

**DRAFT REPORT ON BUMPERS AND IMPORT SENSITIVITY ANALYSIS
FOR MOROCCAN TABLE OLIVES AND OLIVE OIL**

**BY DON HUMPAL (DAI) WITH DATA ASSISTANCE FROM KATHLEEN JACQUES
(FINTRAC)**

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Moroccan Olive and Olive Oil Production

The olive tree is a biennial producer, meaning that a large crop is generally followed by a much smaller crop. This is true for olive trees around the world, despite hundreds of years of efforts to find a way to reduce year to year variation in per tree yields. In Morocco, production has swung from a low about 400,000 to a peak of 720,000 Mt a year since the late 1980's despite the 72 percent increase in surface area from about 320,000 hectares in 1980 to about 550,000 hectares today.

Table 1 Moroccan Olive Production and Use Estimates

	1995	1996	1997	1998	1999	2000	2001	2002
Olive Area (ha)	415,200	418,800	426,600	520,000	520,000	540,000	550,000	550,000
Olive Yield (Mt/ha)	1.051	2.167	1.213	1.362	0.915	0.741	0.764	0.764
Olive Production (Mt)	436,360	908,300	517,600	708,550	475,750	400,000	420,000	420,000
Olive Oil Production (Mt)	35,000	80,000	50,000	60,000	65,000	40,000	35,000	35,000
Olive Oil Imports	n/a	n/a	211	208	158	3,863	4,824	n/a
Olive Oil Exports	n/a	n/a	27,723	4,772	12,559	6,400	84	n/a
Estimated Olives Used for Oil Production (Mt @ 16% extraction rate)	218,750	500,000	312,500	375,000	406,250	250,000	218,750	218,750
Olives Available for Table Olive Processing (Mt home and industrial)	217,610	408,300	205,100	333,500	69,500	150,000	201,250	201,750
Table Olive Exports	n/a	n/a	78,267	50,576	80,355	67,183	73,382	n/a
Waste at 10% of Total Production	43,636	40,830	20,510	33,350	6,950	15,000	20,130	20,130
Total Available for Domestic Consumption as Table Olives	n/a	n/a	106,683	249,574	-17,805	67,817	107,738	n/a

Source: FAOSTAT Databases and calculations estimating olives used for oil, available for table olive processing, waste, and total available for current year domestic consumption as table olives

Note: Data are on a calendar year basis.

Morocco has been pursuing a public strategy of extensive planting of olive trees since the 1980's with a stated Master Plan goal of reaching a million hectares under olive trees by 2010. The net gain in area has been about 10,500 hectares a year, a very impressive achievement but not one that is not likely to reach the million hectare objective until 2045. Yields are low and variable because of the following factors:

- Morocco plants olives both for olive production and soil conservation. In the 1970s and 1980s about 80,000 hectares of olive trees were planted on bench terraces and hillside basins in arid, dryland (*Bour défavorable*) areas where yields average from 300 to 500 kg per hectare. At least another 120,000 ha of inherently extensive planting have been made. Yields and production are highly variable;

- Much of the expansion of olive planting since the 1980s has been in the rainfed zones (*Bour favorable*) in the regions around Fez and Meknes. Yields range from from under 1 to 2.4 Mt/ha. About 150,000 ha is planted in this zone:
- Zones of supplemental irrigation and full-control irrigation account for the remainder of olive production. They are concentrated in the Haouz and Tadla basins. These systems range from standard tree densities of 150 per ha up with yields from 1 to 3.5 Mt/ha to intensive plantings 240 to 400 trees per ha with yields from 6 to 20 mt/ha. About 60% of the production from these areas goes to table olive production, because their olives are bigger in size and usually higher in quality:
- Easily 150,000 ha have olive trees older than 40 years with declining productivity;
- Droughts have decreased tree productivity and slowed the onset of fruiting in new plantings in dryland and rainfed areas, as well as restricting water supply to irrigated areas during the recent string of dry years.
- Continued heavy reliance on one variety the picholine baldi, which is dual purpose oil and table olive;
- Damage to the crop from the olive fly which has become an increasing nuisance over time;
- The complicated marketing system results in poor market signal transmission to producers; and,
- The continued dominance of traditional oil mills (Roman-style rolling stone mills or *maasra*) in olive oil extraction leads results in very acid oil with low value internationally, but with strong domestic value because of olive oil production doesn't meet national needs.

Studies since the early 1990's have urged that Morocco diversify its use of olive varieties, focus table olive production in irrigated areas, and process more of its olive oil with improved presses to move the average oil extraction rates from under 16% to closer to 18% or higher. There has been some success in increasing the area under irrigation since the 1980's that has permitted the continued growth of table olive exports even with variable overall production and strong competition for olives for extraction of oil.

Moroccan Domestic Olive Market Considerations

Olive oil is the dominant use of olives in Morocco. A standard figure for Moroccan olive oil consumption is 1.6 kg per capita. With a population of about 30 million, the hard demand for olive oil is about 48,000 Mt a year. Other vegetable oils are consumed as food at about 325,000 Mt a year in Morocco, much of it imported as seed for crushing to avoid import duties on vegetable oil. As can be seen from Table 1 olive oil is imported in significant quantities to make up the shortfall when domestic production drops to 40,000 Mt. Olive oil is stored a year or more in Moroccan households and by industrial oil processors to compensate for the swings in production.

Table olives are widely consumed throughout Morocco. Stocks may be carried over for 12 months. According to FAO Food Balance estimates, the per capita whole olive consumption ranges from 2 to 3 kg per capita annually. This means a national demand for table olives from 60,000 Mt to 90,000 Mt a year. The average availability over 1997-2001 was 102,800 Mt, but as in the case for olive oil, year to year swings were significant. Morocco imports small quantities of table olives every year, primarily the larger sizes in cans for the upscale urban market. But, any shortfalls in table olive supply are compensated for by reduced per capita consumption. Where home, micro, and small-enterprise olive preservation and preparation is a traditional part of the diet in the Mediterranean basin, most excess olive production is turned from a cash crop into a food crop. Consumption at or near the site of production complicates already complicated data collection and interpretation.

This admittedly crude market analysis suggests that Moroccan production, processing, and marketing are still short of stabilizing domestic supply in a way that avoids price swings and substitution of olives and olive oil by other oilseeds and sources of fat. There is still significant competition between olive oil and table olive production in Morocco. Production levels are not yet at a point that permits the maintenance of olive oil stocks and the development of a strong olive oil export market.

Morocco's Place in World Olive Production and Marketing

Table 2 shows that Morocco ranks about seventh in the world in olive production. The USA ranks about 17th.

Country	1998	1999	2000	2001	2002	5-Year Avg.
Spain	4,279,180	3,460,100	4,943,800	6,780,200	4,303,700	4,753,396
Italy	2,548,510	3,765,100	2,821,000	2,894,097	2,732,000	2,952,141
Greece	2,068,167	2,196,615	2,273,836	2,249,430	2,000,000	2,157,610
Turkey	1,650,000	580,809	1,800,000	600,000	1,500,000	1,226,162
Tunisia	950,000	1,125,000	1,125,000	550,000	150,000	780,000
Syrian Arab Republic	785,000	400,509	866,052	496,952	998,988	709,500
Morocco	708,550	475,750	400,000	420,000	420,000	484,860
United States of America	81,650	131,540	48,000	121,560	81,650	92,880
France	17,234	16,599	18,133	18,127	20,724	18,163

Source: FAOSTAT

The average world production of olive oil is about 2.5 million metric tons (MMt) a year. Average consumption is about 2.4 to 2.5 MMt a year. Production and consumption of olive oil is growing about 8 percent annually, with the biggest increases in the Americas, North and South. Spain, Italy, and Greece control about 70% of the world olive oil market. The average production of table olives is about 1.4 MMt annually, and average consumption is about 1.3 MMt. Growth in

table olive consumption is about 6 percent annually. Table 3 summarizes the Spanish, Moroccan and US positions on the world olive markets. Spain is the world's leading olive oil and table olive producer and the world's leading olive oil and table olive exporter. It continues to invest in intensified olive production and is aggressively seeking new market opportunities around the world. The gross numbers suggest that Morocco should be a net exporter of about 2,000 metric tons of olive oil a year and a net exporter of about 43,000 metric tons of table olives. The USA is a negligible producer of olive oil, importing essentially all of its requirements or 171,000 Mt annually. The USA is currently the world's largest importer of olive oil, having replaced Italy as the main importer in the late 1990's. The USA represents more than 6 percent of world table olive production, because the industry turns 90 to 95 percent of its olives into canned table olives. However, it still annually imports more than 101,000 Mt of table olives. The USA is the world's largest importer of table olives.

Table 3. Spanish, Moroccan and US Positions on World Olive Oil and Table Olive Markets (MMt)

Description	World MMt	Spain MMt	Spain %	Morocco MMt	Morocco %	USA MMt	USA %
Olive Oil Production	2.5	.962	38.5	0.05	2.0	0.009	0.4
Olive Oil Consumption	2.4	.561	23.4	0.048	2.0	0.180	7.5
Table Olive Production	1.4	.446	32.9	0.103	7.4	0.090	6.4
Table Olive Consumption	1.3	.177	13.6	0.060	0.042	0.191	14.7

Source: World and Spanish production and consumption estimates from the International Olive Oil Council, Moroccan figures calculated from FAOSTAT data, USA figures from USDA. All based on 5 year averages over the 1997/98-2001/2002 period.

The International Olive Oil Council at its June 2003 meeting stated that increases in olive oil production and consumption seem to be in balance, with average carry-over stocks still probably low enough to maintain producer prices. Table olive stock carryovers, on the other hand, reflect a situation where production has begun to exceed consumption, and price declines may be expected. These judgments need to be qualified by the fact that olive and olive oil statistics are often in error by 12% or more. The biggest sources of error occur from vagaries in statistical reporting, the use of old models of domestic production and consumption, and uncertainty concerning stock carry-over figures in the major producing countries of the EU.

Bumpers Analysis:

Olive Oil

The United States is a minor olive oil exporter, accounting for about 1.1% of world trade according to IOOC figures. The US exports to 72 countries, many of them in quantities less than a full container load. Table 5 shows the top ten export destinations for US olive oil.

Table 5. US Exports of Olive Oil 1998-2002, Calendar Year

	1998	1999	2000	2001	2002			
	Quantity Mt	Quantity Mt	Quantity Mt	Quantity Mt	Quantity Mt	5 Yr Avg Mt	5 Yr Avg \$/kg	% Exports
MEXICO	1,092.30	581.2	2,009.50	836.7	1,531.60	1,210.3	\$0.81	20.1%
FRANCE(*)	3,494.10	3.7	76.4	12.2	8	718.9	\$0.54	12.0%
CANADA	321.2	596.1	604.9	521.1	483.5	505.4	\$1.97	8.4%
HAITI	27.9	12.3	12.8	5.1	1,901.50	391.9	\$0.49	6.5%
UNITED KINGDOM	119.6	576.9	242.5	485.6	51.2	295.2	\$0.58	4.9%
JAPAN	413.1	211.5	108.9	252.3	454.2	288.0	\$1.05	4.8%
UNITED ARAB EMIRATES	88.9	0	0	0	1,046.50	227.1	\$0.60	3.8%
TURKEY	0	998.1	20.9	0	0	203.8	\$0.27	3.4%
TRINIDAD AND TOBAGO	110.7	589.6	150.1	39.3	13.2	180.6	\$1.05	3.0%
GUATEMALA	29.5	276.8	290.3	42.9	65.4	141.0	\$0.93	2.3%
OTHER 62 COUNTRIES	2408	2891.6	1928.7	1167.5	858.1	1850.78	\$0.73	30.8%
TOTAL	8,105.40	6,737.70	5,445.10	3,362.90	6,413.20	6,012.9	\$0.88	100.0%

Data Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics

(*) denotes a country that is a summarization of its component countries.

The 1998 exports to France are an aberration, as shown by the succeeding year exports. Table 6 shows the Moroccan position on these third markets. The only important markets where both Moroccan and U.S. exports enter are Canada, France, and the United Kingdom.

Table 6. Moroccan Exports of Olive Oil to the Main US Olive Oil Markets

Moroccan Olive Oil Exports	Quantities in Mt					5 Yr Qty	5 Yr 2001/2002
	1997/98	1998/99	1999/2000	2000/2001	2001/2002		
MEXICO	0.0	0.0	0.0	0.0	0.0	0.0	\$ -
FRANCE(*)	82.1	0.8	0.0	0.7	0.0	16.7	\$ 2.32
CANADA	388.4	134.7	90.1	1.7	7.9	124.6	\$ 1.53
HAITI	0.0	0.0	0.0	0.0	0.0	0.0	\$ -
UNITED KINGDOM	0.0	0.0	0.0	0.0	13.7	2.7	\$ 2.86
JAPAN	0.0	0.0	0.0	0.0	0.0	0.0	\$ -
UNITED ARAB EMIRATES	0.0	0.0	0.0	0.0	0.0	0.0	\$ -
TURKEY	0.0	0.0	0.0	0.0	0.0	0.0	\$ -
TRINIDAD AND TOBAGO	0.0	0.0	0.0	0.0	0.0	0.0	\$ -
GUATEMALA	0.0	0.0	0.0	0.0	0.0	0.0	\$ -

Source: EACCE Statistics

Table 7 compares the US and Moroccan share of the total olive oil market in France, Canada, and the United Kingdom. Canada and the United Kingdom do not produce olives, so they import all of the olive oil that their populations consume. France imports about 83,000 Mt of olive oil each year. The US exports virgin, refined, and blended olive oils to Canada and its other trading partners. Morocco exports primarily extra-virgin olive oil to EU destinations and a mix of extra-virgin and refined olive oil to Canada. Moroccan olive oil exports are insignificant on the French and UK markets.

Table 7. Comparison of Olive Oil Market Share (1998-2002 Averages)

	Average Consump- tion MT	US Market Share	Moroccan Market Share
FRANCE(*)	86700	0.83%	0.02%
CANADA	22500	2.25%	0.55%
UNITED KINGDOM	32300	0.91%	0.01%

Source: U.S. Department of Commercial, EACCE, and International Olive Oil Council

Neither the US nor Morocco determine the market price for olive oil in Canada. Both are very minor players in the flow of olive oil. The US is a constant exporter to the Canadian market of about 500 Mt of olive oil each year. There is no evidence that increases or decreases in

Moroccan olive oil exports to Canada affect US exports in quantity or price. Canadian olive oil consumption has been growing at above 20 percent annually since the mid-1990s. **Moroccan olive oil exports should have no negative impact on US exporters, even if exported volume grows by a factor of four to five times their current average level of 125 Mt to Canada.**

Table Olives

The United States exports large, pitted olives primarily of the California ripe style. As the following two tables show the lead client for California table olives differ for preserved olives not directly consumable and for prepared olives that are directly consumable.

Table 8. U.S. Preserved Table Olive Exports

	1998	1999	2000	2001	2002	5 Yr Ave Quantity Mt	5 Yr Ave Value \$/kg FAS	% US Exports
JAPAN	971.9	514.1	934	1,059.40	1,060.80	908.0	\$2.05	72.8%
CANADA	208	177.7	191.3	194.4	209.5	196.2	\$1.69	15.7%
MEXICO	0	0	102.1	43.2	113.2	51.7	\$1.25	4.1%
KOREA, REPUBLIC OF	33.9	27.8	0	0	0	12.3	\$1.88	1.0%
GREECE	12	43.4	0	0	0	11.1	\$1.68	0.9%
SPAIN	0	0	0	18.1	9	5.4	\$3.32	0.4%
RUSSIAN FEDERATION	23.8	0	0	0	0	4.8	\$1.09	0.4%
TAIWAN	1.3	16	0	0	0	3.5	\$1.27	0.3%
EL SALVADOR	11.6	3.5	0	0	0	3.0	\$1.59	0.2%
CHINA, PEOPLES REPUB	0	0	0	0	6.8	1.4	\$2.06	0.1%
HONG KONG	0	0	0	4.1	2.5	1.3	\$2.12	0.1%
COSTA RICA	0	0	3.4	1	0	0.9	\$1.82	0.1%
TURKEY	0	0	0	0	3.8	0.8	\$1.32	0.1%
PANAMA	0	1.9	1.8	0	0	0.7	\$2.16	0.1%
ICELAND	0	0.2	0	3.4	0	0.7	\$2.22	0.1%
DENMARK(*)	0	0	2.7	0	0	0.5	\$1.48	0.0%
AUSTRALIA(*)	0	0	0	0	2.6	0.5	\$1.54	0.0%
NETHERLANDS								
ANTILLES(*)	2.3	0	0	0	0	0.5	\$1.30	0.0%
NEW ZEALAND(*)	0	2.1	0	0	0	0.4	\$1.43	0.0%
GUATEMALA	0	1.9	0	0	0	0.4	\$2.63	0.0%
OTHER	45.1	20.3	47.1	52.1	55.5	44.0	\$2.09	3.5%
WORLD	1309.9	808.9	1282.4	1375.7	1463.7	1,248.1	\$1.95	100.0%

World

Data Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics

(*) denotes a country that is a summarization of its component countries.

Table 9. U.S. Prepared Table Olive Exports

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	5 Yr Avg	5 Yr Avg Value \$/kg FAS	% US Exports
	Quantity	Quantity	Quantity	Quantity	Quantity	Quantity		
CANADA	1,973.30	2,054.10	1,770.50	1,550.40	1,656.50	1,801.0	\$1.65	64.7%
MEXICO	179.8	187	206.6	126.3	245.7	189.1	\$1.41	6.8%
SPAIN	334.8	21.6	3.1	86.1	92.9	107.7	\$0.99	3.9%
KUWAIT	81.8	95.7	32.5	224	0	86.8	\$1.67	3.1%
UNITED ARAB EMIRATES	75.3	198.5	13.5	4.3	4.4	59.2	\$1.38	2.1%
SAUDI ARABIA	57	147.5	49.9	0	0	50.9	\$1.46	1.8%
OTHER 47 COUNTRIES	705.2	621.6	322.3	423.1	369.2	488.3	\$1.53	17.5%
TOTAL	3,407.00	3,325.80	2,398.50	2,414.60	2,368.70	2,782.9	\$1.58	100.0%

Data Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics

Canada is the primary market of interest for Bumper's analysis purposes, along with Japan and Mexico. Morocco did export table olives to Japan in the mid-1990s, but has not exported to Japan since the 1996/97 crop year, so there are no Bumper's considerations for Japan. Table 10 shows Moroccan exports of all types of table olives to France, the two main US export markets and Morocco's exports to the USA. These are all reported on an export year basis July 1 – June 30, so they do not match up with Table 1 figures reported on a calendar year (January 1 – December 31) basis. US data is shown to show how import the total North American market is to Morocco. Ongoing expansion of EU table olive production has lead Morocco and other major exporting countries to target producing nations that have a structural deficit in production (the USA, Argentina, Brazil) and those that do not produce table olives (Canada, Russia, tropical nations, etc.).

Table 10. Moroccan Table Olive Exports to Key US Markets (Mt and CIF prices)

	97/98	98/99	99/00	2000/01	2001/02	5 Yr Avg Qty	5 Yr Avg Val/kg	% Exports
France	32,158	34,228	34,971	32,314	28,617	32,458	\$ 1.25	52.34%
Canada	1,623	1,911	2,055	2,146	1,787	1,905	\$ 1.56	3.07%
Mexico	0	176	273	114	0	113	\$ 0.84	0.18%
USA	10,111	10,547	9,944	10,256	12,228	10,617	\$ 1.84	17.12%
World Total	62,883	62,688	64,234	60,780	59,498	62,017	\$ 1.39	100.00%

Source: EACCE

Table 11 provides the comparison of US and Moroccan share of both major US export markets and the US Domestic Market. For the purposes of Bumper's analysis once a country is exporting more than 5 percent of a market it is safe to assume that its exports influence market prices.

Since both the US and Morocco have about a 10 percent share of the Canadian market, one has to conclude that Morocco competes with the US on the Canadian market. Therefore, USAID support should not be provided to the Moroccan table olive sector.

Table 11. Comparison of US and Moroccan Market Share (1998-2002 Crop Year Basis)

	Average Consumption Mt	US Market Share	Moroccan Market Share
Canada	20100	9.94%	9.48%
Mexico	10800	2.23%	1.04%
USA	187500	48.09%	5.66%

PD71 Analysis of Moroccan Exports to the US Market

Since the Harmonized Tariff Codes for Prepared Table Olives covers 99 percent of US imports, the PD71 analysis can be limited to the figures shown in Table 12, showing the top five table olive sources. The five major contributors to the US table olive market represent over 97 percent

Table 12. Major Prepared Table Olive Exporters to the USA and Market Share (1998-2002 Calendar Year Basis with CIF Value)

<u>CONSUMPTION IMPORTS</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	5 Years Average	5 Years Ave Value \$/kg	% Import Market	% US Consump.
	Quantity	Quantity	Quantity	Quantity	Quantity				
SPAIN	59,120.30	62,010.20	67,685.10	71,420.50	72,639.20	66,575.1	\$2.00	70.31%	34.88%
GREECE	9,723.60	11,966.50	12,440.50	13,751.40	14,620.40	12,500.5	\$2.40	13.20%	6.55%
MOROCCO	8,611.30	10,780.30	9,393.40	10,507.00	11,319.00	10,122.2	\$1.69	10.69%	5.30%
TURKEY	1,171.90	1,719.90	1,268.60	2,544.70	2,207.00	1,782.4	\$1.19	1.88%	0.93%
ITALY	1,178.40	1,065.20	1,083.50	1,184.30	1,417.60	1,185.8	\$3.15	1.25%	0.62%
TOTAL	82,266.10	89,590.20	94,320.70	101,782.40	105,475.00	94,686.9	\$2.02	100.00%	49.60%

Data Source: Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics

of US imports, and just over 43 percent of US table olive consumption. It is clear from the data in the table that the major exporters are increasing their exports to the USA. Morocco, which has seen its total olive production decline since 1999 has maintained its exports to the USA, has relied upon its lower cost of production (compared to Spain, Greece, and Italy) to do so. Black

olives of the California ripe style make up 8,000 to 9,000 Mt of Morocco's exports to the USA. These are the olives destined primarily for the food service trade for pizzas, Mexican fast food, and salads

The California Olive Council is opposed to granting tariff relief for the importation of California style black olives, and oppose such relief within the proposed US-Morocco Free Trade Agreement. From the early 1990's US producers have seen their share of US Table Olive consumption decline from 59 percent to about 51 percent in 2002. There are a few more than 1,300 olive growers in the USA operating on about 36,000 acres (about 15,000 hectares) of olive orchards. New plantings are just about balancing out acreage that is being retired or shifting focus to olive oil production. There are literally only a handful of industrial- scale olive packers left in the United States, and some of these are among the country's largest importers of olives. They too oppose the granting of tariff concessions for ripe black olives.

In the early 1990's, the California Olive Council mobilized 16 US Senators to protest potential USAID assistance to Morocco for the production of black ripe olives. They did not protest USAID assistance for the production and marketing of green and pink olives of Spanish style. However, green and black olives both come from the same tree, and the black ripe olive is processed using an oxidation catalyst that turns green, turning, and partly black olives to full black. **There is an increasing overhang in world table olive carry-over stocks, and continued plantings around the Mediterranean and in the Southern Hemisphere. USAID assistance to the Moroccan table olive industry, its third largest supplier, may have a negative impact on US producers and exporters of table olives by increasing price pressure on all styles of ripe olives in the US market. Moroccan olive production would have to increase from its current low base, but it would take only one or two good rainfall years for a rapid increase in production to occur. USAID should not use public funds to provide support to the Moroccan table olive industry in efforts to export to the USA.**

From a purely private sector perspective, it would appear to make good commercial sense for U.S. packers of olives to seek out Moroccan table olive suppliers who meet their quality requirements and can ensure consistent supply in both wet and dry years. If Morocco can intensify production in irrigated areas in an economically efficient way, it should be able to turn its lower cost structure into an even more competitive position on world table olive markets.

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