Source: Sao Paulo State Fund for Defense of Citriculture (FUNDECITRUS). 1/ Grade 1: plants with | | | | | | | | |
| | | | | | | | | |

symptoms restricted to the leaves. 2/ Grade 2: plants with leaf and fruit symptoms.

In spite of the high percentage of trees affected with CVC, the disease is following its "natural" evolution, and it is reported under control. Affected trees that are 10-15 years old continue producing due to crop management practices but productivity is diminished and fruit size is reduced as producers look to replace these trees within two to three years time. Newly planted trees, for which seedlings were produced in protected nurseries, are more likely to become disease-free and result in healthy mature trees. In fact, trees under two years of age show a 3.9 percent infection level, up 1.1 percent point compared to 2002, but well below the twenty percent level in 1998-1999. The major methods to control CVC are: protected nurseries, pruning/eradication of infected trees, and the chemical control of the vector (sharpshooter). The table shows the evolution of the disease from 1996 to 2003, according to Fundecitrus.

The 2003 citrus canker sampling survey indicates that 0.20 percent of the sampled blocks show citrus canker, compared to 0.11 and 0.083 percent for 2001 and 2002, respectively, as reported by Fundecitrus. The increase is related to weather conditions favoring the spread of the disease and not enough field inspectors to monitor the evolution of canker. In spite of the higher percentage, the disease is considered under control.

Cumulative 2003 (January-November) tree eradication from commercial groves (blocks) due to citrus canker is 177,668 trees, up 75,095 trees for the same period in 2002. Cumulative non-commercial grove eradication for the January-November 2003 period is 52,749 trees, up 23,388 trees from the same period in 2002.

Post contacts report that with the migration of citrus groves to the southern side of the Tiete River, canker could represent a certain risk in the future. Pasture is the traditional activity for such areas and it represents the natural habitat for the sharpshooter, the insect that transmits the disease. Fundecitrus inspectors have already found canker in that region, and special attention is required.

The leaf miner also represents an additional factor contributing to spreading the canker at a faster pace. The insect damages the leaves, making it easier for the bacteria to penetrate the tree. It also increases the size of the lesion.

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|------|-----|----|----|

. .

| | | Block | ζ | | Domestic Grove | | | | |
|-----------|-----|-----------------|--------|------------|----------------|-----------------|-------|------------|--|
| Month | New | Recontamination | Total | Plants | New | Recontamination | Total | Plants | |
| | | | | Eradicated | | | | Eradicated | |
| January | 6 | 6 | 12 | 11,872 | 36 | 5 | 41 | 2,024 | |
| February | 16 | 10 | 26 | 31,570 | 103 | 4 | 107 | 4,047 | |
| March | 13 | 23 | 36 | 28,492 | 15 | 1 | 16 | 4,116 | |
| April | 27 | 22 | 49 | 19,064 | 25 | 4 | 29 | 1,731 | |
| May | 27 | 23 | 50 | 31,288 | 31 | 8 | 39 | 13,228 | |
| June | 10 | 23 | 33 | 4,949 | 184 | 15 | 199 | 2,703 | |
| July | 17 | 15 | 32 | 3,533 | 207 | 27 | 234 | 4,898 | |
| August | 20 | 18 | 38 | 20,910 | 269 | 9 | 278 | 2,134 | |
| September | 13 | 12 | 25 | 8,312 | 120 | 13 | 133 | 6,579 | |
| October | 21 | 7 | 28 | 10,249 | 110 | 21 | 131 | 7,765 | |
| November | 6 | 4 | 10 | 7,429 | 311 | 29 | 340 | 3,524 | |
| December | | | 0 | | | | 0 | | |
| Total | 176 | 163 | 339 | 177,668 | 1,411 | 136 | 1,547 | 52,749 | |
| a a 1 | | | 6.01.1 | | | | | | |

Evolution of Citrus Canker in the State of Sao Paulo, 2003

Source: Sao Paulo State Fund for Defense of Citriculture (FUNDECITRUS).

Fundecitrus is currently conducting a survey to ascertain the spread of "Sudden Death of Citrus" (Morte Subita dos Citros" - SDC) in the affected areas in Minas Gerais and northern Sao Paulo. It is estimated that approximately 1.5 million trees are symptomatic (between 80,000 and 100,000 trees in the state of Sao Paulo and the remainder in the state of Minas Gerais).

Researchers have been trying to identify the pathogen, which has yet to definitively determined. Alellyx Applied Genomics, a national research and development company controlled by Votorantim Ventures, has just discovered a virus that is strongly associated with SDC. The virus was named Citrus Sudden Death Virus (CSDV). A test was devised using more than 100 plants and was able to detect the disease in over 90 percent of the samples. Alellyx has established two hypotheses: SDCV is the only virus causing the disease or SDCV is awakened by its combination with mutations of the "Tristeza" virus, since SDC symptoms are very similar to "Tristeza".

Post contacts report that most growers are not taking immediate action to combat the potential damage caused by the disease, whereas processing companies with citrus groves and large scale farmers have been active in attempting to address the virus. Current options to avoid/control the disease are acquiring seedlings from protected nurseries and replacing trees having susceptible rootstock (Rangpur lime) with resistant ones. In-arching, i.e., introducing a bypass from 1 or 2 resistant rootstock to an affected tree is another management practice adopted by some growers. According to post contacts, in-arching represents an additional US\$1.5-\$2/rootstock and approximately two million trees have already received this treatment.

Producers' Prices

The Orange Index price series released by the University of Sao Paulo's College of Agriculture "Luiz de Queiroz" (ESALQ) for both the fresh domestic market and product delivered to orange juice processing plants in the state of Sao Paulo follows. Both series track orange prices since September 1994. Prices for the fresh market are for fruit on the tree. Good prices received by producers for the MY 2003/04 crop reflect the lower availability of the product.

According to post contacts, a significant percentage of current orange contracts will expire after the end of the MY 2003/04 crop. The industry, however, has not showed so far any indication toward the renewal of the contracts for MY 2004/05 and forward, which creates some uncertainties for orange growers. Post contacts report that orange prices set in futures contracts should be lower than the current US\$3-3.5/box, due to the expected higher availability of the fruit.

| Orange Prices received by 1 | Producers in | the Dome | stic Marke | t (Pera Var | iety, averag | ge prices |
|-----------------------------|--------------|-------------|-------------|-------------|--------------|-----------|
| Month | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| Jan | 4.44 | 6.70 | 2.17 | 4.15 | 11.29 | 13.48 |
| Fev | 5.50 | 8.14 | 2.61 | 6.33 | 10.62 | 13.76 |
| Mar | 5.67 | 8.13 | 4.54 | 9.97 | 10.50 | 15.69 |
| Abr | 4.32 | 6.15 | 4.79 | 9.82 | 10.07 | 14.16 |
| Mai | 3.48 | 4.33 | 3.41 | 8.51 | 8.86 | 11.04 |
| Jun | 3.72 | 3.52 | 2.22 | 7.88 | 8.07 | 9.13 |
| Jul | 4.31 | 2.85 | 2.18 | 8.31 | 7.92 | 8.63 |
| Ago | 5.06 | 2.25 | 2.50 | 9.27 | 8.45 | 9.12 |
| Set | 5.24 | 1.81 | 2.72 | 10.34 | 8.96 | 10.25 |
| Out | 5.41 | 1.42 | 2.75 | 11.30 | 10.91 | 12.16 |
| Nov | 5.55 | 1.29 | 3.43 | 11.69 | 12.62 | 12.70 |
| Dez | 5.87 | 1.52 | 3.79 | 11.62 | 12.79 | 12.10 |
| Comment CEDEA/EGALO N | latar Dagama | han muiaa n | flaata arra | | durin a Da | 1 to 5 |

Source: CEPEA/ESALQ. Note: December price reflects average prices during Dec. 1 to 5.

Orange Prices paid by Sao Paulo industry - spot market (Pera, Natal, Valencia varieties,

| | | J 1 | · · · | , , , | | , |
|-----------------|--------|------|-------|----------|-------|-------|
| Month | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| Jan | 3.24 | 3.91 | 1.47 | 3.98 | 8.71 | 10.07 |
| Fev | 3.54 | 3.89 | 1.46 | 5.11 | 7.19 | 7.58 |
| Mar | 3.80 | 3.96 | 1.61 | 5.46 | 6.00 | 6.25 |
| Abr | 3.80 - | - | 1.80 | 5.50 | 5.80 | 5.67 |
| Mai | 3.94 - | - | 1.70 | 5.50 | 5.04 | 5.78 |
| Jun | 4.30 - | - | 1.68 | | 5.55 | 7.30 |
| Jul | 4.76 | 2.72 | 1.66 | 6.97 | 7.75 | 7.86 |
| Ago | 5.21 | 2.47 | 1.58 | 7.16 | 8.25 | 8.76 |
| Set | 5.25 | 2.06 | 1.66 | 7.44 | 8.49 | 9.25 |
| Out | 5.19 | 1.87 | 2.01 | 8.08 | 10.86 | 9.72 |
| Nov | 5.20 | 1.65 | 2.48 | 8.97 | 11.21 | 10.21 |
| Dez | 4.78 | 1.52 | 2.94 | 9.27 | 10.98 | 10.38 |
| C CEDEA/EGALO N | | 1 | | . | 1 . D | . 1 5 |

Source: CEPEA/ESALQ. Note: December price reflects average prices during Dec. 1 to 5.

Trends in Orange Production for the state of Sao Paulo

The IEA has recently released a study projecting orange production for the state of Sao Paulo until 2009. The Institute assumed that 12 million seedlings were planted for the 2002/03 crop (MY 2003/04) and that 10 million seedlings will be planted for the 2003/04 through 2008/09 crops. The study considered 3 eradication rates (4, 6 percent and a set rate of 10 million trees per year).

The table below illustrates the relative share of trees by age, showing a relative increase of trees older than 10 years for the 2002 to 2009 period. The relative share of trees between 8 and 10 years in the tree inventory should be reduced during this period, whereas the share of young bearing trees (4 to 7 years) is likely to decrease up to 2004, and increase from 2005 onwards. The share of non-bearing trees in the total tree inventory should remain stable.

| orange rree | | | | | | | |
|-------------|-------------|----------------|-------|-----------|-----------|------------|---------------|
| Year | Non-Bearing | Bearing | Total | 0-3 years | 4-7 years | 8-10 years | over 10 years |
| i cai | (nun | nber of trees) | 1 | | (pe | rcent) | |
| 2000 | 23.2 | 191.6 | 214.8 | 11 | 22 | 20 | 47 |
| 2001 | 21.7 | 182.8 | 204.5 | 11 | 21 | 20 | 48 |
| 2202 | 23.0 | 183.1 | 206.1 | 11 | 19 | 19 | 51 |
| 2003 | 27.1 | 173.9 | 201.0 | 13 | 16 | 19 | 52 |
| 2004 | 30.0 | 171.1 | 201.1 | 15 | 14 | 17 | 54 |
| 2005 | 28.0 | 174.7 | 202.7 | 13 | 18 | 15 | 54 |
| 2006 | 28.0 | 175.2 | 203.2 | 14 | 16 | 13 | 57 |
| 2007 | 28.0 | 175.4 | 203.4 | 14 | 18 | 11 | 57 |
| 2008 | 28.1 | 175.7 | 203.8 | 14 | 19 | 11 | 56 |
| 2009 | 28.1 | 175.9 | 204.0 | 14 | 18 | 11 | 57 |
| Courses IEA | | | | | | | |

Orange Tree Inventory Projection and Relative Distribution for the State of Sao Paulo

Source: IEA

The study indicates that according to the tree inventory breakdown by age, State of Sao Paulo production should vary from 368 Mbx in 2002 to 346 Mbx in 2009, assuming different productivities by age (see table below).

| 71.0 | | | | | | | | | |
|-------|-------|-------------|-------------------|-------------------------|-------------------------------|-------------------------------------|---|---|---|
| 71.8 | 64.0 | 57.9 | 46.8 | 42.2 | 47.1 | 47.7 | 53.7 | 58.3 | 44.4 |
| 85.6 | 82.2 | 79.4 | 77.4 | 69.8 | 62.0 | 54.4 | 46.0 | 55.4 | 46.0 |
| 222.0 | 217.8 | 230.6 | 228.8 | 237.8 | 247.1 | 255.6 | 256.5 | 252.1 | 255.2 |
| 379.4 | 364.0 | 367.9 | 353.0 | 349.8 | 356.2 | 357.7 | 356.2 | 365.8 | 345.6 |
| | 222.0 | 222.0 217.8 | 222.0 217.8 230.6 | 222.0 217.8 230.6 228.8 | 222.0 217.8 230.6 228.8 237.8 | 222.0 217.8 230.6 228.8 237.8 247.1 | 222.0 217.8 230.6 228.8 237.8 247.1 255.6 | 222.0 217.8 230.6 228.8 237.8 247.1 255.6 256.5 | 222.0 217.8 230.6 228.8 237.8 247.1 255.6 256.5 252.1 |

The study also calculates projected production for average yields as shown in the following table. If an average yield of 2 boxes per tree is assumed, total production could vary from 366 Mbx in 2002 to 352 Mbx in 2009. Higher average yields (2.1 and 2.2 boxes per tree) will clearly lead to higher projected production.

Orange Production Projection in the State of Sao Paulo, 2000-2009 (boxes/tree, million 40,8 kg boxes)

| 8 | | | | | | | | | |
|-------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| Yield | 2202 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | |
| 2.0 | 366.2 | 347.8 | 342.2 | 349.4 | 350.4 | 350.8 | 351.4 | 351.8 | |
| 2.1 | 384.5 | 365.2 | 359.3 | 366.9 | 367.9 | 368.3 | 369.0 | 369.4 | |
| 2.2 | 402.8 | 382.6 | 376.4 | 384.3 | 385.4 | 385.9 | 386.5 | 387.0 | |
| Source: IEA | | | | | | | | | |

The IEA study did not take into account the effects of SDC, since the propagation of the disease has yet to be fully understood. However, SDC in addition to canker, CVC and weather stress have represented challenges to Sao Paulo commercial citriculture.

In response, trees are becoming more productive as a consequence of technological improvements such as new planting densities (380-400 trees/ha); the use of new SDC-resistant rootstock varieties (Cleopatra, sunki and swingle) to replace Rangpur lime, which is susceptible to the disease; the use of seedlings from protected nurseries and irrigation.

Although growing in use, irrigation still represents less than 10 percent of the orange area in the citrus commercial belt. The new rootstock varieties need water for irrigation, whereas the traditional Rangpur lime is pretty much adapted to water stress. Water, however, as reported by post contacts, is likely to be a constraint in the future. According to post contacts, some studies show that only 15 percent of the citrus commercial area could be irrigated.

Therefore, oranges groves have been geographically migrating from the traditional and weather-stressed areas in the northern part of the state to the southern part of Sao Paulo, which offers better weather conditions for crop management and where irrigation is not a requirement for production.

Large-size producers are usually the ones who can adapt to the aforementioned changes, since high costs are associated with them. Economies of scale are a fact: post contacts report that operational costs of production are US\$1/box for large groves, US\$1.3/box for mid-sized groves and up to US\$2/box for small groves. The initial investment necessary to have a productive grove is about US\$10/tree over a 3-year period.

Indeed, many small and mid-sized growers have gone out of business in recent past, replacing their orange groves with sugarcane and pasture. The concentration of the orange production sector is quite clear. Traditional growers are becoming bigger and bigger. During the mid-nineties, Fundecitrus, IEA and the processing companies registered approximately 29,000 orange growers. Current figures reported by Fundecitrus and processing companies show 10,000 to 15,000 active growers. It is estimated that 20 percent of the orange growers (including the FCOJ processors groves) represent 80 percent of total orange production in the commercial citrus belt.

As reported by Fundecitrus, a total of 574 nurseries were inspected in November 2003. The results show that 539 nurseries were in operation. Protected nurseries, in which seedlings are kept within screened enclosures, represent 97.2 percent of total in operation (524 nurseries), showing that seedling producers adapted themselves to the new legislation that does not allow unprotected nurseries. The number of inspected seedlings totaled 11,406,046 (only 14,527 from unprotected nurseries). The number of inspected rootstock totaled 14,503,215 (only 4,789 from unprotected nurseries). Total nursery protected area is currently estimated at 800,000 square meters, which enables a potential production capacity of 24 million seedlings per year. Note that new plantings are estimated at 15 million seedlings per year.

According to information provided by post contacts, in 2002, 80 to 90 percent of the rootstock produced was Rangpur lime, whereas this variety represented less than fifty percent in 2003. The need for seeds to produce SDC-resistant rootstock could be a constraint for some nurseries, but not for the large ones. Cleopatra seeds are in sufficient supply, whereas sunki and swingle seeds will need to be imported/multiplied in the next couple of years to reach self-sufficiency. Total production capacity is currently estimated at 24 million seedlings per year.

Consumption

Total Brazilian orange consumption for MY 2004/05 is projected at 135.5 Mbx, an 8 percent increase compared to the revised figure for MY 2003/04 (125 Mbx), due to higher expected availability of fruit for the upcoming crop. Note that these figures include actual domestic consumption plus losses from natural drop, harvesting, transportation and packing. Fruit delivered to processors for "not from concentrated (NFC)" orange production for the domestic market is also included in these figures. Domestic consumption estimates are taken as the difference between production estimates and the volume of oranges delivered to processors for FCOJ and NFC produced for exports.

Trade

ATO/Sao Paulo forecasts total fresh orange exports for MY 2004/05 at 2.5 Mbx, up 0.5 Mbx from the revised estimate for MY 2003/04 (2 Mbx), based on updated information from the Brazilian Secretariat of Foreign Trade (SECEX). The table below shows official fresh orange exports (NCM 080510.00) by country of destination, for MY 2001/02, 2002/03 and 2003/04, according to SECEX

| riesh orange Expe | • | | | | , | | |
|-------------------|----------|--------|----------|------------|----------|---------------|--|
| Country | MY 200 | 01/02 | MY 200 | MY 2002/03 | | MY 2003/04 1/ | |
| Country | Quantity | Value | Quantity | Value | Quantity | Value | |
| Netherlands | 50,780 | 10,090 | 15,325 | 3,221 | 25,764 | 5,052 | |
| Spain | 29,602 | 6,248 | 9,614 | 2,084 | 22,988 | 4,897 | |
| UK | 16,872 | 2,655 | 6,867 | 1,009 | 9,499 | 1,635 | |
| UAE | 9,069 | 1,860 | 4,088 | 860 | 3,632 | 659 | |
| Portugal | 11,351 | 2,348 | 2,398 | 528 | 877 | 182 | |
| Kuwait | 1,362 | 279 | 1,070 | 227 | 701 | 127 | |
| Indonesia | 373 | 82 | 748 | 157 | 0 | 0 | |
| Saudi Arabia | 91 | 25 | 87 | 24 | 0 | 0 | |
| France | 0 | 0 | 60 | 19 | 76 | 25 | |
| Singapore | 0 | 0 | 27 | 5 | 273 | 51 | |
| Others | 4,966 | 962 | 28 | 13 | 894 | 142 | |
| Total | 124,467 | 24,547 | 40,312 | 8,146 | 64,703 | 12,770 | |

Fresh Orange Exports by Country of Destination (MT, US\$ 1,000 FOB).

Source: Brazilian Department of Foreign Trade (SECEX). 1/ July-October.

FCOJ

PS&D Table

| Country | Brazil | | | 65 D | egrees Br | ix | | |
|------------------|-----------------|---------------|--------------|--------------|------------|-------------|---------|--|
| Commodity | Juice, C | Juice, Orange | | | (MT) | | | |
| | 2001 | Revised | 2002 | Estimate | 2003 | Forecast | UOM | |
| L | JSDA Official [| Estimate [D/ | A Official [| Estimate [DA | Official [| Estimate [I | New] | |
| Market Year Beg | in | 07/2002 | | 07/2003 | | 07/2004 | MM/YYYY | |
| Beginning Stocks | 151000 | 151000 | 291000 | 240000 | 121000 | 92000 | (MT) | |
| Production | 1351000 | 1354000 | 1021000 | 1005000 | 0 | 1260000 | (MT) | |
| Imports | 0 | 0 | 0 | 0 | 0 | 0 | (MT) | |
| TOTAL SUPPLY | 1502000 | 1505000 | 1312000 | 1245000 | 121000 | 1352000 | (MT) | |
| Exports | 1196000 | 1250000 | 1176000 | 1135000 | 0 | 1195000 | (MT) | |
| Domestic Consump | tio 15000 | 15000 | 15000 | 18000 | 0 | 18000 | (MT) | |
| Ending Stocks | 291000 | 240000 | 121000 | 92000 | 0 | 139000 | (MT) | |
| TOTAL DISTRIBUT | IO 1502000 | 1505000 | 1312000 | 1245000 | 0 | 1352000 | (MT) | |

Production

PS&D Tables

The following tables provide revised data for Sao Paulo and total Brazilian frozen concentrated orange juice (FCOJ) production, supply and demand (PS&D) for marketing years (MY) 2002/03, 2003/04 (July-June) and the initial forecast for MY 2004/05.

| Sao Paulo: FCOJ PS&D (Jul-Jun, Million 40.8 kg boxes, TMT, 65 degrees brix) | | | | | | | | |
|---|---------|---------|---------|--|--|--|--|--|
| Item/Marketing Year | 2002/03 | 2003/04 | 2004/05 | | | | | |
| (Bloom/Harvest) | (01/02) | (02/03) | (02/03) | | | | | |
| Delivered to Processors | 305.0 | 215.0 | 282.0 | | | | | |
| Beginning Stocks | 151.0 | 240.0 | 92.0 | | | | | |
| Production | 1,309.0 | 970.0 | 1,215.0 | | | | | |
| Total Supply | 1,460.0 | 1,210.0 | 1,307.0 | | | | | |
| Exports | 1,205.0 | 1,100.0 | 1,150.0 | | | | | |
| Domestic Consumption | 15.0 | 18.0 | 18.0 | | | | | |
| Ending Stocks | 240.0 | 92.0 | 139.0 | | | | | |
| Total Distribution | 1,460.0 | 1,210.0 | 1,307.0 | | | | | |

| Brazil: FCOJ PS&D (Jul-Jun, Million 40.8 kg boxes, TMT, 65 degrees brix) | | | | | | | | |
|--|---------|---------|---------|--|--|--|--|--|
| Item/Marketing Year | 2002/03 | 2003/04 | 2004/05 | | | | | |
| (Bloom/Harvest) | (01/02) | (02/03) | (02/03) | | | | | |
| Delivered to Processors | 315.0 | 224.0 | 294.0 | | | | | |
| Sao Paulo | 305.0 | 215.0 | 282.0 | | | | | |
| Others | 10.0 | 9.0 | 12.0 | | | | | |
| Beginning Stocks * | 151.0 | 240.0 | 92.0 | | | | | |
| Total Production | 1,354.0 | 1,005.0 | 1,260.0 | | | | | |
| Sao Paulo | 1,309.0 | 970.0 | 1,215.0 | | | | | |
| Others | 45.0 | 35.0 | 45.0 | | | | | |
| Total Supply | 1,505.0 | 1,245.0 | 1,352.0 | | | | | |
| Exports | 1,250.0 | 1,135.0 | 1,195.0 | | | | | |
| Sao Paulo | 1,205.0 | 1,100.0 | 1,150.0 | | | | | |
| Others | 45.0 | 35.0 | 45.0 | | | | | |
| Domestic Consumption | 15.0 | 18.0 | 18.0 | | | | | |
| Ending Stocks | 240.0 | 92.0 | 139.0 | | | | | |
| Total Distribution | 1,505.0 | 1,245.0 | 1,352.0 | | | | | |
| * Sao Paulo stocks. | | | | | | | | |

General

Post projects total Brazilian FCOJ production for MY 2004/05 (July-June) at 1.26 million metric ton (mmt), 65 Brix, up 255,000 mt compared to our revised figure for MY 2003/04 (1.005 mmt), due to expected higher availability of fruits for processing. The Sao Paulo industry is likely to contribute 282 Mbx of orange for FCOJ processing, which should yield 1.215 mmt of the product. Other producing states should deliver 12 Mbx for processing (45,000 mt of FCOJ). Note that the MY 2004/05 crushing season should be initially delayed by 45 days, as a result of the delay in the blossomings during the second semester of 2003.

Total Brazilian FCOJ production for MY 2003/04 has been revised downward to 1.005 mmt, 65 Brix, a 16,000 mt decrease from the previous projection due to expected lower production in Sao Paulo state. The Sao Paulo industry is expected to crush 215 Mbx, down 25 Mbx from previous estimates, whereas other FCOJ processing states should crush 9 Mbx, down 1 Mbx compared to the former forecast. Note that in spite of the lower amount of fruit delivered for processing in Sao Paulo, excellent industrial yields are expected due to the dry weather that prevailed along the crushing season. Therefore, FCOJ production in Sao Paulo is not expected to drop significantly and is currently projected at 970,000 mt, 65 Brix.

The MY 2003/04 crushing pace has not been uniform as a consequence of the irregular blossomings in 2002. Some plants reduced operations in September and early October due to lower availability of fruit ready for harvesting (fruit did not show adequate ratio for picking). The crushing returned to a regular pace afterwards. FCOJ processing companies are expected to close plants during the end of the year holidays. Plants should reopen in mid-January and the crushing season is expected to extend through February, as a consequence of the late blossoming that occurred in December 2002.

Consumption

ATO/Sao Paulo forecasts FCOJ domestic consumption for MY 2004/05 at 18,000 mt, 65 Brix, similar to the revised number for MY 2003/04 (18,000 mt), according to updated information from post contacts.

Trade

ATO/Sao Paulo forecasts total Brazilian FCOJ exports for MY 2004/05 at 1.195 mmt, 65 Brix, up 60,000 mt relatively to revised figure for MY 2003/04, due to higher expected availability of fruit for processing. The Sao Paulo industry should account for 1.15 mmt, 65 Brix, whereas the reminder should come from other FCOJ producing states.

FCOJ exports for MY 2003/04 were revised downward to 1.135 mmt, 65 Brix, down 3 percent from our previous estimate. With the expected record crop in Florida, Brazil is likely to export less product to the U.S. In addition, Florida should become a net FCOJ exporter and compete at least marginally in Brazilian export markets. In spite of lower orange juice production in Brazil for MY 2003/04, export levels should not drop sharply, sustained by high MY 2002/03 carry over stocks (240,000 mt, 65 Brix).

Current FCOJ export prices are reported at US\$ 1,050 – 1,100 per metric ton (bulk). However, post contacts report that the market is weak, and European bottlers purchase only on a spot basis.

FCOJ exports for MY 2002/03 were revised upward to 1.25 mmt, 65 Brix, up 5 percent from the previous estimate, based on updated information from the Brazilian Secretariat of Foreign Trade (SECEX) and post contacts. The hot summer in Europe stimulated orange juice exports to those countries.

The tables below show official FCOJ exports (NCM 2009.11.00 and 2009.19.00) by country of destination for MY 2001/02, 2002/03 and 2003/04, according to SECEX. Orange juice exports by NCM and state also follows. Note that the "Others" category includes both FCOJ and Not From Concentrated (NFC) exports.

| Tiozen Concentrated/Non-Concentrated Orange Julee Exports (MT, 05\$ 1,000 FOD). | | | | | | | |
|---|-----------|---------|------------|---------|---------------|---------|--|
| Country | MY 200 | 01/02 | MY 2002/03 | | MY 2003/04 1/ | | |
| Country | Quantity | Value | Quantity | Value | Quantity | Value | |
| Belgium | 374,483 | 266,199 | 400,205 | 334,678 | 168,441 | 136,065 | |
| USA | 126,804 | 94,863 | 219,048 | 185,875 | 66,700 | 54,666 | |
| Netherlands | 350,102 | 276,997 | 190,411 | 175,681 | 86,833 | 83,587 | |
| Japan | 73,306 | 65,769 | 74,167 | 72,928 | 22,615 | 22,940 | |
| South Korea | 33,590 | 28,007 | 31,708 | 28,041 | 5,481 | 4,713 | |
| Australia | 17,928 | 12,598 | 25,238 | 22,370 | 4,467 | 3,785 | |
| China | 10,370 | 8,131 | 14,393 | 12,691 | 7,345 | 6,394 | |
| Puerto Rico | 9,726 | 8,983 | 9,360 | 10,018 | 2,669 | 3,430 | |
| Switzerland | 7,646 | 7,138 | 7,161 | 7,082 | 4,131 | 3,966 | |
| Israel | 3,061 | 2,022 | 4,059 | 3,469 | 2,442 | 2,089 | |
| Others | 26,611 | 21,966 | 23,101 | 21,550 | 7,941 | 7,051 | |
| Total | 1,033,628 | 792,672 | 998,851 | 874,383 | 379,066 | 328,686 | |
| Comment Data - 11 and Demonstrate of Fernier Trade (CECEV) 1/ Julie October | | | | | | | |

Frozen Concentrated/Non-Concentraded Orange Juice Exports (MT, US\$ 1,000 FOB).

Source: Brazilian Department of Foreign Trade (SECEX). 1/ July-October.

| Brazilian Orange Juice Exports, Others (MI, US\$ 1,000 FOB). | | | | | | | |
|---|----------|--------|----------|------------|----------|---------------|--|
| Country | MY 200 | 1/02 | MY 200 | MY 2002/03 | | MY 2003/04 1/ | |
| Country | Quantity | Value | Quantity | Value | Quantity | Value | |
| Netherlands | 18,107 | 12,979 | 221,138 | 197,250 | 73,199 | 65,039 | |
| UK | 0 | 0 | 24,616 | 22,381 | 13,659 | 12,293 | |
| USA | 12,884 | 2,900 | 9,667 | 2,177 | 9,680 | 2,178 | |
| Switzerland | 0 | 0 | 3,028 | 2,786 | 0 | 0 | |
| Belgium | 92,582 | 21,809 | 1,056 | 335 | 6,340 | 4,396 | |
| Israel | 36 | 26 | 364 | 262 | 36 | 27 | |
| Argentina | 3,258 | 1,539 | 258 | 167 | 0 | 0 | |
| Angola | 116 | 45 | 143 | 62 | 11 | 5 | |
| Chile | 427 | 221 | 90 | 71 | 0 | 0 | |
| Panama | 0 | 0 | 74 | 65 | 41 | 35 | |
| Others | 425 | 308 | 247 | 155 | 208 | 179 | |
| Total | 127,836 | 39,827 | 260,681 | 225,711 | 103,173 | 84,151 | |
| Source: Prezilien Department of Foreign Trade (SECEV) 1/ July October | | | | | | | |

Brazilian Orange Juice Exports, Others (MT, US\$ 1,000 FOB).

Source: Brazilian Department of Foreign Trade (SECEX). 1/ July-October.

| Brazilian Orange Juice Exports by NCM and State (MT, US\$ 1,000 FOB) | | | | | | | | |
|--|------------|------------|---------------|--|--|--|--|--|
| | MY 2001/02 | MY 2002/03 | MY 2003/04 1/ | | | | | |
| NCM 2009.11.00 | | | | | | | | |
| Sao Paulo | 1,009,505 | 955,296 | 363,316 | | | | | |
| Others | 24,123 | 43,555 | 15,750 | | | | | |
| Total | 1,033,628 | 998,851 | 379,066 | | | | | |
| NCM 2009.12.00 | | | | | | | | |
| Sao Paulo | 23,649 | 202,114 | 130,648 | | | | | |
| Others | 0 | 8 | 12 | | | | | |
| Total | 23,649 | 202,122 | 130,660 | | | | | |
| NCM 2009.19.00 | | | | | | | | |
| Sao Paulo | 127,409 | 259,571 | 102,367 | | | | | |
| Others | 426 | 1,110 | 807 | | | | | |

Source: Brazilian Department of Foreign Trade (SECEX). 1/ July-October.

127,836

Stocks

Total

Total ending stocks for MY 2004/05 are projected at 139,000 mt, 65 Brix, up 47,000 mt compared to our revised MY 2003/04 forecast, due to expected higher availability of fruits for crushing. Brazilian owned FCOJ carry over stocks worldwide for MY 2002/03 and 2003/04 are reported at approximately 705,000 and 575,000 mt, respectively.

260.681

103,173

NFC (Not From Concentrated)

There is no official estimate for NFC supply and demand in Brazil. ATO/Sao Paulo projects that approximately 18 Mbx will be crushed for MY 2004/05 NFC exports, up 2 Mbx from our unchanged number for MY 2003/04 (16 Mbx). Note that current PS&D tables consider NFC production for exports as a different entry (see Tables in PS&D section).

Also note that not all boxes of oranges reported for processing are actually exported. Part of the NFC produced returns to the processing plant and is converted to FCOJ due to quality problems or specifications. Post estimates that approximately 175,000 and 255,000 metric tons of NFC, 11.8 Brix, were exported for MY 2001/02 and 2002/03, respectively. Post forecasts that 350,000 mt should be exported for MY 2003/04.

The following table shows "Orange Juice, Not Concentrated and Brix under 20" (NCM 2009.12.00) exports by country of destination for MY 2001/02, 2002/03 and 2003/04, according to SECEX. Note that part of the NFC exports is included in the "Others" category (see FCOJ Trade section).

| C (| MY 200 | 01/02 | MY 2002/03 | | MY 2003/04 1/ | |
|-------------|----------|-------|------------|--------|---------------|--------|
| Country | Quantity | Value | Quantity | Value | Quantity | Value |
| Belgium | 21,440 | 4,824 | 135,336 | 30,451 | 75,246 | 16,930 |
| USA | 0 | 0 | 42,789 | 9,121 | 46,479 | 10,338 |
| Netherlands | 1,930 | 692 | 23,622 | 7,803 | 8,804 | 2,308 |
| Chile | 92 | 41 | 322 | 171 | 119 | 59 |
| Ghana | 0 | 0 | 36 | 19 | 0 | 0 |
| Cape Verde | 0 | 0 | 7 | 4 | 0 | 0 |
| Angola | 0 | 0 | 6 | 3 | 12 | 5 |
| Singapore | 0 | 0 | 1 | 1 | 0 | 0 |
| Japan | 0 | 0 | 1 | 1 | 0 | 0 |
| Senegal | 0 | 0 | 2 | 1 | 0 | 0 |
| Others | 187 | 79 | 0 | 0 | 0 | 0 |
| Total | 23,649 | 5,636 | 202,122 | 47,573 | 130,660 | 29,641 |

Brazilian Orange Juice Exports, Not Frozen, Brix under 20 (MT, US\$ 1,000 FOB).

Source: Brazilian Department of Foreign Trade (SECEX). 1/ July-October.

Policy

On November 12, the Spanish Ministry of Agriculture issued an order banning the import of fresh citrus from Argentina and Brazil. The Ministry reported that phytosanitary inspections of fruit imported from these countries detected the presence of several organisms including the bacteria Xanthomonas campestris, which causes citrus canker.

An official mission of the Brazilian Ministry of Agriculture, Livestock and Supply (MAPA) is visited Spain December 17-19, 2003 to discuss the situation, to illustrate the Brazilian phytosanitary procedures and negotiate the end of the ban. Spain, the major European citrus producer usually depends on Brazilian citrus during the off-season.

Exchange Rate

| Exchange Rate (F | X \$/US\$1.00 - | official rate, I | ast day of per | 10d) | | |
|------------------|------------------------|------------------|----------------|------|------|------|
| Month | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
| January | 1.12 | 1.92 | 1.80 | 1.97 | 2.42 | 3.53 |
| February | 1.13 | 2.03 | 1.77 | 2.04 | 2.35 | 3.56 |
| March | 1.14 | 1.77 | 1.75 | 2.16 | 2.32 | 3.35 |
| April | 1.14 | 1.66 | 1.81 | 2.22 | 2.36 | 2.89 |
| May | 1.15 | 1.72 | 1.82 | 2.36 | 2.52 | 2.97 |
| June | 1.16 | 1.77 | 1.80 | 2.30 | 2.84 | 2.87 |
| July | 1.16 | 1.79 | 1.78 | 2.43 | 3.43 | 2.97 |
| August | 1.18 | 1.81 | 1.82 | 2.55 | 3.02 | 2.97 |
| September | 1.19 | 1.92 | 1.84 | 2.67 | 3.89 | 2.92 |
| October | 1.19 | 1.95 | 1.91 | 2.71 | 3.65 | 2.86 |
| November | 1.20 | 1.92 | 1.98 | 2.53 | 3.59 | 2.95 |
| December | 1.21 | 1.79 | 1.96 | 2.32 | 3.53 | 2.94 |
| | | | | | | |

Exchange Rate (R\$/US\$1.00 - official rate, last day of period)

Source: Gazeta Mercantil. Note: December 2003 prices refer to December 9.