



***“Organic agriculture and olive oil production
in the Southern Mediterranean Countries”***

OLIBIO Research Project

Fabio M. Santucci. DSEEA UniPG,
Washington DC November 2007

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A very heterogeneous group of countries

**Turkey, Syria, Jordan, Lebanon, Israel, Palestine, Egypt,
Libya, Tunisia, Algeria and Morocco**



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Four sources of information

- A research on the situation and prospects for organic olive oil in Italy;
- A study on the organic olive oil in the Med;
- A study on the European market for selected Syrian products;
- A study about competitiveness of Italian organic products.



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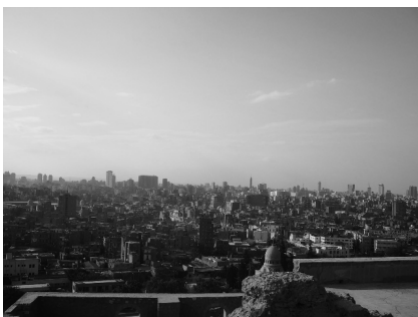
A very fast growing population

| Country | 1980 | | 2003 | | Var. 80-03 | | Life expectancy | | 2015 | | Var. 03-15 | |
|--------------|----------------|--------------|----------------|--------------|-------------|---------------|-----------------|----------------|--------------|-------------|------------|--|
| | (000n) | % | (000n) | % | % | years | index | (000n) | % | % | | |
| Turkey | 46.132 | 29,7 | 71.325 | 28,0 | 54,6 | 70,4 | 100 | 81.300 | 27,4 | 14,0 | | |
| Syria | 8.959 | 5,8 | 17.800 | 7,0 | 98,7 | 71,7 | 101 | 22.000 | 7,4 | 23,6 | | |
| Lebanon | 2.669 | 1,7 | 3.653 | 1,4 | 36,9 | 73,5 | 104 | 5.200 | 1,8 | 42,3 | | |
| Jordan | 2.225 | 1,4 | 5.473 | 2,2 | 146,0 | 70,9 | 100 | 6.800 | 2,3 | 24,2 | | |
| Israel | 3.764 | 2,4 | 6.433 | 2,5 | 70,9 | 79,1 | 112 | 7.900 | 2,7 | 22,8 | | |
| Egypt | 43.915 | 28,3 | 71.931 | 28,3 | 63,8 | 68,6 | 97 | 80.900 | 27,3 | 12,5 | | |
| Lybia | 3.043 | 2,0 | 5.551 | 2,2 | 82,4 | 72,6 | 103 | 6.900 | 2,3 | 24,3 | | |
| Tunisia | 6.469 | 4,2 | 9.832 | 3,9 | 52,0 | 72,7 | 103 | 11.500 | 3,9 | 17,0 | | |
| Algeria | 18.740 | 12,1 | 31.800 | 12,5 | 69,7 | 72,7 | 103 | 38.300 | 12,9 | 20,4 | | |
| Morocco | 19.382 | 12,5 | 30.566 | 12,0 | 57,7 | 68,5 | 97 | 35.400 | 12,0 | 15,8 | | |
| Total | 155.298 | 100,0 | 254.364 | 100,0 | 63,8 | 70,7 * | 100 | 296.200 | 100,0 | 16,4 | | |

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..Urbanization



| Country | % |
|---------|-------|
| Turkey | 66,11 |
| Syria | 50,12 |
| Lebanon | 87,90 |
| Jordan | 79,19 |
| Israel | 91,98 |
| Egypt | 42,03 |
| Lybia | 86,33 |
| Tunisia | 63,53 |
| Algeria | 58,73 |
| Morocco | 57,41 |

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Income and agriculture



| Country | GDP per person | | Ag share | Ag labour force | |
|--------------|----------------|--------------|----------|-----------------|--------------|
| | US\$ | index | % | (000n) | % |
| Turkey | 6.390 | 117,1 | 13 | 14.779 | 44,4 |
| Syria | 3.620 | 66,3 | 23 | 1.599 | 4,8 |
| Lebanon | 4.360 | 79,9 | 12 | 42 | 0,1 |
| Jordan | 4.220 | 77,3 | 2 | 194 | 0,6 |
| Israel | 19.530 | 357,9 | | 67 | 0,2 |
| Egypt | 3.810 | 69,8 | 17 | 8.535 | 25,6 |
| Lybia | 7.570 | 138,7 | 9 | 97 | 0,3 |
| Tunisia | 6.760 | 123,9 | 10 | 966 | 2,9 |
| Algeria | 5.760 | 105,6 | 10 | 2.729 | 8,2 |
| Morocco | 3.810 | 69,8 | 16 | 4.285 | 12,9 |
| Total | 5.457 | 100,0 | | 33.293 | 100,0 |

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Water and agriculture

| Country | Agricultural area | | Irrigated area | | |
|--------------|-------------------|--------------|----------------|--------------|------------|
| | (000ha) | % | (000ha) | % | % |
| Turkey | 41.690 | 26,6 | 5.215 | 39,9 | 12,5 |
| Syria | 13.759 | 8,8 | 1.333 | 10,2 | 9,7 |
| Lebanon | 329 | 0,2 | 104 | 0,8 | 31,6 |
| Jordan | 1.142 | 0,7 | 75 | 0,6 | 6,6 |
| Israel | 566 | 0,4 | 194 | 1,5 | 34,3 |
| Egypt | 3.400 | 2,2 | 3.400 | 26,0 | 100,0 |
| Lybia | 15.450 | 9,9 | 470 | 3,6 | 3,0 |
| Tunisia | 9.763 | 6,2 | 381 | 2,9 | 3,9 |
| Algeria | 40.065 | 25,6 | 560 | 4,3 | 1,4 |
| Morocco | 30.283 | 19,4 | 1.345 | 10,3 | 4,4 |
| Total | 156.447 | 100,0 | 13.077 | 100,0 | 8,4 |

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Summarizing

- **Growing population, increasingly in town**
- **Improving incomes, changing food patterns**
- **Limited or scarce natural resources**
- **Decreasing prices for many conventional commodities**
- **Increasing food trade deficit**
- **Emerging environmental problems**
- **Agriculture still source of income and jobs in some countries**
- **Need to create jobs and income in rural areas**

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Organic agriculture, December 2005



Exporting to Europe –

What will change under the revised EU Regulation?

>Herman Van Boxem, European Commission

>Otto Schmid, FiBL

>Beate Huber, FiBL



| Country | Farms * | | Area | |
|--------------|---------------|--------------|----------------|--------------|
| | n. | % | ha | % |
| Turkey | 14.401 | 34,9 | 93.133 | 30,7 |
| Syria | 5.000 | 12,1 | 20.500 | 6,8 |
| Lebanon | 331 | 0,8 | 2.465 | 0,8 |
| Jordan | 1 | 10,0 | na | na |
| Israel | 420 | 1,0 | 6.685 | 2,2 |
| Egypt | 500 | 1,2 | 24.548 | 8,1 |
| Lybia | 0 | 0,0 | 0 | 0,0 |
| Tunisia | 515 | 1,2 | 143.099 | 47,2 |
| Algeria | 39 | 0,1 | 887 | 0,3 |
| Morocco | 20.040 | 48,6 | 12.051 | 4,0 |
| Total | 41.247 | 100,0 | 303.368 | 100,0 |

* = includes collectors of wild fruits and herbs

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Status of organic agriculture: institutions

| Country | Legislation | Education and research | CSOs | Local Certification |
|---------|----------------------|------------------------|---------------|---------------------|
| Turkey | Like EU | Advanced | 1 Association | 7 CBs |
| Syria | Under elaboration | Scarce | Nothing | Nothing |
| Lebanon | Advanced elaboration | Good | Developed | 1 CB |
| Jordan | Not existant | Scarce | Nothing | Nothing |
| Israel | Like EU | Advanced | 1 Association | 1 CB |
| Egypt | Not existant | Scarce | Developed | 2 CB |
| Lybia | Not existant | na | na | Nothing |
| Tunisia | Like EU | Advanced | Developed | Nothing |
| Algeria | Not existant | Scarce | Nothing | Nothing |
| Morocco | Advanced elaboration | Good | Developed | Nothing |

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International cooperation



- IFOAM Mediterranean
- Mediterranean Organic Ag. Network
- FAO projects
- EU funded MEDA projects
- Bilateral public projects
- Private initiatives

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Status of organic trade



| Country | Export | Domestic market | On going projects |
|---------|-------------|-----------------|-------------------|
| Turkey | Very strong | Growing | Several |
| Syria | Growing | Nothing | Some |
| Lebanon | Modest | Small | Several |
| Jordan | Nothing | Nothing | Some |
| Israel | Very strong | Growing | na |
| Egypt | Very strong | Small | Some |
| Lybia | Nothing | Nothing | na |
| Tunisia | Very strong | Small | Some |
| Algeria | Nothing | Nothing | na |
| Morocco | Very strong | Small | na |



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Prospects to 2010

| Trade | Mean |
|---------------------------------|------|
| Export to EU | 3,0 |
| Domestic market | 2,4 |
| Export to US and Canada | 1,9 |
| Export to Italy | 1,8 |
| Export to Gulf countries | 1,4 |
| Export to Japan | 1,2 |
| Imports | 1,2 |
| Export to former USSR countries | 0,9 |
| Export to Maghreb countries | 0,1 |

4 = strongly increase; -4 = strongly decrease

Status of organic trade

| Country | Export | Domestic market | On going projects |
|---------|-------------|-----------------|-------------------|
| Turkey | Very strong | Growing | Several |
| Syria | Growing | Nothing | Some |
| Lebanon | Modest | Small | Several |
| Jordan | Nothing | Nothing | Some |
| Israel | Very strong | Growing | na |
| Egypt | Very strong | Small | Some |
| Lybia | Nothing | Nothing | na |
| Tunisia | Very strong | Small | Some |
| Algeria | Nothing | Nothing | na |
| Morocco | Very strong | Small | na |

Three groups of countries

- **Advanced: G1 Turkey, Tunisia, Israel and Egypt;**
- **Medium: G2 Lebanon and Morocco**
- **Laggards: G3 Algeria, Syria (and Libya).**



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Structure of exports



- **Bulk products: olive oil from Tunisia, tomatoes from Egypt, cotton from Turkey and Syria, pulses from Turkey.**
- **Processed products: *argan* oil from Morocco, dates from Tunisia, wines from Israel, olive oil from Palestine and Syria, honey from Turkey, t-shirts and herbal teas from Egypt,**

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Organic olive oil

| Country | A) Total organic area | B) Area with organic olive trees | C) Area with olive trees | B/A % | B/C % |
|----------------|-----------------------|----------------------------------|--------------------------|-------------|-------------|
| Turkey | 93.133 | 7.732 | 649.350 | 8,3 | 1,19 |
| Syria | 20.500 | 5.000 | 500.000 | 24,4 | 1,00 |
| Lebanon | 2.465 | 475 | 58.000 | 19,3 | 0,82 |
| Israel | 6.685 | 340 | 22.000 | 5,1 | 1,55 |
| Palestine | 1.000 | 500 | nd | 50,0 | |
| Jordan | 10 | 10 | 64.520 | 100,0 | 0,02 |
| Egypt | 24.548 | 23 | 49.000 | 0,1 | 0,05 |
| Lybia | na | na | 200.000 | na | na |
| Tunisia | 143.099 | 80.016 | 1.500.000 | 55,9 | 5,33 |
| Algeria | 887 | 416 | 239.350 | 46,9 | 0,17 |
| Morocco | 20.040 | 100 | 504.700 | 0,5 | 0,02 |
| Total | 312.367 | 94.612 | 3.786.920 | 30,3 | 2,50 |
| All Med | 3.299.154 | 362.210 | 7.379.090 | 11,0 | 4,91 |

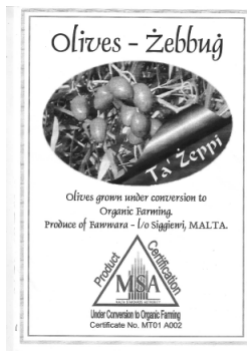
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6 Rules for organic olive oil

- **Respect the conversion period;**
- **Know your soil and respect traditions;**
- **Manage the natural fertility of the soil;**
- **Defend with the help of nature;**
- **Harvest with care and respect;**
- **Process carefully.**



*Comparative LCA gives
mixed results*

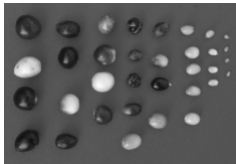
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Organic olive oil chain

- Respects the environment
- In some cases, it improves the natural habitats
- Uses local varieties
- Ensures employment at farm level
- Local processing and bottling provide jobs and income
- Gives pride to producers



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Biodiversity



- Local and traditional olive tree varieties
- Higher number of varieties
- Introduction of shrubs and trees hosting parasitoids
- Cultivation of leguminous crops as green manure
- Sheep, goats, horses, (cattle ?) left grazing → manure as fertilizer
- Higher number of small mammals, birds, snakes?

Further biological research is needed

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Water conservation

- Olive trees are naturally drought resistant..
- Olive trees were normally planted on the most difficult slopes, on marginal hills, on rocky areas;

BUT

- Increased use of irrigation (trickle) since the '70s has made them more productive, but the root system is less deep → more susceptible to reduced water availability
- No specific organic guidelines

*Further research is needed
(not only on olive trees)*

Links with fair trade: an example from UK

| Category | Supplier | Content (liter) | Per box no. | Price (£) | | Price (€) | |
|-----------------|-----------------|-----------------|-------------|-----------|------|-----------|-------|
| | | | | Total | Unit | Unit | liter |
| In conversion | CFT, UAWC, PARC | 0,5 | 12 | 50,4 | 4,2 | 6,2 | 12,3 |
| | | 0,75 | 12 | 70,8 | 5,9 | 8,7 | 11,6 |
| | | 5,0 | 4 | 128,0 | 32,0 | 47,0 | 9,4 |
| Organic Galilee | Sindyanna | 0,5 | 12 | 60,6 | 5,05 | 7,4 | 14,8 |
| | | 0,75 | 12 | 82,8 | 6,9 | 10,1 | 13,5 |



*Organic extra – virgin
olive oil from Palestine*



Scenario to 2010

- *Development of the organic agri-food chain: G1 > G2 > G3*
- *Impact FAO, IFOAM, MOAN: G3*
- *Annual average growth of output: 7,7% (crops and fruits)*
- *Domestic market: G1 and G2; average value < 400.000 €*
- *Export: EU; average value < 700.000 €*

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Limiting factors

| Obstacles | Mean |
|--|------|
| Low education, lack of extension and training | 2,5 |
| Lack of structures (production, processing, distribution) | 2,4 |
| Poor marketing | 2,3 |
| Lack of consumers' awareness | 2,1 |
| High production and certification costs | 1,9 |
| Lack of subsidies and of financial support | 1,6 |
| Small size of farms and firms | 1,5 |
| Lack of inputs and tools | 1,3 |
| Low and/or fluctuating yields | 1,2 |
| Competition of other foreign products (on foreign and local markets) | 1,0 |
| Lack of harmonization with other legislations | 0,5 |
| Lack of traceability | 0,1 |
| Distance from foreign markets | 0,0 |
| Missing legislations / regulations | -0,2 |
| Lack of certification bodies | -0,7 |

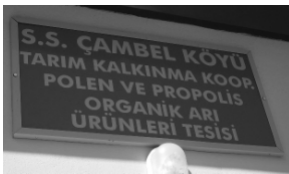
4 = strongly agree; -4 = strongly disagree

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Favoring factors

| Suggestions | Mean |
|---|------|
| More collaboration between international organizations and Donors | 3,1 |
| More cooperatives and associations | 3,1 |
| Private foreign investments and joint ventures | 3,0 |
| Expansion of eco-tourism and of agri-tourism | 3,0 |
| More trade agreements, more access to EU markets, recognition of the national certification systems | 2,7 |
| Common Mediterranean logo | 1,8 |



4 = strongly agree; -4 = strongly disagree

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Organic agriculture meets the MDGs

1. Halving poverty and hunger

- *Higher resilience, more stable and better income, more jobs in rural areas (on farm and off farm diversification) → Rural Development*

7. Ensuring environmental sustainability

- *Re-naturalization of countryside, lower water use, no chemicals, recuperation of native varieties, etc. → More research is needed.*

8. Establishing a global partnership for development

- *Public support to OA through bilateral and multilateral cooperation;*
 - *Private and CSO's partnerships based on respect and fair trade.*

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Thanks for your attention

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